



ENERGY BRINGS TOGETHER

LUKOIL Group Sustainability Report for 2022

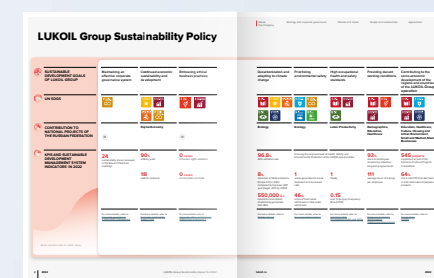
Our corporate mission is to make the energy of natural resources serve the interests of mankind

STRATEGY AND CORPORATE GOVERNANCE

CLIMATE AND NATURE

PEOPLE AND RELATIONSHIPS

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LUKOIL Group Sustainability Policy

SUSTAINABLE DEVELOPMENT GOALS OF LUKOIL GROUP

UN SDGS

CONTRIBUTION TO NATIONAL PROJECTS OF THE RUSSIAN FEDERATION

KPIS AND SUSTAINABLE DEVELOPMENT MANAGEMENT SYSTEM INDICATORS¹ IN 2022

Maintaining an effective corporate governance system	Continued economic sustainability and development	Embracing ethical business practices
	Digital Economy	
<p>–</p>	<p>–</p>	<p>–</p>
<p>24 sustainability issues reviewed at the Board of Directors meetings</p>	<p>90% refinery yield</p> <p>18 patents received</p>	<p>0 cases of human rights violations</p> <p>0 cases of corruption and theft</p>
<p>For more details, refer to Corporate governance Sustainability management</p>	<p>For more details, refer to Economic sustainability Supply chain</p>	<p>For more details, refer to Corporate ethics and behavior Stakeholder engagement</p>

Decarbonization and adapting to climate change	Prioritizing environmental safety	High occupational health and safety standards	Providing decent working conditions	Contributing to the socio-economic development of the regions and countries of the LUKOIL Group operation
Ecology	Ecology	Labor Productivity	Demographics, Education, Healthcare	Education, Healthcare, Culture, Housing and Urban Environment, Small and Medium-Sized Businesses
<p>96.8% APG utilization rate</p> <p>8% reduction of GHG emissions (Scope 1+2) in 2022 compared to the base 2017 year (target: 20% by 2030)</p> <p>550,000 GJ industrial consumption of electricity generated from RES</p>	<p>Ensuring the required level of Health, Safety, and Environmental Protection at the LUKOIL Group entities</p> <p>1 waste generated to waste disposed and recovered ratio</p> <p>46% share of fresh water withdrawal in total water withdrawal</p>	<p>1 fatality</p> <p>0.15 Lost Time Injury Frequency Rate (LTIFR)</p>	<p>93% share of employees covered by collective bargaining agreements</p> <p>111 average hours of training per employee</p>	<p>545 projects supported as part of the Social and Cultural Projects Competition</p> <p>64% share of ECTO branded fuels in total retail sales of petroleum products</p>
<p>For more details, refer to Climate change</p>	<p>For more details, refer to Environmental protection</p>	<p>For more details, refer to Industrial safety Occupational health and safety</p>	<p>For more details, refer to Employment relations Social support Training and development</p>	<p>For more details, refer to Supply chain Society</p>

¹ All the indicators refer to LUKOIL Group.

Our contribution to the UN Sustainable Development Goals in 2022

Expenditure

1,312
RUB mln



Our programs

- ✓ Comprehensive program of interaction between the LUKOIL Group entities and educational institutions of higher education in the oil and gas, chemical, and energy sectors
- ✓ Sponsorship programs for students and teachers of higher and secondary education institutions in Russia
- ✓ Charitable support for schools and educational institutions
- ✓ Employee education programs



Expenditure

1,175
RUB mln



TARGET 7.2
TARGET 7.3

Our programs

- ✓ RES development projects
- ✓ Energy Conservation Programs of LUKOIL Group's Russian entities



Expenditure

188,072
RUB mln



TARGET 8.3
TARGET 8.8

Our programs

- ✓ Social programs and payroll expenses (family support costs are included in SDG 5)
- ✓ LUKOIL Group Program of Industrial Safety, Improvement of Labor Conditions and Occupational Safety, and Emergency Prevention and Liquidation, Occupational Safety subprogram



Expenditure

884
RUB mln



TARGET 5.5

Our programs

- ✓ Support for families



Expenditure

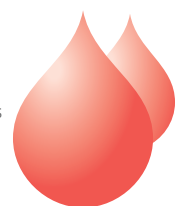
3,019
RUB mln



TARGET 6.3
TARGET 6.4

Our programs

- ✓ Environmental Safety Program of the LUKOIL Group entities, Clean Water subprogram
- ✓ Charity projects and programs in Iraq and Uzbekistan
- ✓ Social and Cultural Projects Competition (the Environment category)
- ✓ Volunteer campaigns to clean up river banks from litter



Expenditure

23,283
RUB mln



TARGET 9.4

Our programs

- ✓ Research and development program
- ✓ Functional development program for information and technology support of LUKOIL Group



Expenditure

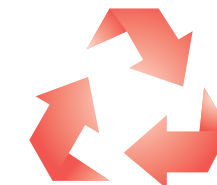
3,536
RUB mln



TARGET 12.5

Our programs

- ✓ Environmental Safety Program of LUKOIL Group, Waste subprogram



Expenditure

11,868
RUB mln



TARGET 13.1

Our programs

- ✓ LUKOIL Group Decarbonization Program
- ✓ Environmental Safety Program of LUKOIL Group, Clean Air subprogram
- ✓ APG Rational Use Program of the LUKOIL Group entities



Expenditure

29,901
RUB mln



TARGET 14.1

TARGET 14.5

TARGET 15a

Our programs

- ✓ Industrial environmental control
- ✓ Emergency prevention and response
- ✓ Biodiversity Conservation Program for the Company's facilities operating in the Arctic zone of Russia
- ✓ Environmental Safety Program (ESP), Biodiversity subprogram
- ✓ Environmental Safety Program of LUKOIL Group, Land Reclamation subprogram
- ✓ APG Rational Use Program of the LUKOIL Group entities
- ✓ Research and development as part of the ESP and environmental initiatives



Expenditure

1,983
RUB mln



TARGET 17.17

Our programs

- ✓ Participation in the World Bank and UN project
- ✓ Participation in the UN Global Compact initiative



Total contribution to the UN Sustainable Development Goals in 2022

265
RUB billion

About the Report

PJSC LUKOIL is pleased to present the 13th Sustainability Report of LUKOIL Group (the "Report") summarizing the Group's performance for the period from January 1, 2022 to December 31, 2022.

The previous Report was published in July 2022 (for the reporting period from January 1, 2021 to December 31, 2021).

This Report was reviewed by the Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors of PJSC LUKOIL and approved by the Board of Directors. You can find the audit report in [Appendix 10](#). The opinion of the RSPP Council on Non-Financial Reporting concerning

the external assurance of the Report is provided in [Appendix 11](#).

The ESG Databook ([Appendix 9](#)) is part of the Sustainability Report. It includes quantitative indicators for five years describing the social and environmental impact of the LUKOIL Group entities' operations and the Group's corporate governance system. The Report comprises high-level quantitative indicators.

In preparing this Report, we used a number of reporting standards and guidelines listed in [Appendix 3](#). The procedure for determining the material topics for the Report is set out in [Appendix 3](#).

Throughout this document, the words "LUKOIL Group", "LUKOIL", "the Company", "the Group", the pronoun "we" and its forms refer to PJSC LUKOIL and other LUKOIL Group entities included in the reporting boundary, unless specified otherwise.

The abbreviations, calculation formulas for indicators, and definitions of terms can be found in [Appendices 1 and 8](#).

The Report contains links to the corporate website and other sources of corporate information providing detailed information on sustainable development topics. The information is updated on a regular basis.

LUKOIL believes that participation in international and Russian initiatives and ratings is one of the useful forms of stakeholder engagement, which helps to improve the quality of decisions taken through inclusion in objective sectoral processes. In 2022, the Company continued to participate in or support the following initiatives:

- ▶ Social Charter of Russian Business;
- ▶ Interdepartmental Sustainability Working Group chaired by the Minister of Economic Development of Russia;
- ▶ the Task Force on Climate-related Financial Disclosures (TCFD);
- ▶ United Nations Global Compact;
- ▶ Zero Routine Flaring by 2030.

As LUKOIL joined the TCFD initiative in 2021, the [Disclosure Index](#) and the [CDP](#) questionnaire were published on its website as part of the climate disclosure obligations.

LUKOIL also continued to take part in the development of the national ESG agenda, which involved discussing plans to create standards for ESG activities and non-financial reporting and systems for ESG project verification. The Company sent expert comments on the methods for compiling ESG ratings for Russian companies.

In 2022, the Company improved its position in the Russian indices.

MOEX – RSPP Responsibility and Transparency Index (Group A) and MOEX – RSPP Sustainable Development Vector Index (Group A).

LUKOIL Group's Sustainability Report for 2021 gained recognition at specialized competitions in Russia and abroad.

Asia Sustainability Reporting Rating 2022

The gold winner



RSPP-MOEX Annual Report Contest

The winner in the Best Sustainability Report category



Sources of information on the activities of LUKOIL Group:

- ▶ Corporate website, the ["Sustainability"](#) section
- ▶ [ESG Databook](#)
- ▶ [Document Center](#)
- ▶ [CDP Report](#) for 2021

Sustainalytics Risk Rating

39 Current¹

33 Previous



ISS

C Current¹

C Previous



MSCI

B Current¹

BBB Previous



FTSE

3.3 Current¹

3.1 Previous



¹ As at December 2022.

About the Company: highlights of the year

LUKOIL, one of the largest public companies, has been supplying energy products to many countries around the world for more than 30 years. Public Joint-Stock Company "Oil Company "LUKOIL" (PJSC LUKOIL) is the Corporate Center of LUKOIL Group. The LUKOIL Group entities employ over 100,000 people in Russia, Europe, Asia, North America, and the Middle East and Africa (over 30 countries worldwide).

LUKOIL Group's operations and financial activities are coordinated from its head office located in Moscow, Russian Federation. We divide our operations into three business segments:

Exploration and Production



Refining and Distribution



Corporate Center and Other Activities



Exploration and Production

The Group has a portfolio of assets diversified by their geography and type of reserves. Our proved oil and gas reserves are mostly conventional resources. In 2022, they amounted to 15.1 billion boe¹, with oil accounting for 76% and gas for 24%.

LUKOIL Group's oil and gas condensate production, excluding the West Qurna-2 project, was 85 million tonnes in 2022, up 7.1% from 2021. The oil production dynamic was driven by the OPEC+ agreement, as well as the acquisition of shares in oil-extracting assets

in Russia, Azerbaijan, and Mexico. Gas production grew to 34.6 billion cubic meters, with the Russian projects accounting for 17.7 billion cubic meters and the international ones for 16.9 billion cubic meters.

Refining and Distribution

The business segment includes entities² with operations relating to hydrocarbons refining; transportation; trading; wholesale and retail trade of oil, oil products, and gas refining products; production and distribution of lubricants, electricity, and heat.

LUKOIL produces and supplies energy products, including oil and oil products, biofuel blends³, gas motor fuel, and electricity generated, among other things, from renewable and low-carbon energy sources. The Company manufactures lubricants and components, as well as petrochemical products,

in an effort to fully recover useful components from extracted natural resources.

In 2022, the business segment saw changes, as new assets and ownership interests were acquired. LUKOIL expanded its fuel filling station network in Russia

through the acquisition of the Shell, EKA, and Eni-Nefto chains. The acquired Shell filling stations were fully rebranded under the new Teboil brand, with its own loyalty program developed and launched. The lubricants business was expanded due to integrating the plant in Torzhok. LUKOIL also acquired a controlling stake in PJSC Enel Russia (renamed as PJSC EL5-Energo). It includes three gas-fired power plants (Konakovskaya GRES, Nevinnomysskaya GRES, and Sredneural'skaya GRES), as well as two

wind power plants (WPPs) – Azovskaya and Kolskaya.

In 2022, refinery throughput at LUKOIL's refineries increased by 11.3% compared to 2021 (to 70.1 million tonnes). The increase was driven by growing fuel demand on foreign markets. The Group's GPPs produced 1.2 million tonnes of liquefied petroleum gas (LPG) and liquid hydrocarbons; the output of marketable gas was 1.9 billion cubic meters. The petrochemical output reached

1.2 million tonnes, up 8.2% from 2021 due to an increase in refinery utilization.

The Power Generation business sector covers a full production cycle, from generation to transmission and distribution of heat and energy to external consumers (commercial power generation) and for own operational needs (supporting power generation). The aggregate installed capacity of our power generating facilities¹ was 6.1 GW² in 2022.

Corporate Center and Other Activities

The Corporate Center and Other Activities business segment consists of PJSC LUKOIL and other management entities. One of the main functions of the Corporate Center is to coordinate and manage organizational, investment, and financial processes at the Company's subsidiaries.

2020–2022 indicators

	Unit of measurement	2020	2021	2022
Research and development (R&D) costs	RUB billion	5	5	5.5
Number of patents received	pieces	25	26	18
Production of oil and gas condensate (excluding the West Qurna-2 project)	thousand tonnes	77,206	79,348	84,972
Gas production	mIn cubic meters	29,005	32,176	34,625
including APG	mIn cubic meters	9,176	9,120	10,944
Output of petroleum products at LUKOIL Group's own refineries	thousand tonnes	54,964	60,015	65,766
Lubricants production (full-cycle ³)	thousand tonnes	923	856	797
Output of finished lubricants	thousand tonnes	695	646	661
Output of marketable petrochemicals	thousand tonnes	1,228	1,134	1,227

¹ According to the classification of the Securities and Exchange Commission (SEC); 'boe' means barrels of oil equivalent.

² The business segment comprises the following business sectors, such as: Oil Refining in Russia, Oil Refining Abroad, Petrochemicals, Oil Product Supply in Russia, Oil Product Supply Abroad, Transportation, Power Generation, and Other Entities Related to the Refining and Distribution Business Segment.

³ The details are provided in the Products sub-section.

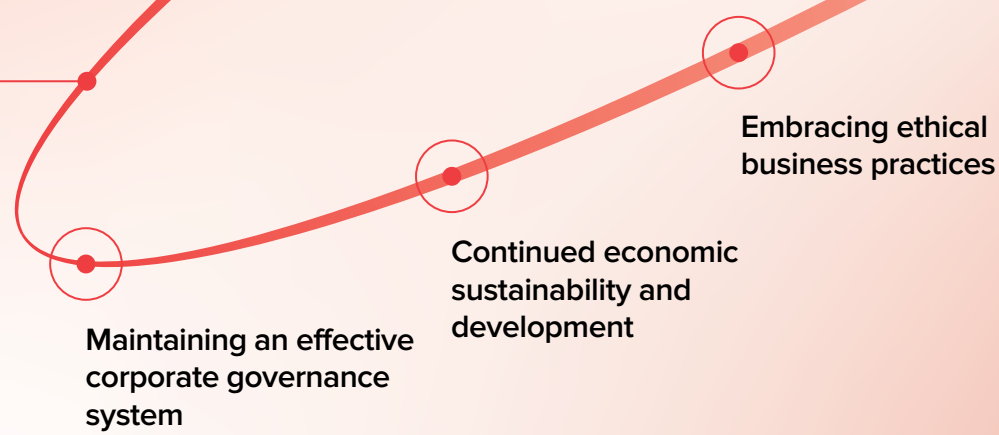
¹ The aggregate electric capacity takes into account facilities owned by LUKOIL entities but leased out to other legal entities.

² The data do not include the West Qurna-2 project.

³ Production of base oils and components.

STRATEGY AND CORPORATE GOVERNANCE

LUKOIL GROUP'S SUSTAINABLE DEVELOPMENT GOALS



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- 18 Corporate governance
- 22 Sustainability management

LUKOIL Group's sustainable development goal: **Continued economic sustainability and development**

Strategic approach

In 2022, LUKOIL, like other companies, faced significant challenges from volatile energy markets and disrupted supply chains. Amid high uncertainty and numerous risks, the key task for all employees of the Company was to ensure its stable financial and operating activities, as well as to maintain its position as a reliable energy supplier.

The Company made every effort within its control to mitigate the effects of the crisis in the financial and commodity markets by intensifying cooperation with stakeholders and addressing supply chain disruptions.

Continuous risk analysis, proactive decision-making, and improving overall performance were an important part of the work.

Despite the growing uncertainty in the global economy, the long-term scenarios developed at the end of 2021 remained largely relevant and were used to make strategic decisions. The trends presented in the forecasts were confirmed by actual data in 2022. The Company's experts continuously monitored the situation in the global energy sector. They plan to make changes to the energy scenarios in the future as critical information accumulates.

The Company remains consistent with its mission and strategic objectives as defined by the approved Strategic Development Program of LUKOIL Group for 2022–2031 and regularly updates its portfolio of strategic asset groups to reflect the current situation and assess the advisability of updating its strategic targets.

2022 saw the Group's entities continue to implement the investment program, address issues related primarily to technology and information security, and do their best to fulfill obligations arising from existing contracts and other requirements.

Investment program

In order to ensure stable operations of the LUKOIL Group entities, the 2022 investment program was refocused to existing projects in the production segment and basic refining assets. LUKOIL monitored and mitigated potential and realized risks, and made decisions on further project development. Among other things, investments were intended to develop production infrastructure and strengthen supply channels. Special focus was placed on measures to reduce operating costs and increase efficiency in all business segments.

Technology policy

In 2022, numerous licensors of technologies used in the oil and gas industry, as well as suppliers of complex technological equipment and services, left the Russian market; shipments of spare parts were suspended or discontinued, and opportunities to engage chemical suppliers decreased. As a consequence, one of the key tasks was to assess and minimize technological risks through searching for alternative solutions in the supply chain, using internally manufactured materials and R&D results, and further implementing the service management model¹ as part of the Impulse project.

Building supply chains

To find replacement solutions, LUKOIL expanded its cooperation with suppliers

of technology and equivalent equipment, materials and resources (M&R) in Russia and neutral countries². The Company has worked extensively in this area and continues to explore opportunities for business cooperation in the future.

LUKOIL sees the need for further development of the competitive environment in Russia in order to ensure the necessary quality of services, goods, and materials supplied by local manufacturers. Various platforms are already used for this purpose coordinating relations among customers, manufacturers of goods and service providers, design and research institutes, and small and medium-sized businesses to identify needs, financing instruments, and technical expertise. LUKOIL continued with its Supplier Days in Russian regions: during 2022, such events were held in Yaroslavl, Ufa, Ekaterinburg, and Tyumen.

Technology cooperation

To reduce the probability of industrial safety risks, considerable attention was paid to testing equivalent technologies and equipment used, for example, in well construction or for timely repairs at refineries. We have already managed to find some solutions comparable in quality to the ones in use.

The Company continues to consult with Russian companies, examining the prospects for cooperation in equipment supply, production automation and power supply, development of joint IT products and other areas. LUKOIL also participates in international and Russian exhibitions and forums and expands its contacts with potential partners.

Information technology

In the IT area, the Company focused its efforts on preventing risks associated with the technological and software stability of information systems already in use by the Group's entities and on developing such systems using alternative technologies.

Adaptation of the ITS³ control systems to current tasks goes in several directions, including redesigning their architecture, expanding in-house code development, additional training and retraining of the Company's specialists, establishing

customer excellence centers, developing the Center of Competence for Process Control Systems. This ecosystem will help the Company to expand access to the labor market, technology, and training with the participation of new partners.

LUKOIL switches to using information technology supplied by IT companies from Russia and neutral countries. For this purpose, cooperation with software developers is promoted, new products are tested by the Group's entities, with some

tasks outsourced to Russian contractors. The Company also contributes to the work of industrial centers of excellence.

In order to respond to cyber risks quickly and successfully, LUKOIL develops a set of software and hardware tools for monitoring and responding to information security incidents. The monitoring and response are provided 24/7, and projects are underway to build information security systems for critical infrastructure.

¹ Information on this is given in [the Improving management efficiency](#) subsection, p. 15 of this Report.

² Neutral countries are defined as countries the interaction with which is associated with minimal potential risks for the Company.

³ ITS means Information Technology Support.

The highlights of the year include:

- ▶ updating the infrastructure of corporate data processing centers;
- ▶ upgrading communications and telecommunications networks;
- ▶ launching the upgrade of the core of the corporate data transmission network;
- ▶ completing the deployment of the IT service management system.

In addition, the Company took measures to improve the effectiveness of commercial, financial, tax, legal and other risk management, including:

- ▶ upgrading the functionality of corporate systems taking into account the latest changes in the Russian legislation;
- ▶ improving the quality and speed of decision-making through the introduction of electronic document flow;

- ▶ advancing information support for the Group employees through the development of an internal corporate portal.

Some investment projects involving industrial service centers¹ and applied digital projects, including in the area of management and security, are scheduled for 2023.

Product supplies

The global trade environment changed significantly in 2022 due to financial, logistics, and other restrictions. The Company was able to adapt by taking a number of anti-crisis measures and focused its efforts on three key objectives:

- ▶ performing all the existing contracts and obligations;
- ▶ diversifying exports, searching for new routes for commodity flows;
- ▶ concentrating on customer needs.

Changes were made to LPG supplies: the Company expanded LPG use at its own production facilities both as a raw material and a fuel gas, entered into more contracts, and began shipments to far abroad with transshipment in Russian ports.

Petrochemicals and lubricants

As for petrochemicals sales, the key objective was to expand distribution of manufactured products in the Russian market and abroad, including through modifying the qualitative characteristics of the products. Mutual supply arrangements with major oil and petrochemical companies were thoroughly developed and put into practice, and traditional export sales directions were diversified.

As major global car manufacturers withdrew from the Russian market, LLC LLK-International intensified its cooperation with manufacturers of cars and machinery under new brands. At the same time, OEM² supplies abroad continued, and meetings with OEM customers in

Russia were held to discuss current issues. A significant increase in sales in the MS³ channel was also seen, and new customers were acquired. We paid great attention to the fulfillment of our obligations to partners. To this end, we monitored product inventories, sought solutions to transition customers to a product equivalent or a new product meeting their requirements (if possible), etc.

Overall, the 2022 product supply strategy made it possible to meet obligations under the existing contracts, boost domestic sales, and acquire new customers. At the same time, LUKOIL continues to adapt to the market situation by developing transportation and logistics infrastructure, as well as strengthening its presence in a number of traditional and alternative commodity markets.

A project is on track to reconstruct LLC RPK-Vysotsk LUKOIL-II terminal for the transshipment of acrylonitrile and methanol within Russia.

Improving management efficiency

The Company has been implementing a large-scale project to improve the governance system and structure of LUKOIL Group since 2020. The transformation is aimed at strengthening economic, technological and financial stability, developing a new corporate leadership philosophy through an increase in the quality and speed of management decision-making and overall management efficiency.

As part of the Impulse project, the management model is reengineered, including through the introduction of project management and Continuous Improvement System (CIS) tools; professional and engineering functions are consolidated within industrial service centers (ISC)¹; a system of relationships between employees at various management levels is formed based on goal-setting and motivation methods; and solutions in other areas are developed. Reengineering and digitalization of end-to-end business processes will allow the transition to data-driven management and modern business analytics.

Continuous improvement system

The fundamental elements of the Impulse project are integrating the continuous improvement principles and adapting the management approaches envisaged by the CIS to the Company's circumstances. The CIS is designed to

maintain the Company's momentum and ability to remain up-to-date over the long run, building a culture of continuous improvement.

Various tools are used to build such a self-evolving system, including creation of a pool of high-performing management personnel, implementation of best practices, strengthening of incentive mechanisms, etc. All LUKOIL employees and key contractors are actively engaged in the improvement processes.

The CIS has been implemented across the refining and petrochemicals entities and is fairly mature at the moment. The oil and gas production entities have successfully implemented pilot projects to deploy various CIS tools. As of 2022, everything was ready to further replicate the management approaches across the business segments:

- ▶ the main documents (the Continuous Improvement System Policy of LUKOIL Group and the Regulations on Incentives for the Employee Continuous Improvement System of the LUKOIL Group entities) were approved;
- ▶ the development of roadmaps for the system implementation was completed;
- ▶ manager training plans were drafted (the training is scheduled for 2023);
- ▶ the CIS performance indicators were defined (to be tested in 2023);
- ▶ collection of employee initiatives at the Group entities was launched.

Service management model

Creating a service model necessary to ensure long-term strategic development and continuous improvement is an important area of transforming the Company's management structure. Industrial service centers have been launched within the LUKOIL Group entities to centralize and strengthen expert and service functions. This approach facilitates the consolidation of internal resources, which is especially important during turbulent times.

The key objective of ISCs is to improve the quality of management decision-making on operations and investment projects, as well as on the innovative and technology development of the Company. In the IT area, the ISCs are intended to implement state-of-the-art IT systems and technology rapidly and effectively.

In 2022, LUKOIL drafted plans to develop centers of excellence based on the ISCs, and created new divisions to replace technologies and equipment.

The Concept for Development of the Innovation Management System at LUKOIL Group was also prepared in 2022. It is planned to develop a strategy for the Company's technology (innovative) development in 2023.

¹ For more details on industrial service centers, refer to [the Improving management efficiency subsection](#), p. 15.

² OEM means Original Equipment Manufacturer.

³ MS means maintenance station.

¹ The ISCs have been created for the main areas of operations: exploration and production (LLC LUKOIL-Engineering), refining and petrochemicals (LLC LINK), oil product supply (LLC LICARD, [see p. 90](#)), and power generation (LLC LUKOIL-Energoengineering). In the field of IT, the service centers are LLC LUKOIL-Technologies and LUKOIL Technology Services GmbH. There is also a Multifunctional Business Support Center combining routine support functions.

Examples of ISC functions and activities

Exploration and Production

LLC LUKOIL-Engineering has created a center of expertise for oil and gas production entities of LUKOIL Group; its main task is to increase the engineering and technological level of performance of work and projects.

DECARBONIZATION

- ✔ Implementing measures to reduce GHG emissions, including through increased energy efficiency

INNOVATION-DRIVEN DEVELOPMENT

- ✔ Implementing R&D results
- ✔ Searching for and adapting new sectoral technology solutions

DIGITALIZATION AND DATA MANAGEMENT

- ✔ Implementing and supporting the development of sectoral IT systems
- ✔ Implementing unified principles, processes, and tools for data collection, processing, and analysis

PROJECT MANAGEMENT

- ✔ Developing practices and processes for multidisciplinary team collaboration
- ✔ Ensuring cross-functional interaction when implementing projects



Examples of work streams and functional tasks¹

Refining and Distribution

LLC LINK consolidates industry expertise in the field of engineering and technological support and capital project management. One of the principal objectives of this ISC is to improve the performance of production facilities by bridging technology gaps, developing optimization solutions, and improving product quality and formulas. The new KPIs, Improving the Performance of Refining Entities and Quality of Service Index, were introduced to assess the ISC performance and quality of services in 2023.

TECHNOLOGICAL IMPROVEMENT AND ENERGY EFFICIENCY

- ✔ Examination, development of technical solutions to increase equipment energy efficiency
- ✔ R&D center (catalyst testing, developing additives and reagents formulas)
- ✔ Inspection of new technologies, including decarbonization
- ✔ Development of engineering models for units

MECHANICAL READINESS AND OVERHAULS

- ✔ Repair supervision
- ✔ Use of the RBI², RCM³, HAZOP⁴, RCA⁵ methodologies
- ✔ Development of predictive analytics for equipment

DEVELOPMENT AND EFFICIENCY

- ✔ Operational excellence
- ✔ Digitalization (support for and development of LP⁶ modeling, development of digital modeling systems)
- ✔ FEED⁷ (feasibility studies and basic designs), optimization of investment projects
- ✔ Internal efficiency and customer service

REENGINEERING CENTER

- ✔ Development of design documents
- ✔ Inspection of alternative equipment producers

PROJECT MANAGEMENT OFFICE

- ✔ Project management, project practice analysis
- ✔ Management of the design process
- ✔ Consulting and control during the implementation of projects



Examples of work performed by LLC LINK

✔ **27** formulas of additives and reagents developed

✔ **4** alternative catalyst systems selected

✔ engineering models for **50** items developed

✔ predictive analytics for **662** items of equipment configured in Mtell⁸

✔ **45** EKONS⁹ performance monitoring panels introduced

The Reengineering Center, together with the LUKOIL Group entities, has identified 240 priority parts for which the design and operational documents should be developed and production organized in Russia in 2023.

¹ The full range of work streams and functional tasks of LLC LINK is broader than presented in the table.

² RBI (Risk-Based Inspection) means the process of determining the optimal scope and frequency of monitoring the technical condition of equipment based on risk factors.

³ RCM (Reliability Centered Maintenance) means maintenance intended to ensure the reliability of equipment.

⁴ HAZOP (HAZARD and OPERABILITY) means a systematic and structured method of risk analysis to identify hazards at a facility using a structured system of questions and answers to detect deviations of process system parameters from the project targets, to assess consequences to the safety of personnel, the environment, and equipment.

⁵ RCA (Root Cost Analysis) means the process of identifying the root causes of issues, for subsequent development of corrective actions.

⁶ LP (Linear Programming) uses mathematical modeling to find the best solution within a constraint matrix.

⁷ FEED is front-end engineering design.

⁸ Mtell is a predictive analysis software.

⁹ EKONS is an online system for monitoring the efficiency of process plants.

LUKOIL Group's sustainable development goal: **Maintaining an effective corporate governance system**

Corporate governance highlights

The Company has a corporate governance system matching the scale of our business and based on international standards of corporate conduct and business ethics, Russian law, the Listing Rules of PJSC Moscow Exchange, and the principles of the Corporate Governance Code recommended by the Bank of Russia.

areas and making decisions in the area of sustainable development. The Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors of PJSC LUKOIL (the SISCAC) has been making a great contribution to deepening the Board's activities in the area of sustainability and ESG factors.

Board of Directors and Board committees

The Board of Directors plays a key role in defining strategic objectives of LUKOIL Group, in forming the Company's position on the most important issues related to global sustainability trends and initiatives aimed at creating new opportunities in the long term. The Board of Directors *monitors the implementation* of the Group's strategic development program and functional programs based on an assessment of KPI dynamics and subject-matter reports. It assesses compliance with legal requirements and expands the practice of regular reviews of stakeholder expectations and external changes, including in connection with sustainable development objectives.

The committees of the Board of Directors do a great deal of work to prepare recommendations on identifying priority

Executive level

To ensure that management is most involved in achieving the strategic objectives, a remuneration system is in place that takes into account sustainability matters and ESG factors. The *motivating KPIs* include health, safety, and environment (HSE) indicators, resource saving and energy efficiency indicators, the standard level of which is set by a respective organizational and administrative document of the Chief Executive Officer (CEO) of PJSC LUKOIL.

Details of the performance assessment system can be found on the corporate website, in the [Sustainability / Sustainable Development Management](#) section.

Changes in the corporate governance system

In 2022, LUKOIL's corporate governance system underwent changes caused by the need to adapt the corporate practices to improve the Company's resilience to emerging risks.

In December 2022, the structure of the Company's executive bodies was streamlined by the resolution of the extraordinary General Shareholders' Meeting by forming the Company's executive body as sole executive body without the collegial executive body of the Company (Management Committee) and the matters within its remit were transferred to the sole executive body; the name of the sole executive body of the Company (President) was changed to the Chief Executive Officer. The matter of appointing the sole executive body of the Company and early termination of its powers is referred to the competence of the Board of Directors instead of the

General Shareholders Meeting in order to increase the efficiency of decision-making on this issue.

Through the decision dated June 21, 2022, the annual General Shareholders' Meeting elected the Board of Directors consisting of 11 persons¹ and defined that nine members of the Board are to be elected at the annual General Shareholders' Meeting of PJSC LUKOIL in 2023. The number of independent directors complies with the requirements of the Listing Rules of PJSC Moscow Exchange for corporate governance of issuers and the recommendations of the Corporate Governance Code (at least three people).

Detailed information on the corporate governance system is provided in the [Annual Report for 2022](#), and in the [ESG Databook \(Appendix 9\)](#).

Shareholder and investor relations

Work with capital market participants and shareholders in 2022 was primarily related to the prompt response to significant external risks arising from restrictions on transactions in Russian securities and on the use of capital by non-residents of the Russian Federation.

Three General Shareholders' Meetings were held during the year, with resolutions adopted on the most important issues. We conducted targeted work with shareholders and infrastructure market participants, and provided timely and complete responses to all the incoming requests.

Information disclosure

During the year, the Company managed to adapt its information disclosure system to the current circumstances, with due account for the disclosure restrictions introduced by Resolution No. 351 of the Government of the Russian Federation dated March 12, 2022, as amended.

¹ As at December 31, 2022, the Board of Directors of PJSC LUKOIL included nine persons.

Sustainability issues in 2022

Board of Directors and Board committees

In 2022, the Board of Directors held 28 meetings and considered 83 issues, 24 of which were related to sustainability and had been previously considered by relevant committees.

In the reporting year, the Board of Directors approved:

- ▶ [LUKOIL Group Sustainability Policy](#);
- ▶ [LUKOIL Group Human Rights Policy](#);
- ▶ [LUKOIL Group Sustainability Report for 2021](#).

Members of the Board of Directors received reports on the following:

- ▶ work with investors and shareholders of PJSC LUKOIL in 2022;
- ▶ HR management work by the LUKOIL Group entities;
- ▶ the strategy for achieving carbon neutrality and climate risk management system;
- ▶ the environmental safety program of the LUKOIL Group;
- ▶ the realization of the decarbonization program;
- ▶ the regulatory framework for sustainable development;
- ▶ the functioning and improvement of the risk management and internal control system.

In particular, the following decisions were taken based on the discussion of LUKOIL Group's environmental safety program and decarbonization program:

- ▶ to continue the work to ensure the regulatory level of environmental impact as part of LUKOIL Group's Environmental Safety Program for 2022–2024;
- ▶ when drafting LUKOIL Group's Decarbonization Program for 2023–2025, prioritize projects to upgrade core and auxiliary production processes to introduce the best available resource-saving and energy-efficient technologies, as well as implement promising

projects aimed at reducing the carbon footprint of products.

In order to improve the Company's resilience to emerging risks, the Board of Directors considered the following issues:

- ▶ import substitution in the Exploration and Production business segment and in oil refining and petrochemicals as a factor of sustainability of LUKOIL Group's business;
- ▶ modification of the supply strategy in the context of trade restrictions;
- ▶ application of the Integrated Management System (IMS) to support and ensure the efficiency of business processes at the Company.

HSE committee of PJSC LUKOIL

LUKOIL's HSE Committee discussed amendments to the Russian health and safety legislation, creation of target HSE programs, and key measures to improve

the culture of safe behavior, in particular, in contracting organizations. It also updated the calculation methodology for the KPI Ensuring

the Required Level of Health, Safety, and Environmental Protection at the LUKOIL Group Entities.

Corporate Secretary

The Corporate Secretary pays considerable attention to the Company's sustainability activities. As a member of the Sustainability Task Force, the Corporate Secretary:

- ▶ analyzes current trends in the field of sustainable development within their competence;
- ▶ interacts with members of the Board of Directors on sustainability issues;
- ▶ organizes interaction between members of the Board of Directors and stakeholders on these issues;
- ▶ interacts with LUKOIL's specialized structural divisions, as well as members of the SISCAC and other committees;
- ▶ participates in the development of approaches to the formation of the management system and improvement of the quality of sustainable development management;
- ▶ participates in coordinating the preparation of LUKOIL Group's non-financial reports;
- ▶ participates in interaction with stakeholders on sustainable development.

Quality of corporate governance

LUKOIL is committed to conducting business in good faith and takes measures on an ongoing basis to prevent non-compliance with legislation and other mandatory and recommended rules and principles.

legislation, international treaties, and the laws of foreign jurisdictions where the Group entities operate.

with violations of the environmental legislation.

In the reporting period, there were no cases of product quality non-compliance with regulatory requirements that affected the health and safety of consumers and led to fines or penalties. The Company paid three significant fines (for damages) for a total amount of RUB 476 million in connection

More information on the tax policy can be found on the corporate website, in the [Sustainability / Tax Policy](#) section.

In 2022, no rulings were issued against the Company by state authorities¹:

- ▶ on penalties related to violations of anticorruption laws;
- ▶ on penalties related to significant breaches of social law and regulations, including in the area of human rights;
- ▶ in significant cases involving violations of antitrust laws.

¹ Definitions of terms with 'case', 'significant case', 'significant breach/deviation', 'significant accident' are provided in [Appendix 8](#).



LUKOIL Group's sustainable development goal: Maintaining an effective corporate governance system

We link LUKOIL Group's long-term development with meeting the society's energy needs by using both low-carbon and conventional energy sources. As an efficient natural energy accumulator, oil continues to play an important role in the global energy balance.

The Company is adapting to the changing situation in the global hydrocarbon market, maintaining a focus on sustainable development goals. The priorities set forth in the LUKOIL Group Sustainability Policy remained valid in 2022. The Company continued to implement key investment projects and social programs, as well as targeted programs in the area of climate, environment and industrial safety.

PJSC LUKOIL has a sustainable development management system in place. Its detailed description can be found on the corporate website, in the [Sustainability / Sustainable Development Management](#) section.

Management system

Regulatory framework

The Company has a [LUKOIL Group Sustainability Policy](#) and policies on major impacts in line with [the 11 UN Sustainable Development Goals](#) and 15 targets that are a priority for LUKOIL Group. We continued to improve the regulatory framework in 2022: the range of regulated issues was expanded, the [LUKOIL Group Human Rights Policy](#) was approved.

For policy details, please refer to the [People and Relationships](#) section of this Report.

The business conduct of the Group's entities is governed by corporate sustainability and compliance policies:

- ▶ LUKOIL Group Sustainability Policy
- ▶ Code of Business Conduct and Ethics of PJSC LUKOIL
- ▶ LUKOIL Group Human Rights Policy
- ▶ Risk Management and Internal Control Policy of PJSC LUKOIL
- ▶ HSE Policy of LUKOIL Group in the 21st century
- ▶ LUKOIL Group Technical Policy for Energy Efficiency and GHG Emissions Reduction in Russia
- ▶ The Regulations on Information Policy of PJSC LUKOIL
- ▶ Antimonopoly Policy of LUKOIL Group
- ▶ Anti-Corruption Policy of PJSC LUKOIL
- ▶ Human Capital Management Policy of PJSC LUKOIL
- ▶ Social Code of PJSC LUKOIL

The documents are available on the corporate website, in the [Document Center](#).

Risk management

The Board of Directors determines the basic principles and approaches to the organization of the risk management system, internal control and internal audit. Sustainability and ESG risks are integrated into the risk management system.

In 2022, other risks associated with changes in the macroeconomic situation

and the volatility of stock and commodity markets also materialized¹. Therefore, the Company updated its Risk Classifier by adding a new risk group, Introduction of International Sanctions and Embargos, which includes, among others, risks associated with the use of information technology.

A description of sustainability risks and measures to manage them can be found on the corporate website, in the section [Sustainability / Sustainable Development Management](#) section. Information on climate risks is presented in the [CDP Report for 2021](#), as well as in the [Climate agenda](#) section of this Report.

Given the nature and geography of LUKOIL Group's operations, the following key risks are identified:

- ▶ public health and epidemic spread risks;
- ▶ climate change risks;
- ▶ health, safety and environmental risks;
- ▶ human rights risks;
- ▶ risk of shortage of qualified personnel;
- ▶ reputational risk.

Allocation of responsibility

The organizational structure of sustainability management ensures that the matters underlying strategic decision-making are thought through in depth.

The Board of Directors provides strategic direction. It has a key role in defining the Company's sustainability strategy and initiatives. The Strategy, Investment, Sustainability, and Climate Adaptation Committee of the Board of Directors is intended to consider and prepare recommendations for the Board of Directors to make decisions on the Company's priorities and long-term development strategy, including in the

area of sustainable development and climate adaptation. The CEO manages the day-to-day operations of the Group.

The HSE Committee of PJSC LUKOIL, the Sustainability Task Force and the Decarbonization and Climate Adaptation Task Force of PJSC LUKOIL, as well as heads of structural divisions of PJSC LUKOIL and heads of the Group's entities analyze the Group's activities and develop proposals on the operational level.

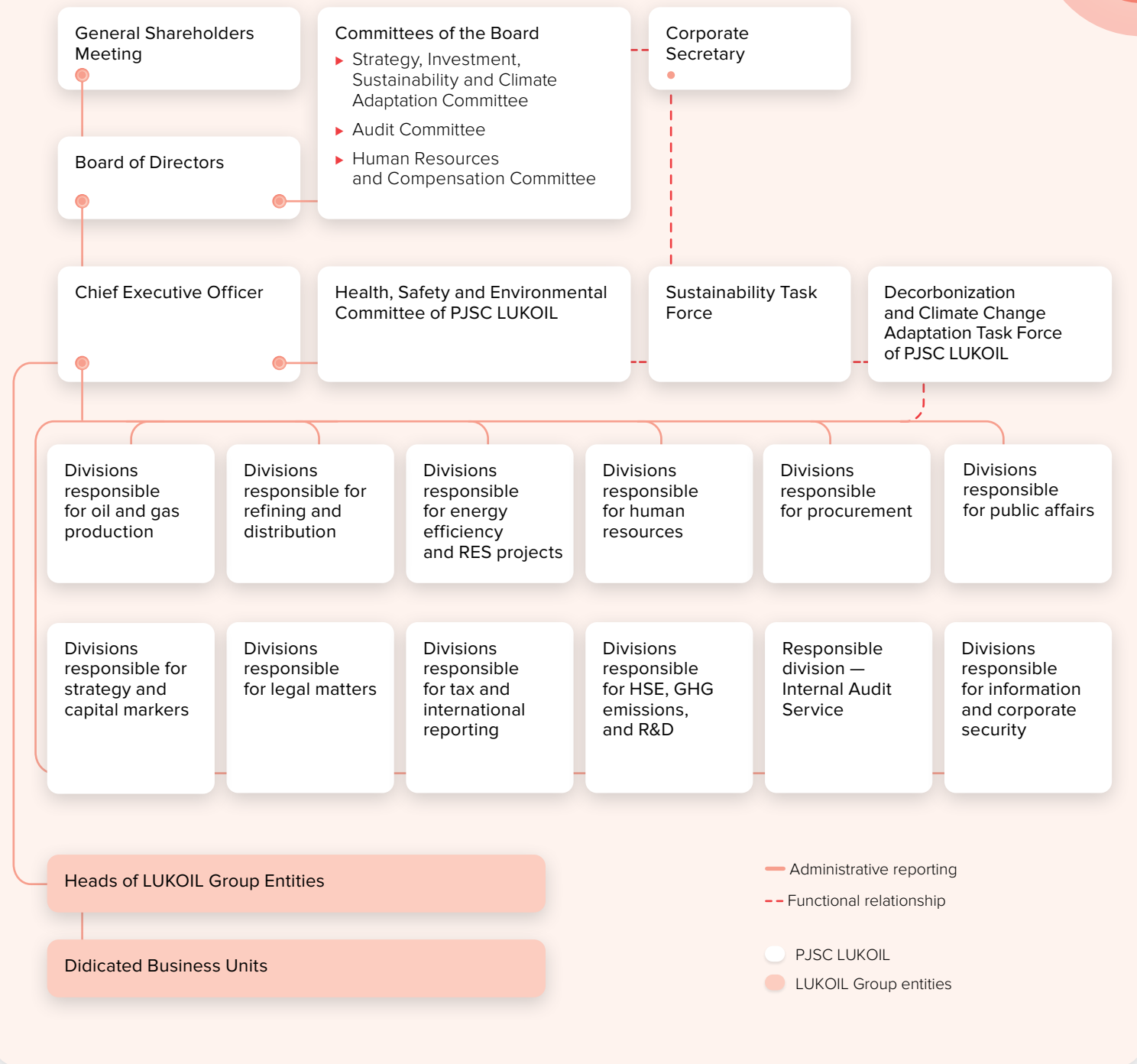
The committees and task forces examine the external environment, industry and global trends, risks and opportunities; review issues related to legal requirements

and stakeholder requests; determine tasks to further develop management practices and harmonize the corporate regulatory framework. Employees from various functions join the task forces to ensure that the matters under examination are addressed in depth.

Detailed description of the [governing bodies functions](#) and responsible persons can be found on the corporate website in the [Sustainability / Sustainable Development Management](#) section.

¹ For more details, refer to the [Economic sustainability](#) section.

Organizational structure of the sustainability management system at LUKOIL Group



Functional management

Policies, corporate standards, and target programs are in place at the operational level; annual KPI assessment is performed; and reports on the implementation of programs and KPIs are submitted to the Board of Directors and its committees for review. All the Russian entities of LUKOIL Group with production facilities have deployed management systems certified for compliance with the international and Russian standards, which are kept up to date and improved.

Coverage of employees of the LUKOIL Group entities with certified management systems

Management systems	Standards	Employee coverage, % of LUKOIL Group's headcount		
		2020	2021	2022
System of management of industrial, fire, radiation safety, emergency prevention, and liquidation, the protection of civilians, occupational safety, and environmental protection	ISO 14001:2015 and ISO 45001:2018	82	81	85
Energy management system	ISO 50001:2018	69	68	68
Quality management system	ISO 9001:2015	—	—	68

Note. With regard to the quality management system, the table shows the share of employees covered by the certified management system in the total number of employees of the Refining and Distribution business segment.

Corporate compliance assessment

The Internal Audit Service of PJSC LUKOIL and other services operating within the Group entities assess the level of compliance of PJSC LUKOIL and other LUKOIL Group entities with local regulatory acts (LRAs) and corporate requirements. The Internal Audit Service carries out its activities in accordance with the Company's LRAs and International Standards for the Professional Practice of Internal Auditing.

In the course of internal audits and consultations, the Internal Audit Service reviews sustainability programs of the LUKOIL Group entities, the progress of their implementation, identifies and assesses ethical and corruption risks. For this purpose, the Ethics and Anti-Corruption Programs Audit Group has been set up within the Internal Audit Service. This unit is also tasked with follow-up monitoring of measures to eliminate identified deviations and shortcomings.

In 2022, the Internal Audit units conducted 27 audits and five audit consultations. Based

on the audit results, no violations of the Code of Business Conduct and Ethics of PJSC LUKOIL and local regulatory acts that could have a significant impact on the achievement of the Company's strategic goals were identified.

Following the audits in 2022, the Internal Audit Service prepared recommendations to improve the efficiency of some of the Company's business processes, including amendments to the Regulations on Internal Control of PJSC LUKOIL (the Internal Control business process).

Corporate relations

PJSC LUKOIL continuously cooperates with other Group entities in implementing corporate policies and other regulatory documents, including by having the Internal Audit Service provide audit advice on the development and implementation

of corporate policies and procedures, as well as audits in accordance with the requirements governing the Internal Audit business process, and subsequently monitoring the measures to eliminate departures from the existing regulations revealed by the audits. The Internal Audit Service of PJSC LUKOIL monitors the

implementation of LRAs, including those governing sustainable development, anti-corruption, antimonopoly conduct, etc. In their turn, the Group's entities ensure compliance with the enterprise-wide requirements, improve their own corporate standards, where necessary, and inform their employees and partners about it.

LUKOIL's best practices. Corporate Social Responsibility Policy of the Bulgarian Oil Refinery

In 2022, the Oil Refinery in Bulgaria systematized its management approaches based on the LUKOIL Group Sustainability Policy and ISO 26000 Standard. LUKOIL Neftohim Burgas AD developed its own Corporate Social Responsibility Policy (the CSR Policy), which is available on the refinery's website and internal portal. The internal auditors received training on sustainability, and the first audit was performed to confirm that LUKOIL Neftohim Burgas AD's management approaches comply with the international standard.

The CSR Policy was communicated to the refinery employees and key contractors. The refinery employees are informed about sustainability and social responsibility objectives through the corporate newspaper and at operational meetings, as well as through a news feed displayed on a panel at the entrance to the refinery. In addition, thematic meetings are held, employee training is organized, and relevant topics are included in personal development plans for younger employees. The CSR Policy has been added to the set of tender documents that

are mandatory for potential contractors to study.

For external stakeholders, the CSR Policy was presented at a meeting of the Public Partnership Council created at the refinery. The Council comprises representatives of the legislative and municipal authorities, the public, the media, and the educational sector.



The LUKOIL Group entities won awards in the All-Russian RSPP competition

✓ **LLC LUKOIL-West Siberia**
in the category "For an Energy Efficiency Project"

✓ **LLC LUKOIL-Astrakhanenergo**
in the category "For Achievements in the Area of Occupational Health and Safety of Employees"

✓ **LLC LUKOIL-Perm**
in the category "For Talent Pool Development"

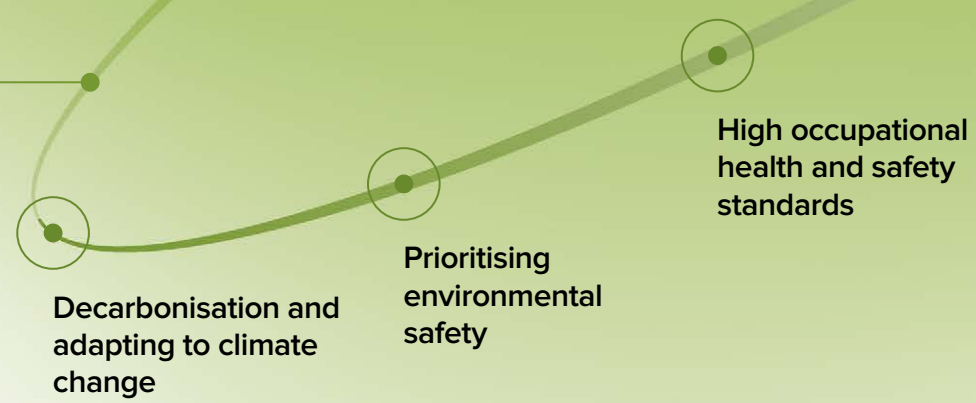
✓ **LLC LUKOIL-Permnefteorgsintez**
in the category "For a Digitalization Project"



CLIMATE AND NATURE



LUKOIL GROUP'S SUSTAINABLE DEVELOPMENT GOALS



- 32 Climate change
- 46 Environmental protection
- 62 Industrial safety

2022 goals and results



TARGETS

Climate change

- To reduce¹ controlled GHG emissions (Scope 1 + Scope 2) by at least **20%** compared to the 2017 level. (under comparable conditions²)
- To eliminate routine APG flaring³

Environmental protection and industrial safety

To consistently reduce the negative impact on the environment by introducing the best available technologies, equipment, materials and increasing the level of automation of process control



2022 RESULTS

- GHG emissions (Scope 1 + Scope 2) fell by **8%** compared to the 2017 level

Waste

- The waste management KPI was achieved as the volume of disposed and recovered waste was equal to the volume of waste generated
- The amount of waste accumulated during the pre-privatization period reduced by **36,000** tonnes

Land

- 88%** of contaminated⁵ land (71 ha) was reclaimed
- The share of corrosion-resistant pipes was **37%** of the total length of existing infield pipelines
- The specific oil spill coefficient in Russia reached five years' minimum

Water

- The discharge of insufficiently treated wastewater by oil and gas production and distribution entities ceased



KEY CHANGES IN 2022

- The Regulations on the LUKOIL Group GHG Emissions Management System were approved
- LLC LINK created a Decarbonization Lab
- Four facilities using renewable energy sources (solar power plants) were put into operation

- Tests of the Garant and Anaconda pipes made of heat-resistant polyethylene were successfully completed

Plans for 2023

Develop facilities using renewable energy sources (RES)



Advance methodological approaches to estimating GHG emissions during investment planning



Managing climate and environmental impacts



GOALS

Elements of the management system

The corporate policies establishes LUKOIL Group's goals, principles, and obligations
The long-term target to reduce GHG emissions has been adopted

Corporate documents

LUKOIL Group Sustainability Policy
[LUKOIL Group Policy for Health, Safety, and Environmental Protection in the 21st Century¹](#)
Regulations on the LUKOIL Group GHG Emissions Management System
LUKOIL Group Technical Policy for Energy Efficiency and GHG Emissions Reduction in Russia
[Insurance Coverage Program for LUKOIL Group entities in 2022](#)



STANDARDS AND BEST PRACTICES

100% of the LUKOIL Group entities must comply with corporate standards to the extent permitted by national law
Tools of the Continuous Improvement System are being implemented

16 fundamental standards of STO 1.6 "HSE Management System"
Regulations on Accounting for Indicators and Reporting on GHG Emissions of LUKOIL Group



RISK MANAGEMENT

The Significant HSE Risks Register and the Significant Environmental Issues Register of LUKOIL Group are updated on an annual basis. The registers are considered by the HSE Committee
Climate-related risks are included in the corporate risk management IT system

STO LUKOIL 1.6.6-2019 "HSE Management System. Management of Risks and Environmental Issues"
Module "Risk Management. Phase 2" Climate Risk Classifier



KEY PERFORMANCE INDICATORS

The composite indicator "Ensuring the Required HSE Levels at LUKOIL Group Entities" comprising indicators related to occupational injuries and accident rates, the key environmental impacts (pollutant emissions and discharges, waste management) is set annually
"Delivery of the Approved Energy Conservation Program"

Regulations on Evaluating the KPI "Ensuring the Required HSE Levels at LUKOIL Group Entities"

Summary of key performance indicators



CERTIFICATION OF THE MANAGEMENT SYSTEM

The IMS has been ISO 14001:2015 and ISO 45001:2018 certified
The energy management system has been ISO 50001:2018 certified

As at December 31, 2022, the following certificates were in effect:
▶ those issued to **45** Group entities (covering **85%** of LUKOIL Group's headcount)
▶ those issued to **24** Russian Group entities (covering **68%** of LUKOIL Group's headcount)



TARGET PROGRAMS, PROJECTS AND INITIATIVES

Environmental Safety Program of LUKOIL Group for 2022–2024
Decarbonization Program of LUKOIL Group for 2022–2024
Program of Industrial Safety, Improvement of Labor Conditions and Occupational Safety, and Emergency Prevention and Liquidation of LUKOIL Group for 2022–2024
APG Rational Use Program of LUKOIL Group Entities for 2022–2024
Energy Conservation Program of LUKOIL Group Entities for 2023 and 2024–2025
Research and engineering projects are undertaken as part of the R&D program

The programs have been approved by PJSC LUKOIL's orders²



¹ Hereinafter in the text of the Report, 'GHG emissions reduction' means a reduction in the amount of gross GHG emissions relative to the base year or another year (for reporting purposes, the relevant values may be compared not only relative to the base year).

² The term 'under comparable conditions' means: within the boundaries of accounting for GHG emissions approved in 2020 when setting the strategic GHG emissions reduction target by 2030 and with the relative stability of technological processes, production volumes, and external factors affecting the Company's operations maintained.

³ Routine APG flaring means flaring during oil production operations in the absence of sufficient facilities or amenable geology to re-inject the produced gas, utilize it on-site, or dispatch it to a market. Routine flaring does not include flaring for safety reasons, even if it is continuous (World Bank). Commitment as part of the Company's participation in the Zero Routine Flaring by 2030 initiative.

⁴ Within the boundaries of accounting for GHG emissions.

⁵ Contaminated land = existing one at the end of 2021 + generated one in 2022.

¹ Hereinafter, the HSE Policy.

² During the previous reporting period, the target programs for 2021–2023 were in effect.

LUKOIL Group's sustainable development goal: Decarbonisation and adapting to climate change

The Company continues to implement its climate strategy, which is part of its corporate strategic development program and a response to global energy transition trends. The strategy provides a framework for adapting LUKOIL Group's business model to climate change effects by strengthening the Company's ability to manage risks and align with the legal framework and business environment.



MANAGEMENT

- ✓ PJSC LUKOIL and LUKOIL Group have built an interaction structure and allocated responsibility for the climate agenda
- ✓ The management structure includes the Decarbonization and Climate Adaptation business process. The Decarbonization and Climate Change Adaptation Task Force (hereinafter, the "Decarbonization Task Force") has been set up by PJSC LUKOIL and coordinates its activities with the SISCAC on an ongoing basis



STRATEGY

- ✓ The target to reduce GHG emissions by 2030 has been set based on a scenario analysis
- ✓ The Regulations on the LUKOIL Group GHG Emissions Management System were approved
- ✓ The first Decarbonization Program for 2022–2024 is being implemented by the Group
- ✓ LLC LINK has launched a Decarbonization Lab to develop and test promising projects and technologies



RISKS

- ✓ Risks and opportunities for the Company's development in the context of climate change have been identified and included in the corporate risk management system
- ✓ The Framework for Financial Assessment of Climate-Related Risks has been developed



REPORTING

- ✓ The Regulations on Accounting for Indicators and Reporting on GHG Emissions of LUKOIL Group and other LRAs are in place
- ✓ GHG emissions data are published in the CDP questionnaire and the Sustainability Report

Climate agenda

Despite the changing geopolitical situation and actively discussed energy security in 2022, many countries around the world, including Russia, continued to meet national GHG emissions reduction targets.

LUKOIL keeps monitoring climate regulation in Russia and abroad and participates in discussions of rule-making initiatives. We place a special focus on stakeholder engagement

in the context of establishing national climate change legislation and strive to get in sync with global trends.

We promptly take into account any new regulatory requirements adopted in Russia and abroad as part of the Decarbonization and Climate Adaptation business process.

Regulatory framework in Russia

Russia has created and continues to develop a national system for GHG emissions and carbon unit regulation in accordance with the country's commitment to achieve carbon neutrality by 2060 and the national goals¹. Building on the provisions of the main federal law², during 2021–2022, a regulatory framework was formed, mandatory reporting on GHG emissions introduced, and trading in carbon units launched that are issued based on the results of climate projects.

In 2022, LUKOIL participated in discussions of a number of draft federal laws (for example, the so-called Sakhalin experiment³ and the related regulations), as well as industry-specific climate adaptation plans⁴, as part of the public discussion of regulations. In its dialog with the authorities, the Company draws attention to the issues that would help improve the effectiveness of climate policy in the interests of national economic development, such as taking into account

the prevailing external conditions when planning regulatory measures and supporting the development of climate initiatives and climate projects.

The methodologies of the corporate GHG emissions accounting system comply with the requirements of Russian legislation and international standards that have come into force.

Regulation abroad

In 2022, the European Union (EU) adopted a new package of measures Fit for 55 introducing more ambitious GHG emissions reduction targets and a reform of the EU ETS, as well as other initiatives. LUKOIL Group's foreign refineries participate in the EU ETS system. Phase IV of the EU ETS (2021–2030) envisages a gradual reduction in the number of free GHG emission allowances in some industries, while introducing the CBAM⁵

mechanism, as well as a reduction in the market-traded allowances traded on the market. To mitigate regulatory risks, the LUKOIL Group Decarbonization Program for 2022–2024 includes measures to reduce emissions from refining facilities.

The Republic of Uzbekistan has also set a relevant national target and introduced requirements for GHG accounting. The country's strategic targets include reducing

the carbon intensity of the economy, cutting the GHG emissions intensity of GDP by 35% by 2030, and taking measures to adapt to climate change⁶. Operating the Kandym-Khauzak-Shady development project, LUKOIL monitors GHG emissions, applies energy-saving technologies⁷, and supports social projects that include, among other things, planting climate-resilient trees.

¹ Resolution of the Government of the Russian Federation No. 3052-r dated October 29, 2021 "On the Strategy for Social and Economic Development of the Russian Federation with a Low Level of Greenhouse Gas Emissions up to 2050".
² Federal Law No. 296-FZ dated July 2, 2021 "On Limiting Greenhouse Gas Emissions".
³ Federal Law No. 34-FZ dated March 6, 2022 "On the Conduct of an Experiment to Limit GHG Emissions in Individual RF Constituents", effective from 1 September 2022.
⁴ Approved by the Government of the Russian Federation and the Ministry of Energy of the Russian Federation.
⁵ CBAM is the Carbon Border Adjustment Mechanism.
⁶ Resolution of the President of the Republic of Uzbekistan No. PP-436 dated December 2, 2022 "On Measures to Increase Effectiveness of Reforms Aimed at Transition of the Republic of Uzbekistan to Green Economy by 2030".
⁷ Refer to the Energy *Efficiency Management subsection in the Decarbonization Program* section.

GHG emissions accounting system

In line with the strategic goals, PJSC LUKOIL and other Group entities continued methodological work and planning for decarbonization and climate adaptation in 2022.

Decarbonization Task Force

The Decarbonization Task Force held three meetings to discuss 15 matters. As a result of its work:

- ✔ a fundamental document "Regulations on the LUKOIL Group GHG Emissions Management System" was developed and approved;
- ✔ an analysis of physical risks of climate change was conducted, and the response practices at Russian and foreign entities were examined;
- ✔ measures were identified to adapt to climate change as part of environmental and industrial safety programs;
- ✔ the Framework for Financial Assessment of Climate-Related Risks was tested;
- ✔ activities under LUKOIL Group's Decarbonization Program for 2022–2024 were performed;
- ✔ the Decarbonization Lab was set up at LLC LINK.

Regulations on the GHG emissions system

The new Regulations on the LUKOIL Group GHG Emissions Management System (the Regulations) establish uniform GHG emission management requirements for the Group entities and define procedures and requirements for planning, implementation, and control of processes that ensure the Company's strategic development with low GHG emissions.

The Regulations contain requirements for ensuring the uninterrupted functioning of the GHG emissions management system across the lifecycle of production facilities. To this end, comprehensive management activities are undertaken, including assessment of climate risks, identification of opportunities and setting goals, development of corporate standards, planning of decarbonization

program activities, monitoring their implementation, creation of GHG emission indicators for the performance analysis, and provision of information on LUKOIL Group performance to stakeholders. Pursuant to the Regulations, authority and responsibility for the performance of the necessary functions and procedures have been allocated at all levels of management of the Group. This has completed the process of establishing the foundations of the corporate GHG emissions management system.

Information on the GHG emissions management system is also available on the website in the [Sustainability / Climate Change](#).

Training

In order to improve the employees' skill in accounting for and reporting on GHG emissions, a workshop meeting was held that was attended by 152 professionals of the LUKOIL Group entities responsible for data preparation. The participants discussed methodological issues and rules of work with the corporate platform GHG Emissions Regulation.

Climate risk management

In 2022, the Company completed the creation of a unified classification of climate risks and opportunities in accordance with the TCFD recommendations, with the data integrated into the corporate risk management information system. Uniform approaches, principles and indicators for financial assessment of climate risks, as well as materiality criteria, were developed. The process of climate risk assessment was described, and the framework for their financial assessment tested. The results of these efforts were

presented at a meeting of the Decarbonization Task Force. The drafting of the Methodology for Financial Assessment of Risks and Opportunities is planned for 2023.

Risks that may have a significant financial or strategic effect on the Company's operations:

- ▶ Reduction in free GHG emission allowances
- ▶ Increase in the price of emission certificates
- ▶ Implementation of payments for GHG emissions in Russia

Opportunities that may have a significant financial or strategic effect on the Company's operations:

- ▶ Energy saving
- ▶ Natural gas
- ▶ RES facilities
- ▶ CO₂ capture and injection into reservoirs
- ▶ Advanced biofuels

Detailed information on climate-related risk management is included in section C2 "Risks and opportunities" of the [CDP Report for 2021 and the Annual Report for 2022](#).

Climate adaptation activities

Given the likelihood of a significant impact of climate on critical production infrastructure, the Company considers it reasonable to create climate change monitoring systems and implement corrective and adaptation measures in a timely manner.

In 2022, as our first step, LUKOIL developed a list of standard climate adaptation measures for target functional HSE programs of

LUKOIL Group, which was included in the corporate standard STO LUKOIL 1.6.8–2022 "HSE Management System. Planning of Measures". The document was prepared based on the analysis of the main climatic factors specific to the regions where the LUKOIL Group entities operate, and taking into account the measures being already implemented as part of the Environmental Safety Program (the ESP) and the Industrial Safety

Program (the ISP)¹. The Group entities are instructed to use it in their planning process. Accordingly, the procedure for planning and implementing adaptation measures has been embedded in the company-wide HSE management system.

Information on measures to adapt to climate change when performing work in the Arctic is provided in the [Sustainability / Safety](#) section.

Decarbonization Lab

In 2022, LLC LINK created the Decarbonization Lab with the following main objectives:

- ✔ monitoring and technical expert review of the best available technologies for GHG emissions reduction, wider RES use, and manufacturing of low-carbon products;
- ✔ development, performance analysis of and technological support for activities for GHG emissions reduction and decarbonization;
- ✔ development of programs for laboratory and pilot testing of decarbonization projects, R&D with the use of LLC LINK resources and with the involvement of technological partners;
- ✔ participation in industry groups and platforms where climate projects and regulation of the fuel and energy complex are discussed.

¹ For the full names of the programs in effect, [refer to p. 31](#)

Decarbonization Program

The Company considers climate adaptation actions and measures to reduce GHG emissions implemented within the target programs as the key steps in mitigating climate risks and ensuring safe and stable production operations.

The Decarbonization Program is part of the medium-term plan to achieve the strategic 20% GHG emissions reduction target by 2030 relative to the 2017 baseline (within the approved organizational boundaries). The Decarbonization Program is formed on a rolling planning basis in accordance with corporate procedures. Monitoring tool for the program effectiveness is a regular inventory of GHG emissions.

In 2022, the first medium-term target Decarbonization Program of LUKOIL Group for 2022–2024 covering over 500 activities was implemented.

Due to changes in external conditions, the Decarbonization Program activities were carried out with some adjustments to the implementation timeline. The implementation of energy-saving measures made a significant contribution to reducing GHG emissions in the Power Generation business sector.

Types of activities that made a major contribution to reducing GHG emissions in 2022



Oil and Gas Production

- ✓ Optimization of steam boilers of combined-cycle plants
- ✓ APG utilization and conversion of furnaces of oil processing units to APG
- ✓ Application of energy-saving methods for enhanced oil recovery
- ✓ Equipment reconstruction and upgrade



Oil Refining, Petrochemicals and Gas Refining

- ✓ Optimization of production processes and equipment operation
- ✓ Equipment upgrade
- ✓ Monitoring of energy consumption
- ✓ Flue gas heat recovery



Power Generation

- ✓ SPP construction
- ✓ Replacement and upgrade of equipment, installation of more efficient burners
- ✓ Rehabilitation of heating network pipelines insulation
- ✓ Facilities retrofitting, upgrade of fuel oil facilities
- ✓ Regulation of the utilization of gas turbine plants

Energy efficiency management

The Russian entities of LUKOIL Group maintain an integrated energy management system compliant with ISO 50001:2018. The key management tools include energy inspections, internal audits and scheduled activities.

In 2022, three Group entities¹ took part in a pilot project to manage demand for electric power, which expands the range of measures used to optimize and reduce energy costs.

The power generation entities continue to implement a project to upgrade three power units of the Krasnodar CHPP and a comprehensive program to upgrade heating networks in Rostov-on-Don and Volgograd. Among other things, the measures affect the energy efficiency of production processes.

The energy management system includes planning of target activities, evaluation of their implementation at the end of the year and adjustment of the targets for the next period. The summary of KPIs for the Russian entities (except for oil refining, petrochemicals and gas refining) includes an indicator “Delivery of the Approved Energy Conservation Program”; at the end of 2022, all the Russian entities of LUKOIL met this indicator.

Information on the energy management system is also available on the website in the [Sustainability / Climate Change](#) section. The [ESG Databook](#) contains information on the certification of the management system.

The Energy Conservation Program sets out activities that are implemented in each business segment. A group of projects with the highest economic efficiency potential has been identified.

Key activities to reduce energy consumption in 2022



Oil and Gas Production

- ✓ Application of energy-saving methods for enhanced oil recovery
- ✓ Optimization and replacement of pumping and rotating equipment with more productive one
- ✓ Introduction of frequency regulation
- ✓ Optimization of equipment utilization and energy consumption
- ✓ Lighting systems upgrade
- ✓ Installation of electric heating temperature control systems



Oil Refining and Petrochemicals

- ✓ Introduction of frequency regulation
- ✓ Optimization of pumping equipment
- ✓ Lighting systems upgrade
- ✓ Optimization of recycled water supply systems
- ✓ Reconstruction and upgrade of condensate recycling systems
- ✓ Installation of electric heating temperature control systems



Oil Product Supply and Transportation

- ✓ Optimization of energy consumption for filling station and oil depot lighting and space heating
- ✓ Lighting systems upgrade, replacement of heating cables with an induction heating system for pipelines at the transportation entities



Power Generation

- ✓ Introduction of frequency regulation
- ✓ Optimization of the number of transformers
- ✓ Lighting systems and thermal insulation upgrade
- ✓ Retrofitting of fuel oil facilities, pumps, boiler houses

¹ LLC LUKOIL-West Siberia, LLC LUKOIL-Perm, and LLC Stavrolen.

Energoproryv Project

Since 2020, LUKOIL Group's refineries and petrochemical entities have been implementing the Energoproryv Project, which is one of the CIS tools aimed at significantly improving the energy efficiency of refining facilities. The main goals of the project are:

- ▶ reduction in CO₂ emissions (Scope 1+2);
- ▶ technological improvement of oil and gas processing facilities.

The project roadmap comprises measures to optimize equipment operation, thereby reducing consumption of fuel, heat, and electricity and, consequently, GHG emissions.

Due to changes in the external conditions in 2022, the Company had to abandon its plans to implement some activities under the project, resulting in a slightly slower pace

of reduction in CO₂ emissions. As a further step in the roadmap implementation, LLC LINK will expand its activities and expertise, and the Company will continue exploring new technological solutions while meeting the goals and objectives of the project.

In 2022, 46 activities were completed under the project with a total reduction of about 30,000 tonnes of CO₂e through:

- ▶ upgrading/optimizing the operation of furnaces and replacement of recovery boilers;
- ▶ integrated heat recovery (installation of condensate traps, waste heat recovery, optimization of heat-exchange equipment and process parameters, elimination of heat losses in the transport system);
- ▶ improving the efficiency of power consumption (installing frequency control systems on electrical equipment, replacing/upgrading outdated equipment, and optimizing power supply schemes).

Indicators

In 2022, energy consumption went up due to increased production. At the same time, energy consumption from RES facilities rose (from 15 to 153 million kWh) as a result of green power supplies under

free bilateral contracts with qualified RES facilities of LLC LUKOIL-Ekoenergo¹. The supplies came primarily from the Tsimlyanskaya HPP with the installed capacity of 211.5 MW, which is the largest

qualified RES facility in Russia, as well as from the Krasnoarmeyskaya and Neftezavodskaya solar power plants (SPPs) with the installed capacities of 10 and 20 MW, respectively.

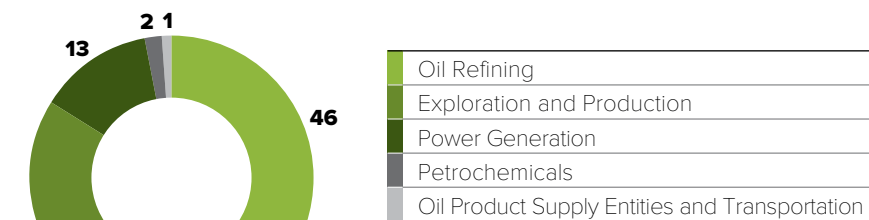
Energy consumption for production purposes within the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
Energy consumption for production purposes (1.1 + 1.2 + 1.3 – 1.4)	mIn GJ	465	477	524
1.1. Energy purchased for consumption for production purposes	mIn GJ	69	66	71
1.2. Non-renewable fuel consumed by stationary production facilities (supporting power generation)	mIn GJ	515	518	556
1.3. Renewable electric energy consumed	mIn GJ	0.049	0.054	0.55
1.4. Energy sold and supplied	mIn GJ	119	107	103

Notes. The data are provided within the reporting boundaries for GHG emissions. Full details of energy consumption for production purposes are provided in the ESG Databook (Appendix 9). Consumption of renewable electric energy through 2021 indicates the consumption of energy produced from own RES (supporting power generation); starting from 2022, it includes the energy consumption from own RES and under free bilateral contracts with the qualified RES facilities.

¹ Free bilateral contracts are made when a consumer purchases green energy directly from its producers.

Energy consumption for production purposes by business activity of the LUKOIL Group entities in 2022, %



Note. The Oil Refining business includes data on all LUKOIL Group refineries (under operational control of PJSC LUKOIL) and LLC LLK-International.

Energy intensity

Indicators	Unit of measurement	2020	2021	2022
Exploration and Production	GJ/boe	0.247	0.247	0.266
Oil Refining	GJ/tonne of manufactured products	4.0	3.6	3.8
Petrochemicals	GJ/tonne of processed basic raw materials	4.1	4.1	4.1

Notes. The Energy Intensity calculation formula in the Exploration and Production business segment: energy consumption for production purposes by entities from the Exploration and Production business segment included in the scope of accounting for GHG emissions / total production of oil and gas condensate, natural gas and APG, liquid hydrocarbons produced at the Lokosovsky Gas Processing Plant (due to the specifics of the technological process of hydrocarbon production at LLC LUKOIL-West Siberia).

Improving energy efficiency of marketable gas production in Uzbekistan

The development of the Kandym group of gas deposits in Uzbekistan is one of LUKOIL's priority projects abroad. The Company's tasks there include well development and well site construction, production and processing of natural gas, and production of marketable gas and other products. A significant portion of gas (more than 70%) is produced in the Kandym-Khauzak-Shady area in the Bukhara Region. The main production facility is a gas processing complex (Kandym GPC) with a capacity of 8 billion

cubic meters of gas per year, one of the largest in Central Asia. The complex is designed to purify natural gas from hydrogen sulfide and produce marketable gas, stable gas condensate and marketable sulfur.

LUKOIL Uzbekistan Operating Company LLC has been aiming from the very beginning of the Kandym project to become a model for safe and environmentally friendly production. It participates in LUKOIL Group's decarbonization program to reduce GHG emissions. A number of projects planned

under the program have been found to be environmentally effective and economically feasible in the conditions of the Republic of Uzbekistan.

In 2021, the Kandym GPC successfully carried out pilot tests of a gas sweetening unit as part of the process mode optimization. The technical solutions found helped reduce fuel gas consumption in the auxiliary production system in 2022 with a corresponding reduction in GHG emissions.

Renewable energy sources

LUKOIL considers increased use of electricity generated from renewable sources as a significant aspect of its climate strategy, including:

- ▶ own consumption of green power to reduce the product carbon footprint and Scope 2 indirect GHG emissions (including through free bilateral contracts on the supply of electricity

from LUKOIL generating entities and RES CDAs);

- ▶ supply of green energy to external consumers (to reduce Scope 3 GHG emissions).

Given the specifics¹ of support measures for RES projects in Russia, including large projects to build SPPs and WPPs, the

Company prefers to work in partnership with Russian companies that have the production capacity and sufficient experience and expertise, which helps reduce the risks and shorten a project schedule.

Key projects in 2022

Small HPP on the Beshenka River.

One of the key events in 2022 was the completion of an investment project to upgrade the small Krasnopolyanskaya HPP on the Beshenka River with the introduction of automated systems and other solutions. Thanks to an innovative engineering solution (a trash rack), water is cleaned from waste falling into the river, which is extremely important for the unattended water inlet of a small HPP. In addition, the rack serves as fish protection and can regulate the sanitary water discharge and the water level in the river.

The project serves as a unique platform for introducing advanced technologies for automation of HPP operation processes with remote control from the dispatching center. In 2022, under-control remote operation of the small Krasnopolyanskaya

HPP from the Tsimlyanskaya HPP was carried out, which confirmed the appropriateness of the adopted technical solutions and the concept of HPP control without the constant presence of personnel.

WPP project development.

The Company is considering building a wind power plant on the Caspian Sea coast to supply green energy to the infrastructure of hydrocarbon production projects. Completion of wind monitoring is scheduled for 2023. Then, a comprehensive evaluation of the project will be carried out, and a final decision will be made. Another project concerns the construction of an offshore wind power plant in Azerbaijan. For this project, studies were conducted in the reporting year to select the best site for the facility.

Upgrade of Tsimlyanskaya HPP.

In 2022, the key technical solutions for the investment project Upgrade of Hydroelectric Unit No. 1 at Tsimlyanskaya HPP were defined. The project's objective is to restore the service reliability of Tsimlyanskaya HPP's hydroelectric unit No. 1, which has been in operation for 70 years. LUKOIL plans to install modern equipment, which will reduce operating costs and increase the reliability of the HPP.

Besides, in 2022, several solar energy projects were completed:

- ▶ The final expansion stage of the solar system on the plant in Lobau (Austria) was put into operation. The project stepped up the maximum capacity of the plant to 1.01 MW. Energy exceeding production needs goes into the new 0.16 MWh battery storage system or is fed into the public grid.

- ▶ A 0.04 MW SPP was installed on the roof of LUKOIL's head office in Moscow. It consists of 156 Russian-made photovoltaic modules. The generated electricity is transmitted to the building's internal power grid.

- ▶ A solar power plant with a capacity of 2.35 MW was commissioned at the Krasnodar CHPP.

- ▶ The solar power plant with a capacity of 0.047 MW was installed at the Dračevac fuel filling station in the Dalmatia Region (Croatia) to partially cover the station's own electricity needs.

¹ The key requirement is the use of localized equipment.

Short-term development and implementation plans for certain projects were adjusted. Immediate plans include:

- ▶ construction of a 5-MW SPP on free space of LUKOIL Lubricants Central Asia LLP in Kazakhstan;
- ▶ development of WPP construction projects.

LUKOIL's renewable energy


Energy sources

Installed capacity of generating facilities, MW

Supplies of generated electric energy


LUKOIL GROUP

420

 HYDROPOWER (4 HPPS AND 1 SMALL HPP)

292

To the LUKOIL Group entities and external consumers (Russia)

 SOLAR POWER (8 SPPS)

44

To the LUKOIL Group entities and external consumers (Russia, Bulgaria, Romania, Austria, Croatia)

 WIND POWER (1 WPP)

84

To external consumers (Romania)

Total amount and percentage of renewable electric energy generated by the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
Total amount of renewable energy generated	mIn kWh	836	1,021	1,071
Percentage of renewable electric energy in total electric energy generated (commercial + supporting power generation)	%	3.5	4.4	4.4

Notes. The dynamics of power generation from renewable sources can be explained by natural factors (water levels in rivers, number of windy/sunny days) and the progress of new RES facilities construction. More details are provided in the ESG Databook ([Appendix 9](#)).

Economic indicators of RES advancement projects

Indicators	Unit of measurement	2020	2021	2022
Investments in RES advancement	RUB mln	1,865	2,023	200
Percentage of income from sales of renewable electric energy	%	14	14	15

Notes. The investment data change depending on a stage of an investment project. The "Percentage of income from sales of renewable electric energy" indicator is calculated as the ratio of income received from the sale of electricity produced from renewable sources to the total income received from the sale of of electricity generated by commercial generating facilities of LUKOIL Group. 'Income' means revenue from sales of electric energy.

Associated petroleum gas

Reducing APG flaring is one of LUKOIL's targets as part of efforts to reduce the Company's negative impact on the climate.

2022 saw LUKOIL implement the APG Rational Use Program of LUKOIL Group Entities for 2022–2024 including measures to build new and reconstruct long-term facilities for APG preparation, transportation and processing, as well as heat and power generation facilities. Six projects were completed

in 2022, including construction and reconstruction of gas pipelines in the Perm Territory and Komi Republic, construction of a pipeline (gas lift unit) for an offshore project in the Caspian Sea, retrofitting of a mobile separation unit for initial separation and disposal of produced water, and other activities by LLC RITEK.

To meet the Company's commitments under the Zero Routine Flaring by 2030 initiative, two investment projects were developed for implementation in the Perm Territory and KhMAA – Yugra in Russia.

In 2020, the project to construct a system for collecting and transporting APG in the Perm Territory was completed, and the following results were achieved.

✔ APG flaring decreased by more than three times (from **17.8** million to **5.3** million cubic meters).

✔ The APG utilization rate increased from **87.8%** to **97.1%**.

✔ GHG emissions decreased by **44,000** tonnes of CO₂e per year (from **62,500** to **18,500** tonnes of CO₂e).

In 2022, we continued stage-by-stage reconstruction of the Povkhovskaya Compressor Station in the KhMAA – Yugra. LLC LUKOIL-West Siberia's employees

did their best to ensure timely delivery of all units of compressor and auxiliary equipment. At the end of 2022, the first stage of the reconstruction project was

completed, while work on the 2nd, 3rd, and 4th stages is in progress.

Indicators

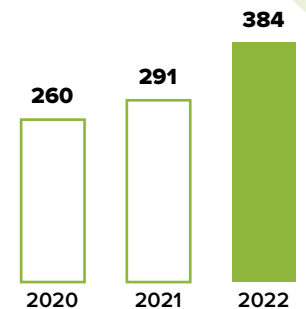
LUKOIL Group continues to demonstrate a high level of APG utilization: 96.8%¹ in 2022 (2021: 97.5%). At the same time, the indicator decrease in 2022 and increased APG flaring were due to two key factors.

LLC LUKOIL-Komi expanded oil production and, consequently, APG production due to intensive drilling of the Yareiyu oil and gas condensate field. To raise the level

of APG utilization, the power center of the Yuzhno-Khylchuyuskoe field was switched in H2 2022 to APG as fuel coming from the Yareiyu field, which boosted APG use for power generation.

The second factor was a decrease in APG processing at gas processing facilities in the Perm Territory and the Western Siberia due to trade and supply chain constraints. The Company continues to look for solutions to this problem.

Total volume of APG flaring, mln cubic meters



Note. The data are presented within the reporting boundaries for GHG emissions.

Reducing methane emissions

We agree on the need for measures to reduce methane emissions, as reduced concentrations of methane in the atmosphere can curb the growth in the surface air temperatures in the near term and offer an opportunity to buy some time to take wider measures to stabilize climate.

The Company carried out regular activities in 2022 to reduce leaks of methane, the main component of APG and natural gas.

- ▶ Walkarounds of interfield and trunk pipelines were conducted, with line

fittings and gas vent stacks serviced to prevent gas leaks.

- ▶ At stationary units (compressor stations, gas distribution plants, etc.), the parameters of the gas-air mixture were measured by each shift using both stationary and portable gas analyzers.
- ▶ Line pipes of interfield pipelines are periodically cleaned of accumulated condensate to prevent gas hydrate formation and a reduction in the throughput capacity.

- ▶ Independent certified organizations carry out annual safety expert reviews and technical certification of gas facilities and pipelines. Based on the results of these, a report on the continued operation of facilities is issued. Gas pipelines are repaired or reconstructed, as necessary.

¹ The data are provided within the reporting boundaries for GHG emissions.

Goals and indicators

Goal for 2030: to reduce controlled GHG emissions (Scope 1 + Scope 2) by at least 20% compared to the 2017 level.

LUKOIL Group's voluntary goal to reduce GHG emissions has been developed by reference to forecasts by the Intergovernmental Panel on Climate Change based on the goal specified in Article 2 of the Paris Agreement to keep the increase in the global average surface air temperature below 2°C.

During the reporting year, the Decarbonization and Climate Change Adaptation Task Force of PJSC LUKOIL decided to approve a new methodological approach to the 2022 inventory for LUKOIL Group's direct GHG

emissions based on the composition of APG in production and refinery gases in oil refining, gas refining and petrochemicals.

The results of LUKOIL Group's GHG emissions calculations for 2022 showed that the total direct (Scope 1) and indirect energy (Scope 2) gross GHG emissions of LUKOIL Group within the approved reporting boundaries were 46,887 million tonnes of CO₂e, a 13% increase from 2021. Compared to the 2017 baseline, the indicator dropped by 8%.

Increased GHG emissions in the Exploration and Production business segment were largely a result of applying the new methodological approach. Another reason for that increase was the growing production in the key lines of business, such as oil and gas production, oil refining, petrochemicals. Regional ratios for the grid-connected electricity and heat energy were used in calculating indirect energy GHG emissions (Scope 2)¹.

GHG emissions across LUKOIL Group

Indicators	Unit of measurement	2017	2020	2021	2022
LUKOIL Group (Scope 1 + Scope 2)	mIn tonnes of CO ₂ e	50.897	43.651	41.491	46.887
Scope 1	mIn tonnes of CO ₂ e	40.448	36.705	36.388	41.202
Scope 2	mIn tonnes of CO ₂ e	10.450	6.947	5.103	5.685
Energy consumption for production purposes (net of mobile sources)	mIn GJ	468	465	477	524
APG utilization rate	%	95.6	97.7	97.5	96.8
GHG emissions (Scope 1), by business activity					
Exploration and Production	mIn tonnes of CO ₂ e	10.267	10.216	10.836	13.132
Oil Refining and Petrochemicals, LLC LLK-International	mIn tonnes of CO ₂ e	17.635	16.397	16.110	19.523
Power Generation	mIn tonnes of CO ₂ e	12.468	9.980	9.239	8.346
Transportation	mIn tonnes of CO ₂ e	0.078	0.111	0.203	0.201

Notes. For more information on the boundaries of accounting for GHG emissions and the indicators broken down based on various criteria, see the ESG Databook ([Appendix 9](#)). Growing GHG emissions in the Transportation business sector in 2021 were due to the emergence of new sources of GHG emissions at LLC LUKOIL-Trans (water transport). Reduced GHG emissions in 2020 are primarily due to a slump in demand and a decline in production of the main types of products driven by the COVID-19 pandemic.

¹ Since 2021, the GHG emissions ratio for grid-connected electricity based on the data obtained from JSC Administrator of the Trade System of the Wholesale Power Market has been applied to the Russian entities. During 2017–2020, projected regional ratios of the European Bank for Reconstruction and Development were used (expired in 2020).

GHG emissions intensity by business activity (Scope 1 + Scope 2)

Business sector	Unit of measurement	2017	2020	2021	2022
Exploration and Production	kg of CO ₂ e / boe	23.95	21.62	19.32	22.13
	g of CO ₂ e / MJ	4.01	3.69	3.3	3.78
Oil Refining and Petrochemicals	tonnes of CO ₂ e / tonne of processed raw materials	0.29	0.31	0.28	0.30
Power Generation	tonnes of CO ₂ e / MWh of generated electricity and heating	0.34	0.35	0.34	0.33

Notes. The GHG emissions intensity of the oil refining and petrochemicals entities has been calculated based on GHG emissions from oil refineries and petrochemical complexes (in total) excluding LLC LLK-International (engaged in production of lubricants). The emissions intensity of Power Generation entities is calculated without LLC LUKOIL-Energoseti (engaged in heat generation and transmission). The increased GHG emissions intensity in all the core business sectors (except for the Power Generation business sector) in 2022 was driven by such factors as the application of an updated methodology for calculating GHG emissions based on the use of the composition of APG in production and refinery gases in oil refining, gas refining and petrochemicals, as well as increased complexity of production processes and higher refinery yields at oil refining and petrochemical entities.

Prospective projects

To unlock the opportunities associated with the climate agenda, the Company manages a portfolio of prospective projects intended to reduce the carbon footprint of our products and bring new products and services to our clients¹. Such projects are included in the R&D Annual Coordination Program of PJSC LUKOIL for 2023–2025 and in the Decarbonization Program of LUKOIL Group for 2023–2025.

Development of technologies related to the capture and utilization of carbon dioxide formed as a by-product of technological processes is already underway in the main business segments. In particular, the processes of flue gases injection at the fields of LLC LUKOIL-Perm were studied in 2022, and a pilot project

was implemented to offset the carbon footprint at the permo-carboniferous stratum of the Usinskoye field of LLC LUKOIL-Komi. The Decarbonization Program includes projects on the production of low-carbon hydrogen for commercial distribution, as well as on the processing of polymer waste.

Together with other companies, the Group is considering options for using electric power storage systems at its industrial facilities, as well as for using floating power units to supply power to oil and gas fields. Another area includes projects to increase energy efficiency through the introduction of innovative equipment.

Types of prospective projects

Russia:

- ▶ CO₂ capture and utilization technologies
- ▶ Development of the APG utilization technology to produce CO₂-neutral hydrogen
- ▶ Utilization of flue gases using microalgae and processing of biomass into bio oil

Abroad:

- ▶ Production of green hydrogen
- ▶ Participation in projects to develop the hydrogen economy
- ▶ Consideration of the possibility to offset GHG emissions through the planting of forest vegetation

Mastering the CO₂ capture by microalgae

The technology of CO₂ capture by microalgae is under consideration as one of the promising methods to reduce GHG emissions. LUKOIL, together with its partners, implements a project to develop a technology for utilization of flue gases produced at power facilities. *Arthrospira platensis* (spirulina) cyanobacterium was selected for the study as one of the most widely cultivated in the world.

At the initial stage of the project, the study of the effectiveness of CO₂ capture by microalgae from the gas-air mixture with different CO₂ concentration levels was completed. The experiments included measuring the change in the optical density of the spirulina suspension and the CO₂ concentration in the laboratory chamber. The results of the tests revealed the conditions under which maximum efficiency of CO₂ removal is achieved in the process of microorganism growth. Research into the viability of other variants at high levels of CO₂ concentrations also began.

The results suggest the prospects of creating artificial biotechnological hubs (carbon polygons) for effective CO₂ capture using microalgae. It is possible to produce food and feed additives, fertilizers, and carbon-free biofuel from the CO₂ biomass obtained in the process of utilization.

¹ Information on the types of products with a reduced carbon footprint is given in the Supply Chain section of this Report.

LUKOIL Group's sustainable development goal: Prioritising environmental safety

Integrated management system

The *Integrated Management System* of Industrial, Fire, Radiation Safety, Emergency Prevention and Liquidation, the Protection of Civilians, Occupational Safety and Environmental Protection (IMS) implemented by the Company on a voluntary basis has been in effect for over 20 years. The system covers 100% of the LUKOIL Group entities. The following ongoing processes guarantee its robust performance:

- ▶ updating of the policy and corporate standards system (once every five years or whenever required);
- ▶ identification and management of risks and environmental issues (on an annual basis);
- ▶ implementation of targeted functional programs (annually, with a 3-year planning horizon);
- ▶ monitoring and assessment of performance results (on an annual basis) using the following tools and instruments: KPI assessment, audits as part of corporate-wide control and supervision, reporting to the Board of Directors of PJSC LUKOIL.

The Company started another three-year certification cycle in 2022 and had its management system successfully audited.

Improvement of the management system

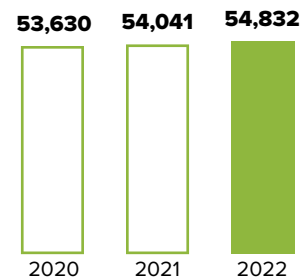
Based on the new requirements of Russian HSE and climate laws that entered into force in 2021 and 2022, the Company developed a digital model for managing these activities and updated corporate IMS procedures in respect of:

- ▶ HSE risk management;
- ▶ HSE training;
- ▶ personal protective equipment (PPE) provision;
- ▶ planning of HSE measures;
- ▶ management of HSE contractors;
- ▶ registration of incidents.

A new step in the IMS development was the assessment of the targeted functional programs measures in terms of their compliance with the objectives of adapting LUKOIL Group production facilities to climate change.

Plans for 2023 include, among other things, identification of significant risks associated with the causes of incidents that result in lost time injuries for employees of the Group entities and contractors. It is also planned to continue the implementation of digital technologies aimed at preventing injuries, accidents, and negative environmental and climate impacts.

Financing of HSE targeted and investment programs



Note. More details are provided in the ESG Databook ([Appendix 9](#)).

Information on the IMS is available on the website in the [Sustainability / Safety](#) section, including on the following issues: liability insurance, risk management, targeted programs, assessment of the management system efficiency and KPIs, etc.

Training

The Company works to continuously raise HSE awareness and competence of the Group's specialists and executives. For this purpose, seminars, competitions are held every year across the Group's entities and at the corporate level of PJSC LUKOIL, and awards are given for the best projects. The Safety Days program covers best practices and challenging issues.

Training courses maintain a proper level of skills and competences of employees and executives and ensure compliance with legal requirements and corporate standards.

In 2022, the Company's specialists participated in the All-Russian seminar Issues and Practices of Applying Effective

Laws on the Environment and Natural Resources Management. A training seminar was held for the heads of the environmental units, with the participation of the Rosprirodnadzor representatives.

Environmental impact assessment

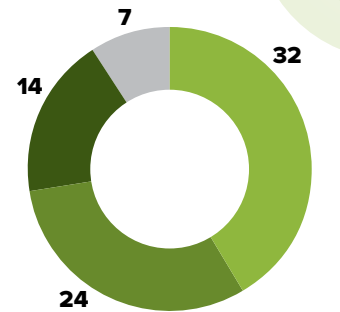
Following statutory requirements and voluntary initiatives, LUKOIL assesses¹ and monitors the environmental impact of its production operations at all stages, from design to completion, based on the precautionary principle. The assessment results form the basis for selecting project and technological solutions and for adjusting production activity.

The hearing results are used to adjust the project documentation, if necessary. In 2022, 77 EIA-related events were organized.

A description of the EIA procedure and the production environmental control (PEC) system, as well as the EIA results for the largest projects are available at [website](#).

In accordance with the Russian laws, public hearings are held to assess the environmental impact of planned projects, including projects on the construction of new production facilities and expansion of production. Residents from surrounding communities and local authorities, experts, scientists, and other stakeholders participate in such events.

Number of EIA events



NAA, YaNAA, Komi Republic
Astrakhan Region
Perm Territory, KhMAA – Yugra
Kaliningrad, Nizhny Novgorod, Leningrad Regions

Environmental safety program

Our approach is to consistently reduce the technogenic burden on the environment by introducing the best available technologies and increasing the level of automation of technological process control.

Environmental protection events are held annually to achieve this objective. The ESP is also aimed at ensuring that the Company's production facilities are compliant with the requirements of environmental legislation, including obtaining integrated environmental permits and equipping sources of emissions and discharges for facilities of hazard Category I with automatic measuring and recording instruments,

establishing sanitary protection zones for existing facilities, and other requirements.

In 2022, the ESP included more than 500 events (grouped into nine sub-programs) in accordance with the Program Passport designed to reduce the impact on air, climate, water bodies, waste disposal and recovery, and biodiversity conservation at 48 LUKOIL Group entities in Russia and abroad. Production environmental

control and monitoring of environmental components were performed in the areas of impact of LUKOIL Group facilities.

In 2022, the share of excess payments² in the total amount of compensation for adverse environmental impact equaled 35% (2021: 17%). The higher indicator is mainly caused by increased air emissions due to an increase in APG flaring.

¹ The Environmental Impact Assessment (EIA) procedure is implied.

² The excess payments, inter alia, may arise due to delays in obtaining approvals and permits.

Key deliverables

As a result of the ESP events, a number of indicators characterizing the level of environmental impact¹ of the Group entities have improved, including the following:

- ▶ The share of fresh water withdrawal in the total water withdrawal continues to decline.
- ▶ The discharge of insufficiently treated wastewater at oil and gas production and distribution entities has ceased.
- ▶ The volume of sulfur oxide (SO₂) emissions across LUKOIL Group continues to decline.
- ▶ The volume of waste disposed of and recovered was equal to the volume of waste generated.
- ▶ The percentage of waste landfilled at the Group's own disposal facilities has been consistently declining.
- ▶ A significant area of contaminated land has been reclaimed.
- ▶ The discharge of contaminated effluents into surface bodies of water has completely ceased at LLC LUKOIL-Komi.

Environmental technology leaders

The LUKOIL Group entities were among the winners of the **Ecotech-Leader 2022 National Environmental Technology Award** (under the auspices of the Ministry of Natural Resources and the Environment of the Russian Federation, the Civic Chamber of the Russian Federation, and the Chamber of Commerce and Industry of the Russian Federation).

As the best projects of the IV All-Russian Competition of Regional Environmental Practices **“Reliable Partner – Ecology”**:



LLC LUKOIL-Komi
the Construction and Operation of Treatment Facilities category

LLC LUKOIL-Volgogradneftepererabotka
the Sustainable Land Use category

▶ **LLC LUKOIL-Komi**
▶ **LLC LUKOIL-Nizhegorodnefteorgsintez**
▶ **LLC LUKOIL-Kubanenergo**
More than 300 applications from organizations and companies from all regions of the country were submitted for the competition.

Water resources

Water is required for operations of all the Group entities — from exploration and production of hydrocarbons to delivery of finished products to the consumer. In oil and gas production, water is used mainly to maintain reservoir pressure and desalinate produced oil. Refineries and petrochemical plants use water

in cooling and condensation units for distillation products, in heat-power stations for steam generation, as well as in the preparation of make-up water for boilers, cooling towers, and steam generators, as raw material and reagent for chemical production and in other processes. Power generation facilities need water to produce

steam and cool the equipment of thermal power plants. Water from surface and underground bodies is withdrawn subject to water use permits and mainly within the established limits.

Our actions

We are focused on optimizing water consumption, including in arid (dry) regions, and reducing the pollution of water bodies with wastewater. Our primary approach to solving the issue of sustainable water use is the application of water recycling and reuse systems, increasing the level of wastewater treatment, and reducing water loss in production.

Power generating facilities, refineries, and petrochemical plants are equipped with circulating and sequentially reused process water supply systems. At production facilities, treated reservoir water is reused for the needs of reservoir pressure

maintenance. New production facilities are required to be equipped with circulating and recycled water supply systems and treatment units.

84% of LUKOIL Group's total water² use comes from circulating and recycled water supply systems, while for the Russian Group entities this figure is 89%.

The Company analyzes issues surrounding its water use in the process of updating the Register of Environmental Aspects. Activities on sustainable water management under the ESP have been integrated into the Clean Water subprogram. To improve

the system of water consumption, each year the Company builds, renovates, and retrofits water treatment and wastewater treatment systems.

The management approach to handling water (including fresh and sea water); formation water extracted in the process of hydrocarbon production; and water resources in arid (dry) regions is described on the website in the [Sustainability / Environment](#) section.

¹ The targets for 2022 and analysis of the results of the reporting year are given in the relevant sub-sections.
² Water use means water consumption for own needs and storage/use of water in circulating and recycled water supply systems.

Fresh water

In 2022, fresh water accounted for 46% of the total water withdrawal by the LUKOIL Group entities. Fresh water withdrawal by Russian entities has been consistently declining over the past five years (from 75% in 2018 to 66% in 2022) as a result of ESP measures on water use optimization.

Fresh water is received through the Group's own water intake from

surface and underground sources. Water is mainly withdrawn from the Ob, Pechora, Volga, Don and Kuban river basins subject to permit documents and within the established quotas. The main focus of environmental activities on the rational use of water is the reduction of production losses.

In the foreign Group entities, fresh water withdrawal accounted for 8% of the

Group's total water withdrawal (compared to 2019–2021 when the indicator stood at 9%); water is mainly withdrawn from the established water supply systems.

Regional drinking water supply projects

In Russia and abroad, the Group entities implement projects that ensure the provision of drinking water to local residents, which improves the sanitary and epidemiological situation and has a positive effect on people's health.

- ✔ A new water well was drilled in the village of Mokraya Olkhovka (Kotovskiy district, Volgograd Region).
- ✔ Several projects are underway to provide drinking water to residents of settlements and villages in the Komi Republic (*refer to p. 60*).
- ✔ A spring with drinking water in the village of Devlezerkino (Chelno-Vershinsky municipal district of the Samara Region) was restored.
- ✔ The artesian wells on the territory of the Black Lands State Natural Biosphere Reserve (Republic of Kalmykia) and on the territory of the Mekletinsky Reserve of federal significance (Republic of Kalmykia) were cleaned out.
- ✔ Bottled drinking water is provided for orphanage residents in the towns of Bukhara and Karshi (Uzbekistan).
- ✔ Search for natural fresh water sources (Tabasco, Mexico) was carried out.

Arid regions

Most of the Russian entities operate in regions with ample fresh water resources, with the exception of regions with a high-density population and a concentration of economic activity in the south of

the country. These territories have medium to low values of the Baseline Water Stress indicator¹, however, we consider five regions to be arid in the national context. The Baseline Water

Stress indicators in three countries outside of Russia are at high and very high levels, and the availability of fresh water supply in those territories may worsen due to climate change.

¹ Data from the Aqueduct project of the World Resources Institute were used to identify arid regions. Source: <https://www.wri.org/aqueduct/tools>. Country territories are compared using the Baseline Water Stress indicator, which measures the ratio of total water withdrawals to available renewable water resources. Water withdrawals include household, industrial, irrigation, and non-recoverable use of water in livestock production. Available renewable water resources include surface and groundwater supplies and consider the impact of upstream water users and large dams on the downstream water availability. Higher indicator values suggest increased competition for water resources among users.

Significant regions¹ that the Company classifies as arid

Russia:

✔ Krasnodar and Stavropol Territories, Astrakhan, Volgograd, and Rostov Regions.

Abroad:

✔ Italy, Romania (Prahova County), Uzbekistan.

Regular operations of the LUKOIL Group entities have no significant impact on the water content of natural sources and water quality or the availability of water resources to other consumers in arid regions².

The share of fresh water withdrawn by the Russian Group entities in arid regions in Russia in accordance with the permits of the authorized state agencies is 43% of the Company's total

water withdrawal in Russia (2021: 45%). Power facilities withdraw most of the water. Abroad, the same indicator is 2.3% (2021: 2.6%).

Further information on handling seawater, formation water and water resources in arid regions is available on the website in the [Sustainability / Environment](#) section.

Indicators

Target for 2022 (Russian entities): Optimization of water consumption at production facilities.

In 2022, sea water withdrawal from oil refineries in Italy grew due to an increase in production (water is used to cool the equipment and is returned to the sea without being used in production processes).

Water withdrawal and retrieval by the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
LUKOIL Group	mIn cubic meters	611	681	726
Sea water	mIn cubic meters	58	45	63
Fresh water	mIn cubic meters	291	332	333
Other water (mineralized, wastewater, centralized water supply, etc.)	mIn cubic meters	263	305	330

Notes. Data on water withdrawal exclude water produced as a by-product with hydrocarbons and subsequently used to maintain the formation pressure during oil production. More details are provided in the ESG Databook ([Appendix 9](#)).

Water produced as a by-product with hydrocarbons and subsequently used to maintain the formation pressure during oil production

Indicators	Unit of measurement	2020	2021	2022
LUKOIL Group	mIn cubic meters	350.1	374.5	426.0
Russian entities	mIn cubic meters	350.1	374.5	426.0
Foreign entities	mIn cubic meters	0.02	0.03	0.03

Note. The increase in water withdrawal was caused by the growth in oil production.

Water usage by the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
Water consumption for own needs (household, industrial, other)	mIn cubic meters	543	588	628

Notes. The 2021 trend is explained by an increase in water use at LLC LUKOIL-Kubanenergo as a result of an increase in power generation at the Krasnodar CHPP (water is used primarily to cool the equipment). The 2022 trend is explained by the growth in oil production and refining. More details are provided in the ESG Databook ([Appendix 9](#)).

Wastewater discharge and wastewater quality

We constantly monitor wastewater quality, paying particular attention to its chemical and physical properties. Improving the quality of wastewater is one of the objectives of the Environmental Safety Program. The Company's laboratories, along with independent certified organizations, monitor compliance with established standards as part of PEC.

Wastewater generated as a result of the production process is transferred to treatment facilities that use mechanical, biological, and physical-chemical treatment methods. Measures are taken to identify and prevent potential negative consequences related to sewage disposal, including undertaking investment projects to improve the quality of wastewater.

A description of the management approach to wastewater, as well as the treatment of formation water, is available on the website in the [Sustainability / Environment](#) section.

Examples of the reporting year events

The reconstruction of treatment facilities at the Nizhny Novgorod oil refinery was completed as part of the ESP in 2022, and the achievement of the wastewater quality indicators specified in the design documentation is assessed. Upgrade of biological treatment facilities continues at the Ukhta oil refinery and LLC Saratovorgsintez.

In 2022, LLC LUKOIL-Severo-Zapadnefteprodukt ceased to discharge insufficiently treated wastewater into bodies of water, which was made possible by upgrading the storm sewage treatment

facilities and the timely maintenance of storm sewage systems in the Kaliningrad Region. As a result, the target for specific discharges of polluted wastewater established for the Oil Product Supply in Russia business sector was met at the level of "0".

In arid regions in the south of Russia, LLC LUKOIL-Yugnefteprodukt continues to implement a project to introduce a recycled water supply system at multi-fuel filling station No. 23374 (MFS Taman). In 2022, the Company carried out tests of an engineering facility used to perform

abacterial, reagentless treatment and decontamination of household wastewater. The output is stable technical water that can be reused for sanitary purposes. The installation of such facilities will make it possible to reduce the clean water withdrawal by 74% at each fuel filling station.

¹ A significant region means a constituent entity of the Russian Federation or a foreign country where at least one LUKOIL Group entity with the headcount of 500 employees or more operates, and that entity is included in the reporting boundary for environmental indicators.

² The Company assumes that, since water withdrawal quotas are allocated by the state, it is implied that the allocation is performed in such a way that the available water resources are sufficient to satisfy the needs of all water users.

Indicators

Target for 2022 (Russian entities):
Minimization of polluted (insufficiently treated) wastewater discharges into water bodies.

In 2022, the amount of water discharged into surface water bodies remained virtually unchanged compared to 2021. The increase in water discharge into the sea is due to the growth in production at refineries in Italy.

The share of clean standard-quality wastewater and wastewater treated to standard quality in the total (cumulative)

volume of discharges into surface water bodies and the sea remained high at 98% (2021: 97.9%), with 99.96% of these categories of wastewater discharged into the sea. The Russian entities reduced the discharge of polluted wastewater into both surface water bodies and into the sea.

Water discharge into water bodies by wastewater quality across the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
Water discharge into surface water bodies:	mIn cubic meters	161.7	210.3	211.4
clean standard-quality wastewater	mIn cubic meters	126.4	172.5	172.5
wastewater treated to standard quality	mIn cubic meters	26.7	29.3	30.6
polluted wastewater	mIn cubic meters	8.6	8.5	8.3
Water discharge into the sea:	mIn cubic meters	188.4	202.7	220.4
clean standard-quality wastewater	mIn cubic meters	188	202.3	219.6
wastewater treated to standard quality	mIn cubic meters	0.2	0	0.7
polluted wastewater	mIn cubic meters	0.2	0.4	0.1

Notes. Polluted water is insufficiently treated wastewater and wastewater that is not treated. The increase in the volume of polluted water discharged into the sea in 2021 is related to its formation at a foreign Group entity. More details are provided in the ESG Databook ([Appendix 9](#)).

LUKOIL's best practices. Project LIFE WATEROIL (LUKOIL Neftochim Burgas AD, Bulgaria)

The Oil Refinery in Bulgaria is implementing the LIFE WATEROIL project aimed at improving the environmental situation in the Burgas region and reducing fresh water withdrawal from Lake Mandra through the construction of modern treatment facilities that contribute to increasing the share of reused water. The equipment will include an aeration system to ensure oxygenation of the treated wastewater. Launched in 2022, the project is expected to be completed in 2024. It was presented to the public at roundtables and supported by their participants.

A number of research and analytical activities were performed in 2022.

- ▶ The project partner company has designed and produced under laboratory conditions nine enzymic and biological products that are tailored to LIFE Wateroil needs and can be used in both aerobic

and anaerobic environments. Powder bioactivators will be used to decompose molecules in closed pipeline systems, and liquid bioactivators will be sprayed in the air around the treatment facilities and absorb the odor-causing molecules.

- ▶ In addition, the partner company selected a microorganism capable of living in water solutions with a high hydrocarbon content from among its microbiological collection. Due to its metabolic properties, the microorganism effectively decomposes hydrocarbons without adding any feed.
- ▶ Indicators are being developed to monitor the environmental efficiency of treatment equipment in terms of impact on air quality. Special attention is to be paid to monitoring the impact on the Mandra-Poda protected zone.
- ▶ Preparatory work is underway to monitor the state of biodiversity in the Mandra lake

ecosystem. The assessment will be performed according to the international methodology; the results are expected to be used for further monitoring of changes in the ecosystem (after the construction of treatment facilities).

- ▶ It is planned to hold awareness raising conversations with visitors to the Poda Nature Conservation Center and monitor biodiversity in the conservation area surrounding Lake Mandra.

Emissions

Reducing pollutant emissions into the atmosphere is a priority area of the Environmental Safety Program integrated into the Clean Air subprogram.

A description of the management approach in respect of air emissions is available on the website in the [Sustainability/Environment](#) section.

Key initiatives to reduce pollutant emissions include:

- ▶ replacing or upgrading equipment, introducing the best available technologies at production sites;
- ▶ implementing emissions capture and treatment systems;
- ▶ upgrading and constructing new generation capacities in energy generating entities with improved automated systems to regulate combustion processes.

Examples of the reporting year events

In 2022, a new Claus-Tail Gas unit with a capacity of 20,000 tonnes of sulfur per year was put into operation at the Romanian refinery. This made it possible to increase the operational safety of production, obtain a

marketable product, and significantly reduce the emissions of sulfur compounds into the atmosphere (from almost 1,500 mg of SO₂/standard hour to nearly 200 mg of SO₂/standard hour).

The production facilities at the Nizhny Novgorod oil refinery were equipped with gas treatment facilities.

Measures were taken under the APG rational use program aimed at APG collection and transportation from remote fields:

- ▶ reconstruction of the gas pipeline from the Pashnya preliminary water discharge unit to the Zapadny Tebuk thermal-chemical unit at LLC LUKOIL-Komi;
- ▶ construction of LLC LUKOIL-Perm gas pipelines;
- ▶ upgrade of the small-size modular separation unit at the Aprelskoye field for APG separation, with its subsequent use in the mobile preliminary water discharge unit of LLC RITEK.
- ▶ construction of a pipeline (gas-lift) at the Valery Grayfer field of LLC LUKOIL-Nizhnevolyzhskneft;

Indicators

Target for 2022 (LUKOIL Group):
Ensuring that specific air emissions are not higher than the level achieved in 2020.

The increase in gross emissions of pollutants (solid substances, volatile organic compounds (VOC) and hydrocarbons) in 2022 was mainly caused by reduced APG utilization (see the Climate section).

Starting from 2022, the Company uses specific indicators of emissions as a

benchmark, since they more accurately describe changes in the impact of the Group entities on the air. The deviation from the target figures for the three business sectors is explained by the restrictions in APG acceptance at the Perm oil refinery and the fact that the main production facilities of LLC Stavrolen have been put

into operation after capital repairs, as well as an increase in the share of fuel oil used as fuel at power facilities in the context of reduced production volume.

Air emissions (net of CO₂) at LUKOIL Group

Indicators	Unit of measurement	2020	2021	2022
Total pollutant emissions	thousand tonnes	395	425	457
NO _x	thousand tonnes	45	42	41
SO ₂	thousand tonnes	31	35	33
Solid particle discharges	thousand tonnes	14	18	21
CO	thousand tonnes	143	177	198
Hydrocarbons emissions	thousand tonnes	49	37	40
VOC	thousand tonnes	111	116	124
Other	thousand tonnes	2	1	1

Note. More details are provided in the ESG Databook ([Appendix 9](#)).

Specific air emissions by the Russian entities of LUKOIL Group by business activity

Business sector	Unit of measurement	2020	2021	2022
Exploration and Production	kg / tonne of oil equivalent in extracted hydrocarbon resources	3.3	3.5	3.7
Oil Refining	kg / tonne of refined oil	0.8	0.8	0.8
Petrochemicals	kg / tonne of processed raw materials	1.6	1.5	1.7
Oil Product Supply	kg / tonne of oil products sold	0.7	0.9	0.8
Transportation	kg / tonne of oil, oil products transported	0.2	0.2	0.2
Power Generation	kg / tonne of oil equivalent in consumed fuel	3.5	3.2	3.4

Waste and land reclamation

Our primary approach to industrial waste management is to prevent its accumulation at the LUKOIL Group facilities. To achieve this, the waste management KPI was introduced in Russian entities (the volume of waste disposed of and recovered should correspond to the volume of waste generated)¹. This indicator is met every year.

Waste generation and management

Most production waste in Russia falls under non-hazardous or low-hazard categories (Classes IV and V under the Russian classification): more than 60% is drilling waste and used drilling mud generated during drilling and well operation. These are mainly dealt with by contractors selected on a competitive basis. The volume of waste

generated depends primarily on the scope of drilling and repair works. Pitless drilling technology is used in a number of regions, where the drilling waste generated is not stored or landfilled at drilling sites.

Landfills or sites for waste accumulation, its safe disposal and recovery, or temporary

storage, with subsequent removal along winter roads, are being built at remote LUKOIL facilities in the Arctic Zone of the Russian Federation that do not have permanent connection with populated areas.

Hazardous waste management

The share of hazardous waste (Classes I–III) in the Russian LUKOIL Group entities was 2.2% as at the end of 2022. Class I and II waste containing substances dangerous to human life and health and causing permanent changes in ecosystems is subject to mandatory handover to the

Federal Environmental Operator. Waste of hazard class III include, among other things, a portion of oil-containing waste (with an oil product content above 15%); all waste of this class is also subject to mandatory disposal. We monitor the quality of contractors' operations by examining

their waste-handling methods, the state of the production control system, and the availability of adequate resources to fulfill their contractual obligations.

Pre-privatization waste management

LUKOIL disposes of waste from the pre-privatization period²: 36,000 tonnes were disposed of or recovered in 2022, of which 12,000 tonnes were disposed of or recovered in the Russian entities. In Russia, such waste has been fully recycled at

LLC LUKOIL-Western Siberia, LLC RITEK and the Volgograd oil refinery; accumulated wastes remain at the Perm oil refinery and the Ukhta oil refinery, and the respective work is performed according to the schedule. In Bulgaria, according to national legislation,

the state is the owner of this waste, and, therefore, it is disposed of or recovered using government funding. The Oil Refinery in Bulgaria continues to operate according to schedules and based on government funding.

Waste recovery

The LUKOIL Group entities are focused on finding solutions to the use of low-waste technologies and using waste in production, which complies with the principles of the circular economy. When selecting waste-related service providers, the Oil Refinery in Romania prefers companies that can recycle waste into products suitable for use

in other industries rather than counterparties that provide waste incineration or landfilling services. For example, after processing, ash and slag waste and sewage sludge of the oil refinery are sent to cement factories, catalysts are sent to the recovery enterprises, and the oil-containing waste is recycled.

Additional information on the methods of waste management, including hazardous waste generated as a result of production processes in various business segments, is available on the website in the [Sustainability/Environment](#) section.

¹ The term 'waste disposal and recovery' is used to mean 'use, neutralization, landfilling, or handing over to a specialized organization for these purposes.' The KPI calculation does not take into account the volume of rock generated during shaft works at LLC LUKOIL-Komi sites and placed at specialized waste dumps.
² By the time of privatization of a number of oil production and refining assets in Russia and Eastern Europe, significant amounts of oil-containing waste (oil sludge) had been accumulated at production facilities and are now stored at special storage facilities.

Indicators

Targets for 2022 (LUKOIL Group):
KPIs: the volume of waste disposed of and recovered is equal to the volume of waste generated¹
Reducing the amount of waste accumulated during the pre-privatization period by 20,000 tonnes.

Waste generation has remained at approximately the same level over the past three years, with an average reduction rate of 1.5% per year. As in previous years, the waste management KPI was achieved in

2022. By the end of the year, the volume of hazard class I waste increased at the Russian entities due to the implementation of a new scheme for handling such waste in the Russian Federation. During 2022,

the Federal Environmental Operator set up logistics arrangements for the collection and disposal of hazardous wastes.

Waste management at the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
Waste generated during the reporting year	thousand tonnes	2,178	2,065	2,056
Waste received from third parties	thousand tonnes	4	6	4
Amount of waste eliminated (recovered, neutralized, transferred to specialized entities, as well as landfill waste)	thousand tonnes	2,217	2,020	1,997
Waste at the end of the reporting year	thousand tonnes	912	964	1,028

Notes. Data are provided without taking into account rock formed as a result of mine oil production at LLC LUKOIL-Komi. More details are provided in the ESG Databook ([Appendix 9](#)).

Waste at the end of the reporting year by hazard class at the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
Russian entities	thousand tonnes	884	938	1,004
Hazard Class I	thousand tonnes	0.0016	0.001	0.007
Hazard Class II	thousand tonnes	0.0089	0.004	0.001
Percentage of waste of Hazard Classes I and II	%	0.0012	0.0005	0.0008
Hazard Class III (incl. oil-containing)	thousand tonnes	21	25	22
Percentage of waste of Hazard Classes I, II, and III	%	2.4	2.7	2.2
TOTAL hazardous waste (Classes I, II, and III)	thousand tonnes	21	25	22
Hazard Class IV	thousand tonnes	829	878	948
Hazard Class V	thousand tonnes	34	35	34
TOTAL non-hazardous and low-hazardous waste (Classes IV and V)	thousand tonnes	863	913	982
Foreign entities	thousand tonnes	28	26	24
Hazardous	thousand tonnes	24	25	23
Non-hazardous	thousand tonnes	3.5	0.9	1.1

Notes. The increase in the volumes of hazard class I waste by the end of 2022 (mainly fluorescent lamps and mercury laboratory thermometers) was caused by a temporary accumulation of such waste due to changes in the legal requirements for the management of hazard class I and II waste that came into effect in March 2022. At the same time, the amount of hazard class II waste (mainly acid-alkaline batteries) decreased, as their formation dynamic depends on the equipment service life.

¹ The ratio of waste disposed to waste generated is close to or equal to 100%. Drilling waste from construction of cluster sites comprises the main share of waste remaining in the accumulation. If the drilling began at the end of the reporting year, the drilling waste is disposed in the next reporting year, after the drilling of the entire cluster site is completed. Thus, the volume of 'transition' waste depends on the scope of drilling operations.

Clean Arctic

LUKOIL supported the federal project Clean Arctic to clean up the Barents Sea shoreline in the Nenets Autonomous Area, near the former village of Stary Varandey located not far from LUKOIL's Varandey terminal. The specific feature of the project was that the work was performed in areas remote from population centers and in the conditions of volatile northern weather. The Company assisted volunteers by providing them with vehicles, accommodation and meals.

Volunteers from the Nenets Autonomous Area, Moscow, Tula, Sverdlovsk and other regions of Russia participated in the campaign. Approximately 200 tonnes of waste (mainly scrap metal and iron barrels) were collected and prepared for disposal during the week. A local individual entrepreneur will transport the collected waste to the mainland and reclaim the land plots.

Land resources

LUKOIL Group's primary impact on land resources is caused by oil production activity. Remediation of contaminated land is carried out by the LUKOIL Group entities in full compliance with the legislation. In the event of a spill of oil, oil products, or formation water, the contaminated land is remediated after

eliminating the cause of the incident and its main consequences. The Company carries out compensatory reforestation work in a number of Russian regions.

A description of the management approach to the contaminated land reclamation is available on the website in the [Sustainability / Environment](#) section.

Indicators

Target for 2022 (Russian entities):
Remediation of about 40 hectares of contaminated land per year.

As a result of the reclamation measures included in the Environmental Safety Program, in 2022 the area of contaminated land was significantly reduced (from 49 to 10 hectares) as at the end of the reporting year, most of the work was performed in the Komi Republic.

Contaminated land formation and reclamation in the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
Land reclaimed during the reporting year	hectares	44	49	71
Russian entities	hectares	44	45	71
Foreign entities	hectares	0	4	0
Land contaminated during the reporting year	hectares	60	49	10
Russian entities	hectares	56	49	10
Foreign entities	hectares	4	0	0

Biodiversity conservation

Our refineries and most of our gas stations are located in highly populated areas where natural ecosystems have been irreversibly altered over many decades. Therefore, the main impacts on ecosystems are related to hydrocarbon exploration and production activities and the operation of transportation systems, especially in offshore projects.

Our approach is to preserve the natural biosystems diversity and to ensure their sustainable use that does not threaten their ability to regenerate. At each stage of a project, we strive to balance any

impacts that our operations might have and implement a variety of projects and activities to preserve ecosystems. We aim to avoid conducting work in habitats of valuable and highly protected plant and animal species or to minimize such impact where it cannot be avoided.

At a conference in Montreal in 2022, 196 countries agreed on a collective goal to preserve 30% of global land resources, fresh water sources, and the ocean by 2030. Achieving this goal will help to preserve biodiversity.

Taking into account the importance of preserving the diversity of the Earth's species and ecosystems of high value, the Company supports projects aimed at improving the state of ecosystems.

A detailed description of the system for biodiversity conservation management system and the measures taken by the Company is given in the [Conserving Biodiversity brochure](#).

Conservation of rare species

Saiga (Republic of Kalmykia, Astrakhan Region, Russia)

Since 2020, measures have been implemented to preserve the saiga population inhabiting the Chernye Zemli State Biosphere Reserve in the Republic of Kalmykia, and the Stepnoi State Nature Reserve of Regional Significance in the Astrakhan Region (Russia).

As part of the Cooperation Agreement between the Ministry of Natural Resources and Environment of the Russian Federation and PJSC LUKOIL, the Action Plan for the Conservation and Reintroduction of the

Saiga in the Republic of Kalmykia and the Astrakhan Region for 2020–2024 was approved. The document was developed with the assistance of the environmental and scientific community, as well as with the participation of the management of the two reserves.

In 2022, scientists at the Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences focused on the development of an animal recognition algorithm based on high-resolution

multispectral satellite images. This method will make it possible to simultaneously keep a register of saiga species throughout the entire area.

The algorithm is to be applied in creating a software prototype of an automated system for accounting for ungulate steppe ecosystems (using saiga antelope as an example) and to perform an automatic calculation of animals in pictures. The first results are expected in 2023. The specification of data on the size and structure of the saiga population will facilitate the development of the correct methods for conservation and restoration of the Saiga population.

The Company also supports regional awareness-raising projects. For example, the International Saiga Day was organized at the Yashkul Gymnasium in Kalmykia (the steppe section of the Black Lands Reserve is located in this area). The organizers invited students from various schools, and representatives of LLC LUKOIL-Nizhnevolzhskneft spoke about the importance of the steppe antelope conservation.



Lesser kestrel (Bulgaria)

Lesser kestrel (*Falco naumanni*) is a small falcon (the size of a pigeon), a rare species included in the Red Data Book of the Republic of Bulgaria. The Bulgarian refineries, together with a local environmental organization, are implementing a project to protect and increase the bird colony size as the lesser kestrel was discovered on the territory of the plant in 2014.

Subsequent observations have shown the existence of the only remaining wild (natural) colony of the bird after almost 50 years of its absence within the country. As part of the project, nest houses were set up, and the number of nesting pairs gradually increased to 10. One of the hens was ringed; monitoring helps to determine the areas of the birds' hunting and their origin. The ringed

bird was named Emma after an employee's daughter.

In 2022, the plant received a request from a PhD student at the University of Burgas for an opportunity to study the birds' colony to write a thesis. LUKOIL Neftochim Burgas AD will support the research.

Study of the Caspian seal abundance

The Soul of the Caspian project intended to study and conserve the Caspian seal (*Pusa capsica*) has been ongoing since the fall of 2021 at the initiative of Russia's Ministry of Natural Resources and Environment with the Company's financial support. This is the first large-scale research of the Caspian endemic species since it was included in the Red Data Book of the Russian Federation. The main participants in the project are the International Environmental Foundation Clean Seas, scientists of the Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences, Russian Federal Research Institute

of Fisheries and Oceanography, and employees of the Astrakhan Reserve.

In 2021, the expedition included two stages: air surveillance and biological sampling from animals, tagging with satellite tags. A single haul-out of about 500 species was discovered. Biological and necropsy studies were performed.

The research will be continued in 2023. The dead seals appearing on the coast of the Caspian Sea over the past few years is the reason to continue with this research. The research team consisting of specialists

from the Russian Federal Research Institute of Fisheries and Oceanography, the Severtsov Institute of Ecology and Evolution of the Russian Academy of Sciences, and employees of the Clean Seas Foundation, will continue research work using Russian-made aircraft equipped with optical and infra video and photographic equipment: a manned La-8 amphibian aircraft and DIAM-Aero UAVs. A water area of more than 9,000 square kilometers will be examined. A detailed report will be provided upon completion of the research.

Research

Study of Lake Buivol (Stavropol Territory, Russia)

Since 2014, scientists have been studying the state of biodiversity in Lake Buivol located near LLC Stavrolen. Hydrobiological studies have shown that the lake is home to many species of aquatic plants, phytoplankton, and multicelled invertebrates, including those unique to the region. In addition,

25 species of ground vertebrates included in the Red Books of Russia and the Stavropol Territory were discovered during the observations (two species of animals, 21 species of birds and two species of reptiles).

Expeditions (Murmansk Region, Russia)

The Murmansk division of the Russian Geographical Society organized expeditions to the Sredny and Rybachy peninsulas. The main scientific objectives included an assessment of the species diversity of coastal ecosystems.

Ecosystem recovery

Reforestation (Romania)

For more than nine years, the Romanian oil refinery, together with its partners and with the active participation of local residents as volunteers, has been supporting a reforestation project in the former landfill of Ploiești.

Protected natural areas (Perm Territory, Russia)

On an annual basis, employees of LLC LUKOIL-Perm hold a clean-up event to remove litter from the shores of Lake Nyukhti, located on the territory of the Nizhnevishersky reserve of regional

significance. They also became patrons of a type of birch with dark bark ("black birch") that grows in the only place in the Perm Territory, the Kuyedinsky reserve.

The Komi Republic

LLC LUKOIL-Komi is one of the largest subsoil users in the Timan-Pechora oil and gas province in northwestern Russia and operates in the Komi Republic and the Nenets Autonomous Area. The entity includes territorial production enterprises (TPE) LUKOIL-Usinskneftegaz, LUKOIL-Ukhtaneftegaz, LUKOIL-Severneftegaz, the Yareganeft Oil Mining Enterprise, as well as the Usinsk Gas Processing Plant. High-viscosity oil is produced in the region, partly through mining. The Group also includes the Ukhta oil refinery located in the region. Each year, LUKOIL takes measures to improve industrial and environmental safety at production facilities, invests in the development of social infrastructure, and provides support to local communities and public organizations.

Environmental events

LLC LUKOIL-Komi annually implements measures under the ESP, as well as social and environmental projects aimed at social and economic improvements in the republic.

- ▶ Water and bottom deposits treatment is underway to clean up the Maly Voyvozh stream from oil and oil products.
- ▶ Disposal and recovery of accumulated oil-saturated sandstone from oil mines continues.
- ▶ Contaminated land is reclaimed.

As can be seen in the table below, significant progress has been made in the management of water resources: the discharge of contaminated wastewater into surface bodies of water has completely ceased. The reclaimed land area has significantly increased.

Details of the measures to eliminate the residual consequences of the Oshskoe field accident in 2021 are given in [Appendix 4](#).

Environmental performance of LLC LUKOIL-Komi

Indicators	Unit of measurement	2020	2021	2022
Emissions of pollutants	thousand tonnes	57	59	84
Withdrawal of water from surface sources	thousand cubic meters	122	236	325
Disposal of contaminated (poorly treated) water	thousand cubic meters	43	0.03	0
Disposal of contaminated (untreated) water	thousand cubic meters	0	0	0
Total weight of pollutants contained in wastewater discharged to surface water bodies	tonnes	42	0.02	0
Including hazard classes I and II	tonnes	0.03	0	0
Waste generation	thousand tonnes	421	409	346
Volume of waste eliminated	thousand tonnes	421	351	349
Volume of oil spilled in accidents	tonnes	33.2	71.2	6.7
Area of reclaimed land	hectares	40	37	68

Interaction with local communities

A large number of public events were held in the Komi Republic in 2022.

Public hearings were held in the settlement of Novikbozh, Usinsk District, and in the settlement of Krasnobor, Izhemsk District. They were repeatedly postponed due to the position of local residents with regard to the exploration wells infrastructure development. The meetings resulted in compromise solutions that satisfied all the parties, technical design documentation was adjusted taking into account the requests expressed by the participants.

The Company has assumed a number of social obligations in response to the residents' requests; the priority is to provide the settlements with drinking water, develop medical and children's

institutions, improve the quality of roads and help children.

Over the past five years, a number of major projects have been completed, including the construction of the second building of the Yugdöm Ice Arena, kindergartens and a rural outpatient clinic in Mutny Materik and Schelyabozh; development of the water treatment networks and systems in the settlement of Ust-Usa and the village of Novikbozh, renovation of the airport runway in Usinsk, equipment of modern playgrounds and sports grounds in Usinsk, Kolva, Zakharvan, and Denisovka.

The following obligations were fulfilled in 2022:

- ▶ Recreation was organized at the Mother and Child sanatorium for families with children and at the seaside for 63 teenagers from the settlements of Mutny Materik, Denisovka, Zakharvan, Akis, Ust-Usa, Kolva, Parma and from the Ust-Tsilemsk district.
- ▶ The quality of roads in the settlement of Kolva was improved.
- ▶ Residents of the settlements of Kolva, Novikbozh and Ust-Usa were provided with wood for home heating.
- ▶ A kindergarten building for 80 children was commissioned in the settlement of Mutny Materik, and a 'doctor's house' for two families was built.
- ▶ Universal sports areas and playgrounds were equipped in the villages of Zakharvan and Denisovka.

Provision of drinking water to residents

The lack of centralized water supply or poor quality of drinking water in five villages and settlements of the Usinsk, Izhemsk, and Ust-Tsilemsk districts of the republic was raised by residents during public hearings in 2019. They had to take water from old wells, that had been built back in the 1970s, or from natural sources and filter it for drinking.

From 2019 to 2022, the following measures were implemented with LUKOIL's support:

- ▶ water treatment networks and systems in the settlements of Ust-Usa and Novikbozh were equipped;
- ▶ water supply was provided to social facilities that were previously built using LUKOIL funds in the settlement of Schelyabozh, and water withdrawal units were installed;
- ▶ design work is underway to construct a water pipeline in the settlement of Mutny Materik.

Given the proximity of the settlement of Kolva to the town of Usinsk, a decision was made to lay a water pipeline from the town to the settlement, which will make it possible to install water withdrawal units or to lay on water supply lines directly to residential buildings. The project is to be completed in 2023–2024.

Transport connection

Due to the geographical location, it is especially important for the residents of the Ust-Tsilemsk district to have a stable network of regular vehicle inter-municipal and municipal transportation routes. An

amphibious hovercraft Parma has been purchased that can carry passengers and baggage in spring and autumn, when it is difficult to reach public transport.

LUKOIL Group's sustainable development goal: High occupational health and safety standards

The Company takes comprehensive measures to mitigate risks and prevent incidents and emergencies¹ in accordance with legal requirements and voluntary commitments set forth in the HSE Policy. Our industrial safety priorities include several areas:

- ▶ Continuous improvement of industrial safety, including:
 - reduction of the risk of accidents at hazardous production facilities;
 - improvement of the reliability of their operation;
 - maintenance of the integrity of technological equipment and infrastructure.
- ▶ Ensuring the preparedness of the management bodies of the LUKOIL Group entities, personnel and Emergency Response Teams (ERT) to liquidate potential accidents, fires, and emergencies.
- ▶ Improving procedures for the preparation and implementation of programs addressing the most pressing issues of industrial, fire, environmental safety, occupational health and safety, and the prevention of emergencies.

Our actions

The Group entities take all the measures made available and practicable by the stable functioning of the IMS, the implementation of the Continuous Improvement System tools, and the performance of annual activities of the [Program of Industrial Safety](#).

It is mandatory to assess the risks of potential spills using scenario simulation at the production activity design stage, as well as during the operation of production facilities.

All of the LUKOIL Group entities in Russia operating hazardous production facilities have Emergency Spill Prevention and Response Plans (SPR Plans) in place. Each document contains step-by-step instructions to ensure a rapid response and efficient cooperation

between emergency response and recovery personnel. Emergency Response Teams² have been set up with a total number of responders exceeding 2,000 people, some of whom are stationed directly at production facilities.

Additional information is available on the website in the [Sustainability / Safety](#) section, including the following issues: risk assessment, SPR Plans, measures on the demolition and disassembly of hazardous production facilities, management of offshore projects and the reliability of pipeline system.

¹ In Russia, an emergency is defined as a situation resulting from, among other things, an accidental oil or petroleum product spill that may cause or has caused human casualties, damage to human health or the environment, significant material losses, and disruption of living conditions of people. Emergencies can be split into categories. The minimum category refers to spills of less than 100 tonnes (or 714 boe, with 1 boe = 0.14 tonnes).

² Establishing in-house emergency response teams and contracting professional response teams are regulated by the legislation of the Russian Federation.

Industrial Safety Program

Key measures

In 2022, four professional and 14 outsourced ERT and more than 780 emergency responders were certified; 120 drills were held at the Group entities, including 105 drills to eliminate potential spills of oil and oil products.

In addition to other ISP measures, plans were implemented to liquidate old mothballed facilities (37 items of equipment

were liquidated). As part of the Action plan to reduce environmental risks during the operation of oilfield pipelines of the LUKOIL Group entities approved in 2021, technical supervision and construction control divisions were created in the entities of the Exploration and Production business segment.

The oil product supply (OPS) entities continue to take measures aimed at the application of a safer method of filling tank cars by switching from top loading to bottom loading. Two oil depots were re-equipped in 2022. In total, 13 oil depots are equipped with bottom loading systems, and 48% of oil products are transshipped using the bottom loading method.

Quality of contractors' work

In order to improve the quality of work performed by service organizations for LUKOIL exploration and production entities, PJSC LUKOIL applies a comprehensive approach that combines methods of control and interaction with counterparties, and introduces elements of the Continuous Improvement System.

- ▶ Ongoing control over service companies' compliance with the design documentation and the requirements of industrial safety standards using in-house and third-party supervisors. Hydraulic fracturing is performed under enhanced

control on the part of supervisors and specialists from the hydraulic fracturing subdivisions.

- ▶ Performance of regular on-site inspections of facilities by the engineering and technical units of the drilling and OHS divisions.
- ▶ Discussion of problematic issues, joint search for ways to improve the quality and safety of work. Representatives of contractors participate in Safety Days, have the opportunity to master best practices and present their own best practices.

Current contracts with contractors stipulate penalties for violation of the HSE requirements. In 2022, more than a thousand audits of counterparties were conducted at the Group' Russian entities as part of corporate oversight and production control.

Reliability of pipeline transportation in Russia

One of the goals of the LUKOIL Group Sustainability Policy is to increase the reliability of production processes and equipment. Having extensive experience in operating pipelines in various geological and natural conditions, we use a comprehensive approach, choose the best engineering solutions and apply methods that have proven their effectiveness.

The Company is focused on consistent stabilization and reduction of accident rates of pipeline transport in accordance with global best practices. [The reliability](#)

[management system for infield and mainline pipelines](#)¹ has been established; all cases of violations of their integrity are recorded, reasons are analyzed, and solutions that can provide a reliable result are sought.

Planning and implementation of measures is performed as part of the Renovation and Technical Re-equipment of Pipeline Transport Facilities investment program, which is implemented by every Russian oil and gas producer. These measures are crucial for minimizing the risk of accidents.

Specialized safety methods are used for sea pipelines and platforms, culvert crossings, production facilities in the Arctic zone, and the tank farm.

A description of the pipeline reliability management system as well as information on the management of offshore projects and safety measures in the Arctic is presented on the website in the [Sustainability / Safety](#) section.

¹ The information of this section pertains to the Russian entities of LUKOIL Group, unless stated otherwise.

Events in 2022

One of the objectives of the reporting year was to maintain the continuity of pipeline transport safety processes. Considering the changes in the external situation, the Company's specialists monitored the Russian entities performing the full range of necessary industrial safety inspections and expert reviews.

Contractors and subcontractors that would ensure the continued safety of critical infrastructure (e.g., offshore pipelines)

were selected. High requirements are placed on their level of expertise and technical equipment, in particular on the accurate determination of metal losses on the internal and external surface of the pipeline and the detection of cracks and other defects. In 2023, pilot testing is also scheduled in respect of a technology for anti-corrosion protection of the internal surface of the welded joint and the adjacent zone using Russian-made technical components.

The Company's specialists participate in industry conferences and seminars on improving the level of safe operation of pipelines and exchange of experience, in particular, they presented LUKOIL's best practice at the "Infield Pipelines 2022. Ensuring the integrity and efficiency of infield transport systems" conference held in Volgograd.

New types of pipes

Polymer pipes

The Group entities are testing polymer-reinforced pipes manufactured using various technologies, including from raw materials produced at the petrochemical complex of LLC Stavrolen.

In 2022, tests of the Garant and Anakonda pipes were successfully completed at a temperature of up to +80°C at the facilities of the Yaregskoye field. The pipes are made from polyethylene with higher thermal resistance produced by LLC Stavrolen. Based on the testing results, the pipes were recognized as meeting the declared characteristics and recommended for use in similar operating conditions. Pilot testing of several types of pipes at LLC LUKOIL-Perm were also completed.

Given the good prospects for the use of polymer pipes in the oil and gas industry,

LUKOIL participates in the development of national standards. Two of them¹ were finalized in 2022 and are expected to be approved.

Bimetallic pipes

A partnership program has been agreed with a Russian pipe manufacturer, which stipulates the development of a technology for manufacturing bimetallic (plated) oil and gas pipes and the performance of the necessary testing of pipes and connection pipes for offshore projects.

For this purpose, an expert group is formed at the relevant research institute to develop and update regulatory and technical documentation. Russian metals companies have applied for participation in the group, and representatives of

PJSC LUKOIL are also planning to participate in its work.

Oil leak detection systems

Oil leak detection systems which allow for prompt identification of the leak location and response are being implemented at the fields. Five such systems are already in use in the Komi Republic. One more system is planned to be installed during the reconstruction of the Pavlovka Oil Processing and Pumping Unit – Chernushka Oil Delivery and Acceptance Point pipeline (Perm Territory, implementation of the project is planned for 2023–2024). In addition, four self-pressure stabilizers were installed at LLC RITEK facilities to prevent destruction as a result of internal hydraulic impact.

Indicators

In 2022, the share of total pipeline replacement was about 2% of the total

fleet. The share of corrosion-resistant pipes in use has increased significantly over the past five years, from 27% of the total length of existing infield pipelines

in 2018 to 37% in 2022. The Company's approach is to use only corrosion-resistant pipes when replacing the corroded pipeline sections.

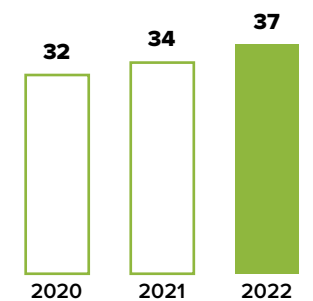
Indicators of oil spills in the LUKOIL Group's Russian entities

Indicators	Unit of measurement	2020	2021	2022
Volume of oil spilled in accidents	tonnes	43	73	7
Including resulting from significant spills	tonnes	6	71	0.01
Number of significant spills	incidents	4	4	1

Note. Significant spill is an emergency with environmental consequences (incident or accident) resulting in consequences that meet one or more of the following criteria: the amount of potential financial risks for a LUKOIL Group entity exceeded USD 1 million; the area of contamination exceeded 5 hectares; the volume of the pollutant spilled exceeded 10 tonnes; damage was caused to water bodies.

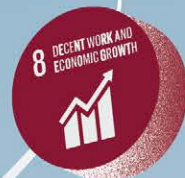
More details are provided in the ESG Databook ([Appendix 9](#)).

Percentage of corrosion-resistant pipelines, %



¹ GOST R "Oilfield Pipelines. Pipelines from flexible polymer reinforced pipes. Rules of design, assembly and operation" and GOST R "Oilfield pipelines. Polymer pipes reinforced with a metal frame and fittings to them. Rules of Design, Assembly and Operation".

PEOPLE AND RELATIONSHIPS



LUKOIL GROUP'S SUSTAINABLE DEVELOPMENT GOALS

Providing decent working conditions

High occupational health and safety standards

Contributing to the socio-economic development of the regions and countries of the LUKOIL Group operation

- 70 Corporate ethics and behavior
- 74 Our employees
- 86 Supply chain
- 94 Society

2022 goals and results



POLICY GOALS / OBJECTIVES



2022 RESULTS



KEY CHANGES IN 2022

Employees and the Company

- ✓ Ensuring safe working conditions, protecting the life and health of the Company's employees and employees of contractor organizations
- ✓ Supporting public interest projects
- ✓ **51** best OHS practices implemented in the Group entities
- ✓ **545** projects supported as part of the Social and Cultural Projects Competition
- ✓ **26** social and economic cooperation agreements with constituent entities of the Russian Federation are in effect

- ✓ Developed new PPE
- ✓ Approved the LUKOIL Group Human Rights Policy
- ✓ Approved the Key Principles of Management Rotation in the Oil Refining in Russia and the Petrochemicals business sectors (to ensure the prompt replacement of managers at different levels)
- ✓ Updated the Corporate Culture Rules of the LUKOIL Group Entities

Supply chain

- ✓ Ensuring high quality of products and services
- ✓ Constructive interaction with suppliers and clients
- ✓ Customer satisfaction rates remained high
- ✓ Ensured product quality compliant with the regulatory requirements in the countries of presence
- ✓ Pursued innovative product development
- ✓ Increased the number of filling stations with electric vehicle charging infrastructure

- ✓ Introduced supplier pre-qualifying for compliance with special requirements for main categories of goods and services
- ✓ Considering third-generation biofuel production opportunities



Plans for 2023

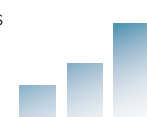
Implement a pilot project on using the near miss recording and analysis procedure



Transit to new risk-oriented PPE Issue Rules



Implement training system for the CIS fundamentals at LUKOIL Group



Prepare individual development plans for managers and specialists



Roll out training under the Standard Management Practices program



Implement the Leadership Mentorship methodology



Continue implementation of charity programs in the regions of presence



Expand the Social and Cultural Projects Competition geography



Social impact management



Elements of the management system

GOALS, PRIORITIES

Description

The Company's social priorities are:

- ▶ ensuring safe working conditions, protecting the life and health of the Company's employees and employees of contractor organizations¹
- ▶ creating a management system that will ensure the Company's stable status as an 'employer of choice' in the labor market
- ▶ ensuring product safety and quality, improving the level of service
- ▶ maintaining constructive relations with clients and partners
- ▶ providing charitable and sponsor support in the areas of education, culture, sports, healthcare, and environment
- ▶ supporting socially vulnerable groups

Corporate documents

[LUKOIL Group Sustainability Policy](#)
[LUKOIL Group Human Rights Policy](#)
[Human Capital Management Policy of PJSC LUKOIL](#)
[Health, Safety and Environment Policy of LUKOIL Group in the 21st Century](#)

Corporate requirements and rules for filling stations of LUKOIL Group's Russian Oil Product Supply entities
 "Service Book" corporate standard

[Social Code of PJSC LUKOIL](#)



CERTIFICATION OF THE MANAGEMENT SYSTEM

The quality management system is certified for compliance with the requirements of International Standard ISO 9001:2015

As at December 31, 2022, certificates issued to the LUKOIL Group entities were in effect, covering 68% of the headcount in the Refining and Distribution business segment



PRINCIPLES

Principles in the area of employment relations:

- ▶ compliance with statutory requirements
- ▶ equal opportunities for employees
- ▶ respect for the culture of the countries of presence

[Code of Business Conduct and Ethics of PJSC LUKOIL](#)

Corporate Culture Rules of the LUKOIL Group Entities

[Social Code of PJSC LUKOIL](#)

Principles of the external social policy:

- ▶ continuity of business
- ▶ economic feasibility
- ▶ control over performance of obligations and reporting

Charity and Sponsorship Coordination Council of PJSC LUKOIL forms a strategy in the field of charity and sponsorship activities



INTERACTION

▶ Established a system of social partnership with the International Association of Trade Unions of PJSC LUKOIL

▶ Social and economic cooperation agreements with constituent entities of the Russian Federation

▶ Communication channels made available to employees and residents of the regions

Agreement between the employer and the trade union of Public Joint-Stock Company "Oil Company "LUKOIL" for 2021–2023



KEY PERFORMANCE INDICATORS

Labor productivity

▶ Summary of key performance indicators



ADDITIONAL INFORMATION

[LUKOIL Charity Fund](#); [Social and Cultural Projects Competition](#); [LUKOIL Sports Club](#)

Our partner in the More than Just a Purchase program is the [Our Future](#) foundation of regional social programs

¹ Occupational safety issues are regulated within the IMS framework (the [Climate and Nature](#) section).

**LUKOIL Group’s sustainable development goal:
Embracing ethical business practices**

Our operations are based on corporate values, including unconditional statutory compliance, performance of voluntary commitments, zero tolerance towards corruption of any kind, and adherence to fair trade rules. The Company welcomes stakeholder engagement and uses feedback to improve the dialog.

A description of corporate conduct standards, including business ethics principles, antitrust policy, anti-corruption measures and other issues is available on the website in the [Sustainability / Ethics and Statutory Compliance](#) section.

Business ethics

LUKOIL Group’s ethical principles set forth in the Code of Business Conduct and Ethics of PJSC LUKOIL cover all aspects of business conduct and apply to relations with partners, suppliers, and contractors. We inform them about our rules and the Code of Business Conduct and Ethics of PJSC LUKOIL. All the new employees hired by the Group entities are required to read the documents and confirm that by their signature.

PJSC LUKOIL has a Business Ethics Commission that reviews all reports on possible violations of corporate ethical standards. In 2022, the Commission received nine inquiries unrelated to business ethics (2021: five inquiries). The inquiries questioned about relations with a manager or the application

of the corporate culture rules, so they were referred to the HR function. Responses were provided to all the requests.

Internal audits and consultations are effective methods of monitoring compliance with the LRAs and the corporate ethics standards. In 2022, 102 significant¹ deviations / deficiencies related to non-compliance with the LRAs were identified (2021: 101). The deficiencies identified were mainly related to the performance of certain corporate procedures. No violations of the Code of Business Conduct and Ethics of PJSC LUKOIL and the LRAs were identified that had a material impact on the achievement of the Company’s strategic goals.

¹ Refer to [Appendix 8](#) for the definition of a significant deviation / deficiency related to non-compliance with LRA requirements.

Anti-corruption

We adopt a zero-tolerance approach towards corruption of any kind or manifestation, regardless of jurisdiction and local laws, even if they permit some types of incentives. We strive to prevent corrupt practices, including among business partners.

The Company’s position on corruption is reflected in the [Anti-Corruption Policy of PJSC LUKOIL](#). The Policy sets common principles, goals, and objectives in this area and defines key activities that reduce the likelihood of corruption risks. Upon joining the Company, new

employees are required to read the Policy and confirm that by their signature; counterparties of the Group entities are subject to counterparty due diligence. The Company has a 24 / 7 whistleblowing hotline for reports of corrupt practices.

No reports were received via the hotline in 2022.

Contact details and addresses of communication channels are given at the end of the Report.

Human rights

We are guided by the principles of the United Nations Universal Declaration of Human Rights.

The Company’s position is set out in the [LUKOIL Group Human Rights Policy](#) (the “Policy”) approved by the Board of Directors in 2022; it is disclosed in respect of the following aspects:

- ▶ Rights related to employment relations
- ▶ Rights to safety and health protection
- ▶ Right to freedom of association and collective bargaining
- ▶ Economic, social, and cultural rights
- ▶ Rights of local communities and indigenous peoples

The Policy also stipulates the Company’s obligations confirming its commitment to the principles of respect for human rights, e.g.:

- ▶ The right of each employee to be represented by a trade union and the right for collective bargaining
- ▶ Elimination of any forms of forced or compulsory labor and elimination of child labor
- ▶ The right to a favorable environment and safe work
- ▶ Promotion of equal employment opportunities, including equal remuneration for women and men for work of equal value, as well as non-discrimination in labor and employment

The Policy implementation will be assessed by the Internal Audit service of PJSC LUKOIL during audits and consultations starting from 2023. Human rights risks are included in the overall risk management system. The activity of the Group entities is monitored annually, e.g., as part of HR audits.

In 2022, there were no reports of human rights violations (including child labor, compulsory, slave and forced labor, and forced resettlement of indigenous people) by the Group entities. HR audits¹ were performed at eight Group entities, with no significant² violations identified.

Detailed information is available on the website in the [Sustainability / Human Rights](#) section, including information on the following issues: human rights monitoring tools, social partnership and approaches to labor rights, HR audits, and respect for rights of indigenous minorities of the North and interaction with them.

¹ HR audits are performed to check the compliance of the processes related to the documentation of employment relations and remuneration with the labor laws of the country of presence and with corporate regulations, as well as with other requirements containing labor law provisions.

² For the definition of a significant violation of human rights, refer to [Appendix 8](#).

Stakeholder engagement

Every year, LUKOIL has a large number of contacts with various stakeholder groups to achieve an optimal balance of mutual interests and expectations. We recognize the importance of engaging with all stakeholders and strive to build long-term constructive relationships. Our principles are set forth in the [LUKOIL Group Sustainability Policy](#) and the [Code of Business Conduct and Ethics of PJSC LUKOIL](#). The corporate website, the Annual Report, the Sustainability Report, press releases are the main channels for regular provision of information on the Company's operations to stakeholders.

We distinguish the following groups of stakeholders:

Clients



Shareholders and investors



Employees and trade unions



Suppliers and contractors



National and local legislative and executive authorities



Society



The Global Energy Association named the press service of PJSC LUKOIL the best in the industry. Independent experts assessed the information content and public significance of the Company's media projects. Based on the survey results, VCIOM (Russian Public Opinion Research Center) also named LUKOIL's Telegram channel the leader among sectoral media channels.

External communication channels

External stakeholders have an opportunity to contact the Company with any queries. Such channels as hotlines / direct lines, helplines, website addresses, addresses

for written reports, etc., are used for this purpose. Such methods of communication are available both at the level of PJSC LUKOIL and at the Group entities¹. For example, LLC LUKOIL-Perm has a hotline on employee safety; direct lines on environmental issues are available at LLC LUKOIL-Komi

and LLC LUKOIL-Permnefteorgsintez; a helpline is also available at LLC Stavrolen. In emergency situations, temporary hotlines can be set up, as was the case in the acute phase of the COVID-19 pandemic (LLC LUKOIL-Perm practice). Sales entities are the most active in using communication channels².

¹ Detailed information on interaction with clients of the Oil Product Supply entities and LLC LUKOIL-Perm is given in the Products section of this Report.

² Contact details for the main communication channels are given at the end of the Report.

Interaction with employees

Direct lines with managers are available for employees of the Group entities, meetings with the CEOs and meetings on personal issues are held. All employees' issues are considered and referred to the relevant functions and divisions for resolution. As a rule, the issues are related to employment relations or internal regulations, while proposals on improving the neighborhoods where employees' families live are less common.

A list of the main hotlines at the level of LUKOIL Group is given at the end of the Report ([Contact details](#)).

Stakeholder engagement

Stakeholders

Principal regular engagement channels

Clients



Surveys and studies – annually or with a different frequency depending on the subject of the survey.
Loyalty programs – ongoing.
Mobile applications – ongoing.
Universal hotline and grading system in the mobile application – ongoing

Employees and trade unions



Collective agreements and contracts with trade unions – once every three years.
Social and safety culture programs – ongoing.
Corporate events and media – on an annual basis

Shareholders and investors



Instruments of communication:
▶ investor conferences – regularly;
▶ meetings and calls with investors – regularly;
▶ mass media interviews with senior management;
▶ press releases – regularly;
▶ annual and other reports – on an annual basis;
▶ corporate website – regularly

Suppliers and contractors, partners



Tender procedures – regularly.
Hotline – ongoing.
Agreements with strategic suppliers – as may be necessary.
Technology field days in Russia's regions – on an annual basis

Government legislative, regulatory, and executive authorities



Participation in industry associations, expert councils, and work groups as part of public discussion mechanisms for draft regulations – on a permanent basis

Society: the regions of presence



Working meetings and discussions with governments of the constituent entities of the Russian Federation, executive authorities, and representatives of local governments

Society: mass media



Coverage of the Company's activities by information agencies, business publications, industry media – ongoing. Social networking – ongoing

Society: residents of the regions and countries of presence, public, municipal organizations



Round tables, dialogs, public discussions and hearings in Russia's regions. Meetings with residents of the regions of presence

LUKOIL Group's sustainable development goals: High occupational health and safety standards. Providing decent working conditions

The success of the Company is determined by many factors, but the key role belongs to people. The changes in the business environment in the oil and gas industry imply modernization of the management style in companies, improvements in employee performance and quality of decisions taken by managers at all levels. In addition, people born after 2000 started entering the labor market, and with the quality of their professional environment and career development opportunities important to them, certain demands are placed on companies as employers.

New management approaches are introduced in LUKOIL Group as part of the Impulse project to form a more modern corporate culture¹ and a system of employment relations for successful achievement of the Company's strategic goals.

Management model transformation

Among the transformational effects of the Impulse project, labor productivity is expected to improve as a result of optimal distribution of functions and competencies within the Company and the involvement of employees in generating ideas for continuous improvement.

The incentive system as a significant tool for interaction between managers and employees is restructured; a pool of managers with broader competencies and flexible management methods is created.

In order to boost the motivation of employees of all grades, their remuneration is linked to the achievement of corporate and individual goals. A system of salary levels (grades) is implemented; such methods as career rotation, mentoring, and other non-financial incentives are planned to be used (or expanded). The development of a unified career and succession management system in the Group will facilitate more active attraction of young talents.

To ensure that management positions at various levels at the LUKOIL Group entities are promptly filled, the Main Principles of Management Rotation were approved in 2022; they determine the goals, objectives, principles, and rules of the rotation process for high-potential employees.

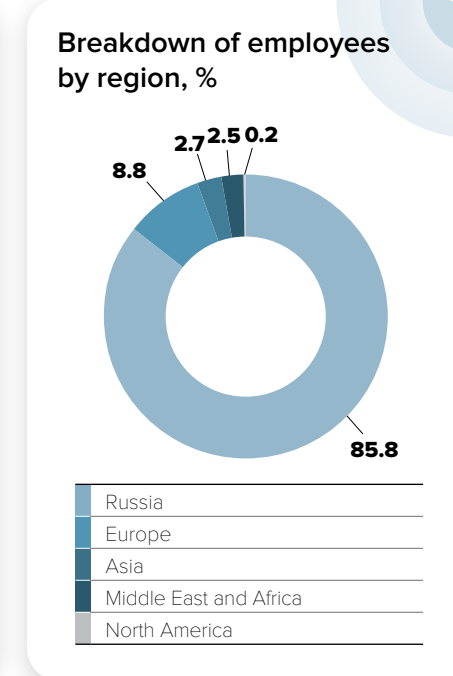
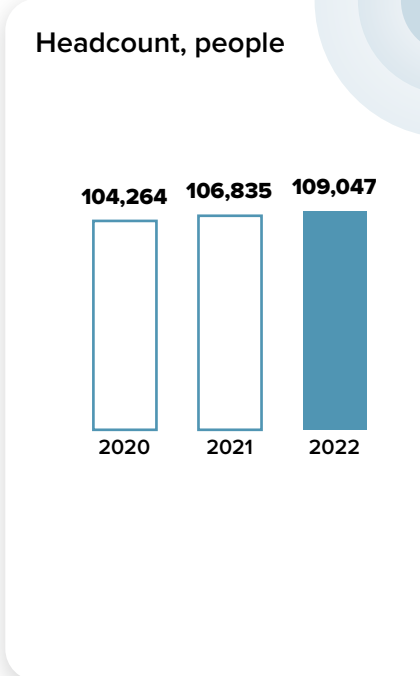
LUKOIL maintains its focus on the occupational safety issues. The continuous improvement system offers additional opportunities in this area by involving employees, promoting best practices and cross-functional interaction to search for and implement initiatives on occupational safety improvement.

¹ The updated Corporate Culture Rules were approved in 2022.

Personnel characteristics

In 2022, the LUKOIL Group entities employed more than 100,000 people, most of whom worked under permanent employment contracts (92%) and full-time contracts (99.7%)¹. The personnel structure has remained stable over the past five years in terms of employee categories² and the ratio of men to women employed in the Group entities. The headcount for the same period changed insignificantly (within 3% per year); more than 80% of personnel are employed in Russia.

In the past three years, more than half of the employees work in the Refining and Distribution business segment, more than a third are employed by the Exploration and Production entities, and about 15% work on a rotational basis. The 2022 employee turnover rate remained at the level of 2021 (9.0 vs. 9.1 in 2021).



Detailed information based on various criteria (employee breakdown by type of employment, type of contract, category) and other information in accordance with the GRI standards is given in the ESG Databook ([Appendix 9](#)).

¹ Hereinafter in the People and Relationships section, the estimates are based on the employee headcount as at December 31 of the reporting year (unless otherwise stated).
² In 2018–2022, the year-on-year deviation of the indicator was not more than 1 percentage point.

Occupational health and safety (OHS)

Our priorities are to ensure safe working conditions and preserve the life and health of our employees and employees of contractor organizations working at LUKOIL production facilities. LUKOIL takes major efforts to minimize the number of injuries and accidents at work. The Company is committed to ensuring that all employees comply with the established safety rules, providing OHS training and holding emergency drills. The Company's commitments in the area of employment relations, occupational safety, and social support are reflected in the Agreement between the Employer and the Trade Union of PJSC LUKOIL for 2021–2023.

Our actions

To prevent injuries, the Company regularly identifies risks (including significant risks) in accordance with the corporate standard and takes steps to manage them. As part of the *ISP*, measures are taken annually to ensure safe working conditions and preserve the life and health of employees. The Continuous Improvement System tools are implemented to further develop the culture of safe behavior.

In the event of accidents at the Group entities, investigations are conducted, the results are communicated to the executives and employees of the entities and structural divisions of PJSC LUKOIL, considered at meetings of HSE Committee of PJSC LUKOIL, during PJSC LUKOIL Safety Days, and included in the annual report to the Company's management and the agenda of the Board meetings. The results of accident investigations are used to plan measures to prevent similar incidents and / or minimize potential damage.

In order to avoid fatal injuries, the criterion "zero fatal on-the-job accidents" (including employees of contractors performing work at the Company's facilities) is included in the KPI Ensuring the Required HSE Level. Entities where fatalities have occurred receive an unsatisfactory rating, which results in a reduction in financial incentives. In accordance with clause 6.1.9 of the Agreement between the Employer and the Trade Union of PJSC LUKOIL for 2021–2023, employees may refuse to perform work if their lives and health are in danger.

In accordance with corporate standards, the following tools of safe behavior are used on a regular basis: a risk-oriented approach, key safety rules, leadership visits to production sites, implementation of best practices, etc. Ongoing communication with contractors and reviews of their compliance with corporate requirements are performed throughout the term of the contract.

The Company aims to reduce the injury rate in contractor organizations, including by expanding cooperation in the area of occupational safety. Compliance with corporate requirements is checked on an ongoing basis in the course of fulfillment of contractual obligations. Representatives of key contractor organizations are invited to participate in Safety Days and quarterly meetings to analyze injuries and discuss measures to prevent accidents in the future. A program for training contractors to use the CIS tools to improve their work safety and efficiency is in development.

The authorized and technical inspectors of the trade union are actively involved in the OHS work; the Institute of Technical Labor Inspectors¹ with the participation of trade unions has been created to interact with key contractor organizations.

Details of interactions with contractors on safety issues are available on the website in the [Sustainability / Supply Chain](#) section.

Due to the systematic approach to achieving the goals of improving occupational safety, injury rates in the Group entities remain at a low level² compared to peer companies in terms of production volumes and headcount.

Developing safety culture

As part of the IMS, corporate standards establish procedures of regular preventive measures aimed at increasing the safety level, including:

- ▶ training seminars for managers and specialists of the Russian entities and HSE subdivisions on changes in Russian laws;
- ▶ holding Safety Days at PJSC LUKOIL and the Group entities;
- ▶ Safety Leadership Visits to production facilities;
- ▶ occupational safety checks in cooperation with trade unions;
- ▶ identification and dissemination of best practices of safe work as part of the Occupational Health and Safety competition.

Based on the results of leadership visits in 2022, 26% of the identified deficiencies were related to violations of technological production operations, and 4% were about using PPE, including its use by contractors.

The other comments were related to the condition of the production facilities and the location of work equipment.

The scale and continuity of the Company's efforts to enhance the safety culture are confirmed by the indicators of the dynamics of best practices implementation. In 2022, the Group entities reported the application of 51 HSE best practices, including 19 in the Oil Refining and Petrochemicals entities and 14 in the Production entities. The largest number of best practices was introduced in the following areas: OHS Information Support and Promotion, Modern Technologies in Training, Improvement of Leadership Mechanisms and Safety Culture.

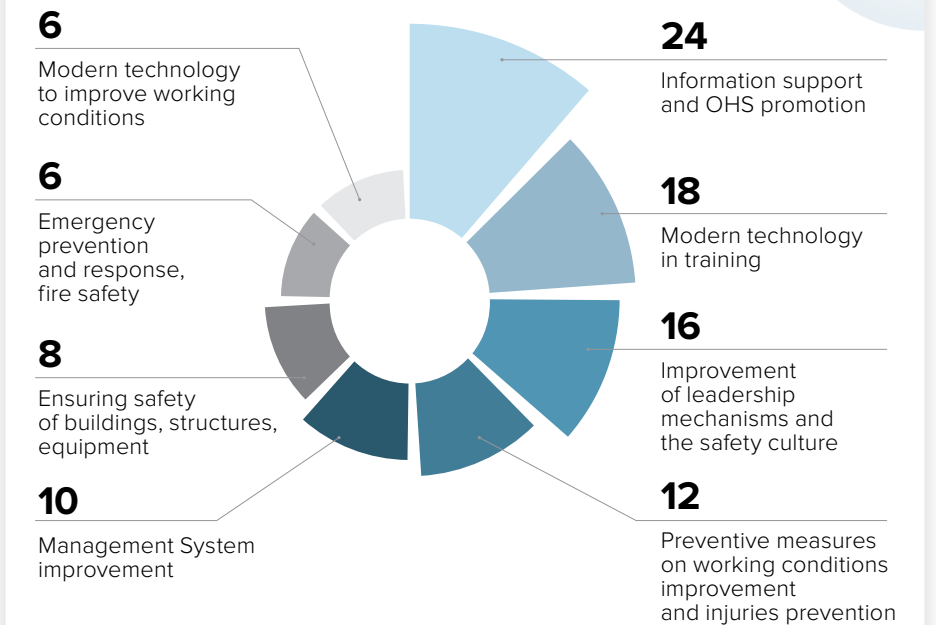
Training is provided for OHS officers under the Safety Leader program in order to strengthen cooperation with trade unions.

Personal protective equipment

The testing of a new collection of special clothing to be used in various climatic conditions was an important event in 2022. The new PPE is based on more convenient designs; the number of elements for the clothing ventilation increased. In response to the employees' proposals, a new set of clothing was developed for demi-season. Convenient and modern PPE makes working conditions more comfortable and helps to reduce the levels of sickness and injuries. The transition to new risk-oriented PPE Issue Rules is planned for 2023.

Due to the foreign companies' exit from the Russian market, LUKOIL is switching to Russian manufacturers of professional apparel. For this purpose, a category-based team¹ has been created to resolve PPE issues.

Best practice application areas, %



Continuous Improvement System tools

As part of the Impulse project, CIS tools are implemented at the LUKOIL Group entities to further develop the [safety culture](#), improve labor conditions, change employee mindset, and encourage their initiatives in the area. Projects that yielded positive results at the pilot stage and recommended for replication were presented at the 2022 Safety Day, including:

- ▶ assessment of risks before undertaking high-risk work;
- ▶ electronic on-the-job trainings and power switching simulators for electrical installations (employed at power generation entities);
- ▶ digital solutions, such as:
 - the video surveillance and intelligent video analysis system that helps detect industrial and occupational

safety violations, including those related to the use of PPE, or the occurrence of contingencies, and prepare violation statistics reports;

- the personnel monitoring system calling for the use of wearable tech devices (personal wristbands, radar beacons) that helps track employees moving around production sites and in open areas, control their use of PPE, receive alerts in case of alarm button activation or human tumbling, check employee heart rate.

A pilot project on using the near miss recording and analysis procedure is scheduled for 2023.

¹ The Institute of Technical Labor Inspectors involves technical labor inspectors to perform public control (on behalf of trade unions) over compliance with labor laws and other regulatory legal acts in the area of occupational safety.

² Based on the results of an analysis performed at PJSC LUKOIL.

¹ For category-based teams, refer to the [Supply Chain](#) section.

Indicators

Despite the efforts made, one fatal accident was recorded at a LUKOIL Group entity in 2022. An operator at LLC LUKOIL-Komi suffered chemical burn to trachea in the process of loading oil in the oil tank truck. The investigation that followed concluded that the employee did not use PPE to protect their respiratory system.

Three fatal accidents occurred to employees of contractor organizations at LUKOIL Group facilities (two at the Oil Refinery in Bulgaria and one at LLC LUKOIL-Energoseti). An electrician at the Oil Refinery in Bulgaria suffered fatal burns in the course of carrying work not provided for in the work

permit; during loading works a heavy-weight cargo fell on the two assemblers, resulting in the death of one of them. At LLC LUKOIL-Energoseti, a contractor's foreman touched live parts of the electrical installation when performing work at the electrical substation. The main causes of the above accidents include poor organization of work and inadequate work safety assurance on the part of managers of contractor organizations.

Contributory causes of other accidents, that resulted in injuries to employees and contractor personnel, included falls from height, extreme temperature impacts, and electric shocks.

Further to investigations, all measures aimed to prevent occupational injuries

were implemented, and, additionally, the following measures were taken:

- ▶ managers and personnel of the Group entities were briefed on the results of accident investigations;
- ▶ to prevent similar accidents in the future, accident analysis results are taken into account when identifying industrial and occupational hazards and risks, including at the stage of developing measures to ensure safety during high-risk work;
- ▶ the Group entities were recommended to step up measures:
 - to ensure personnel compliance with the site-specific safety rules and the use of PPE;
 - when operating load lifting machinery, performing loading and unloading operations, and working at heights.

LUKOIL's best practices. Increasing safety at refining entities

Improving efficiency in business sectors involved in raw materials refining is among the Company's strategic objective. To accomplish this objective, the CIS elements have been implemented for some years. Further efforts will be undertaken in this area, including in terms of industrial and occupational safety. The Continuous Improvement System is a 'live' system and, therefore, involves an ongoing enhancement of procedures and instruments to reduce injury rates, potentiate motivation for behavior-based safety, intensify automation and digitalization in the area of industrial and occupational safety.

- ▶ Libraries of best practices and video tutorials on safe practices for high-risk

- work have been created and restocked (12 videos are already used).
- ▶ The Mobile Inspector, Electronic Shift Work and other production systems are being introduced.
- ▶ Risk-oriented tools are used, such as identification of internal causes of incidents (RCA); determination of the optimal volume and frequency of monitoring the technical condition of equipment (RBI); implementation of the equipment reliability strategy using the RCM¹ methodology.
- ▶ The Competition of the LUKOIL Group entities was held.
- ▶ Prior to performing equipment overhauls, personnel of service organizations is trained under the Safe Contractor

program (Nizhny Novgorod oil refinery). A record in the Book of Commitment is a commitment to oneself and their loved ones to avoid non-observance (Perm oil refinery).

- ▶ The International Occupational Safety ONLINE quiz game has been held for several years now. Besides oil refineries, entities of the Oil Product Supply, Power Generation, Exploration and Production business sectors have participated in the event since 2021. In 2022, 34 teams from four countries, including seven teams from contractor organizations, went in for the quiz game.



Indicators related to occupational injuries at the LUKOIL Group entities

Indicators	2020	2021	2022
Lost time injury frequency rate (LTIFR)	0.17	0.10	0.15
Total number of occupational accidents	28	17	18
▶ fatal	2	0	1
▶ high-consequence work-related injuries	7	5	6
Number of employees injured in workplace accidents	28	17	26

Note. If the same employee suffered more than one injury during the reporting period, each case is counted as a separate injury. The lower LTIFR is, the better. More details are provided in the ESG Databook ([Appendix 9](#)).

Indicators related to occupational injuries at contractor organizations across LUKOIL Group

Indicators	2020	2021	2022
Total number of occupational accidents	10	16	15
▶ fatal	3	3	3
▶ high-consequence work-related injuries	1	6	3
Number of employees injured in workplace accidents	11	17	17

Note. More details are provided in the ESG Databook ([Appendix 9](#)).

Health in the workplace

The corporate [health control system for employees](#) is based on managing the risks of occupational and work-related diseases. The risk management system identifies typical hazards, such as increased noise, vibration, chemical exposure, labor intensity, etc. If the risks identified at the level of a LUKOIL Group entity are assessed as significant, measures are developed to control and reduce their impact. The key methods of preventive work include in-depth medical examinations at the workplace and health resort treatment.

Occupational health and safety measures at the workplace are also described on our website, in the [Sustainability / Safety](#) section.

Developing occupational health services

The Company is setting up an information system that will help to improve the quality of managing employee health protection issues, develop and implement the necessary therapy and health recreation measures.

¹ RCM (Reliability-Centered Maintenance) means maintenance, which is aimed at ensuring equipment reliability.

Measures to further develop the medical service at the LUKOIL Group entities are intended to bring medical care nearer to workplaces, for the maximum comfort of employees. The occupational health services infrastructure is at its active development stage; site medical facilities, first-aid stations, and outpatient clinics are upgraded; and the quality of medical services is brought up to date. During 2022, the following projects were continued:

- ▶ The Diagnostic Radiology Unit at LLC LUKOIL-West Siberia was equipped with the state-of-the-art computed tomography (CT) scanners.
- ▶ Construction of the new outpatient clinic at the Volgograd oil refinery was completed.
- ▶ A state-of-the-art outpatient clinic was opened at the head office of LLC LUKOIL-Perm.
- ▶ A new outpatient clinic and a diagnostic medical center in Usinsk (Komi Republic) and medical facilities in Kogalym (KhMAA – Yugra) are under construction.
- ▶ Medical stations at offshore platforms in the Caspian Sea were organized.

Moreover, despite a relatively stable COVID-19 situation, educational work with the labor collectives continued.

Occupational health services at LLC LUKOIL-Komi

Occupational diseases are extremely rare among LUKOIL Group employees. LLC LUKOIL-Komi (the Yareganeft Oil Mining Enterprise) is the only entity where arduous working conditions (mining production method) still exist. LLC LUKOIL-Komi constantly improves working conditions in oil mines: new ventilation systems are installed in the mines; equipment preventing the employee from contacting sources of vibrations is purchased; automation tools are implemented; specialized PPE is provided. The priority is the early identification of employees prone to occupational diseases; rehabilitation measures are taken and, if necessary, transfer to another job is arranged. The quality of medical examinations has enhanced and, as a result, the detection of health distresses has improved.

Indicators of occupational diseases at the Russian entities of LUKOIL Group

Indicator	2020	2021	2022
Number of workers with newly diagnosed occupational diseases, people	7	8	10

Note. The newly diagnosed diseases are primarily identified among elderly employees and, as a rule, are the result of health exposures over their entire service term (not only at the LUKOIL Group entities).

Employment relations

We endeavor to apply uniform principles and approaches to working with our employees in all countries and regions where the Group operates, taking into account local culture and specifics of laws. The [Human Capital Management Policy of PJSC LUKOIL](#) determines the Company's business strategy and principles to ensure PJSC LUKOIL's stable position as an employer.

The [LUKOIL Group Human Rights Policy](#) provides for respect for employment and labor rights of employees and compliance with legal requirements, non-discrimination in recruitment in the countries where the Group operates, ensuring equal rights and opportunities for men and women and representatives of indigenous peoples, and other principles.

In 2022, local hires in Bulgaria, Italy, Romania, and Belarus accounted for 99% of the headcount of the respective LUKOIL Group entities, with 93% in Uzbekistan and 64% in Iraq². All jobs in Uzbekistan were created as a result of launching and advancing with a joint project between LUKOIL and the Republic of Uzbekistan to develop the Kandym and Gissar gas fields, including construction of a gas refining complex. The share of local senior managers³ remained stable at 35% (during 2020–2022).

For more information, please visit our website, the [Sustainability / Our employees](#) section.

Young professionals and employees

[Interaction with young employees](#) and professionals¹ forms an integral part of the [Human Capital Management Policy of PJSC LUKOIL](#) and features a system of measures aimed at attracting the young. The LUKOIL Group Youth Policy was updated in 2022 and now describes the scope and content of work with this employee category, including young employee onboarding and enabling them to unlock their best potential across the Company.

Among the key enablers of the Youth Policy are Councils of Young Professionals (13 regional associations and 67 councils at the LUKOIL Group entities). Councils of Young Professionals organize work

to promote proactive initiatives of the youth and help them adapt to the new working environment. Representatives of Councils of Young Professionals hold meetings with managers of the Group entities to discuss pertinent issues.

A contest to award the Best Young Professional of the Year title in various nominations is held on an annual basis. The contest winners receive a one-time bonus and a one-year supplement to their salary; they may be considered for inclusion in the organization's personnel reserve and the schedule of internships at the LUKOIL Group entities. Young employees are also involved in developing corporate policies and activity plans.

Key forms of work with the youth:

- ▶ Contest for young professionals
- ▶ Research and technology contest
- ▶ Conferences and educational events (trainings, seminars, webinars)
- ▶ Corporate, cultural, and sporting events for youth
- ▶ Program for schoolchildren and students
- ▶ Grants and scholarships

Number of young employees and professionals

Indicators	Unit of measurement	2020	2021	2022
Number of young employees	people	36,955	36,515	35,985
Including young professionals	people	1,317	1,351	1,436

Note. The declining number of young employees aged under 35 is due to employees exceeding the age threshold for the young employee category, as well as the retirement age increase in Russia.

¹ For definitions of terms, see [Appendix 8](#).

² Given our broad geographic presence, some indicators such as the share of local hires and the average salary are disclosed for each significant region (countries and constituent entities of the Russian Federation). For the definition of 'significant regions', see Appendix 8. In 2022, six foreign countries mentioned in this paragraph of the Report are designated as significant regions. Local hires are all employees of the Group's entities, except for seconded employees (for the definition of 'seconded employees', see [Appendix 8](#)).

³ Senior managers include the CEO (Managing Director / General Director) and their deputies for functional areas. Local senior managers mean employees who are permanently registered in, or are nationals of, a relevant country.

Payroll and social support

We strive to maintain a favorable employee remuneration system to facilitate social stability and enhance the quality of life of our employees and their families. The Company's obligations that supplement those envisaged

by the laws of the Russian Federation and the international standards are set out in the [Social Code of PJSC LUKOIL](#) and the Agreement between the employer and the Trade Union of PJSC LUKOIL for 2021–2023. Opportunities under

employee social programs are provided at both Russian and foreign entities, and employees can participate in these programs irrespective of their employment terms (whether they are employed full- or part-time).

LUKOIL Group staff costs

Indicators	Unit of measurement	2020	2021	2022
LUKOIL Group	RUB mln	151,528	169,235	180,464
Payroll	RUB mln	142,809	159,842	170,214
Social benefits and payments, social support for employees	RUB mln	7,977	8,539	9,222
Training	RUB mln	742	854	1,028

Notes. Expenses on social benefits and payments and social support for employees include payments under collective bargaining agreements but do not include social payments made from the wage fund. More details are provided in the ESG Databook ([Appendix 9](#)). The payroll data for employees of the Russian entities have been prepared in accordance with the requirements of current laws and forms of federal statistical monitoring.

Motivation and payroll

As part of implementing the [Human Capital Management Policy of PJSC LUKOIL](#), the Company continued to develop the targeted incentive system; representatives of all functional and line divisions of PJSC LUKOIL and the Company's major subsidiaries were invited to participate.

During 2022, certain arrangements for the goal-setting based on a special technique within the new Personnel Efficiency Management process were made: the LRAs were developed and approved, pilot operation of the new system was successfully launched in cooperation with the LUKOIL Group entities, an e-learning course

Key components of the incentive system:

- ▶ setting corporate and individual goals;
- ▶ annual assessment, appreciation and recognition of top performers;
- ▶ compensation based on the end-to-end grading system;
- ▶ accessible professional development and a transparent career growth system;
- ▶ culture of efficiency, regular feedback from management, mentorship to unlock employee potential.

for the corporate distance learning system (DLS) was developed and assigned to employees, individual development plans for 2023 for all managers and specialists were shaped.

The new Corporate Culture Rules of the LUKOIL Group Entities were approved, the model of corporate

competencies (basic, managerial and leadership) was updated to discover and bring the three career paths – expert, project, managerial – to fruition.

The Continuous Improvement System provides for encouraging employee initiatives at all levels by welcoming new ideas and mastering best practices.

Standard Management Practices

Changes in the incentive system will require each manager to increase focus on employees, both in terms of time and attention, since the underlying principle of the new system entails active involvement of line and functional managers. For this purpose, the Standard Management Practices¹ that will become the basis for the corporate training system have been developed. The SMPs describe management techniques that may be used to enhance employee motivation and implant the culture of efficiency across the Company. The program will include brushing up goal-setting, task delegation, feedback, year-end dialog and other skills.

The program will be delivered in an in-person format; several thousands of managers are to complete the training in 2023 and 2024.

Leadership Mentorship Program

The Leadership Mentorship² Program Implementation Guide was drawn up and approved to develop employee potential with account taken of expectations of the younger generation of employees and specialists. The Guide is scheduled for implementation in 2024, in the course of adopting the targeted incentive system.

The program is intended for savvy and skillful employees to enable their career development by way of current managers lending their experience. During efficiency and performance assessment of both the mentor and the mentee special consideration will be given to their meaningful participation in the program.

Compliance with the law

LUKOIL strictly complies with the statutory requirements in relation to labor remuneration and payroll due dates.

The Agreement between PJSC LUKOIL and the Trade Union of PJSC LUKOIL sets the minimum monthly wage rate at the Russian entities at no less than the minimum wage in the Russian Federation.

In 2022, the minimum wage rate at the Group entities in significant regions of operation in Russia met or even exceeded the established regional minimum wage. The starting wage of employees at foreign entities is also set at no less than the minimum wage in accordance with the labor legislation provisions in the country of operation, the collective bargaining agreement, and / or the LRAs.

The minimum monthly wage (compensation) of employees in the regions of operation is set in accordance with the regulatory legal acts in effect in each particular constituent entity of the Russian Federation pursuant to the collective bargaining agreement.

The minimum wage rate is the same for men and women, with its size depending on the duties performed, the complexity of the tasks to be solved, and the level of responsibility; it is set for each employee based on their education and experience levels.

By the end of 2022, the average wage level in significant regions of operation in Russia, where mining, refining, and power generation entities operate, exceeded the average wage in these regions by 1.2–2.5 times.

Information on the ratio of average wages to average wages in significant operating regions is provided in the ESG Databook (Appendix 9).

Social support

The employee incentive system includes [benefits and compensation](#) established by the agreement between the employer and the trade union, the collective bargaining agreements, and other LRAs.

PJSC LUKOIL voluntarily enters into the agreement with the IATUO of PJSC LUKOIL that mainly sets out the provisions to supplement the requirements of labor legislation, such as employment, observance of working and rest hours, occupational safety and health recreation measures, wage levels and the provision of agreed social benefits and guarantees. The Company does not interfere with the activities of the trade union organizations and maintains an ongoing and meaningful dialog with the trade union representatives.

All rights and guarantees set forth in that agreement are reflected in collective bargaining agreements of the LUKOIL Group entities and apply equally to all employees of LUKOIL Group, regardless of their trade union membership. Significant attention is paid to the benefits and compensation enhancing the quality of life of our employees, including those geared towards maintaining their health, providing support to families with children, offering housing aid, etc. Social benefits are provided to retired employees as well.

Percentage of employees covered by collective bargaining agreements

Indicators	Unit of measurement	2020	2021	2022
LUKOIL Group	%	90	93	93
Russian entities	%	98	99.5	99.5

VHI

According to the Uniform Rules for Voluntary Health Insurance (VHI) for Employees of the LUKOIL Group Entities¹, all employees² working at Russian entities of the Group (as a primary job) are entitled to VHI insurance. Employees can increase the insurance coverage at their own expense to meet their specific needs.

Housing program

Within the scope of the corporate Fundamentals of Housing Policy of LUKOIL Group, employees may receive aid from the Company as part of the employer-assisted housing program, including in the form of partial repayment of interest on bank loans. In 2022, 395 employees participated in the program (in 2021: 490 employees).

Pension benefits

Russian entities provide funding for the corporate defined benefit pension plan that covers most of their employees. Employees of foreign entities are provided pension benefits in line with the laws of the countries where the Company operates, as well as their LRAs. Some pension plans are funded solely by the Group entities, while others are based on contributions from both employees and employers.

More details on the Company's pension plans are provided on our website, in the [Sustainability / Employees](#) section.

Private pension coverage

Indicators	Unit of measurement	2020	2021	2022
Number of former employees receiving a corporate pension (Russian entities)	people	53,519	53,646	53,512
Number of employees participating in the pension programs (LUKOIL Group)	people	44,116	43,302	43,741

Note. More details are provided in the ESG Databook ([Appendix 9](#)).

¹ The document establishes the requirements for arranging VHI policies for employees of Russian entities of the Group. The Uniform Rules are not binding for foreign entities of the Group, the employees are subject to VHI in accordance with local laws and employee labor contracts.

² In 2020, amendments were made to the document, according to which newly hired employees (new hires) are subject to VHI within one calendar month from the end of the trial period stipulated by the employment contract.

¹ Standard Management Practices (SMPs) are a set of practices regularly used by management to improve efficiency and safety of work processes.

² Leadership mentorship means mentorship by management of the LUKOIL Group organizations aimed at enhancing opportunities for high-potential employees through sharing personal experience.

Training and development

Corporate training is a long-term priority area of the Human Capital Management Policy of PJSC LUKOIL. Given the pace of technological development, there is a growing demand for management personnel capable of solving non-routine problems. The Human Capital Management Policy of PJSC LUKOIL sets out the principle of advanced development of employees' competencies and their continuous development. The Company's primary area of focus is to train and develop the necessary skills and competencies of employees, as well as attract and develop young professionals.

To create a capable corporate training system, the Company:

- ▶ develops criteria for organizing employees into groups for training and development purposes;

- ▶ identifies professional, technical, managerial, and behavioral requirements common to these groups;
- ▶ determines common training and development needs stemming from the Company's development strategy and long-term plans;
- ▶ considers possible training and development formats and modes to satisfy the identified needs;
- ▶ develops a comprehensive and forward-looking corporate training and development program for various groups of employees and designs its implementation.

Distance learning

The largest part of training, including courses and programs on mastering new areas of knowledge and types of activity, as well as on acquiring modern competencies, is held in the Distance Learning System.

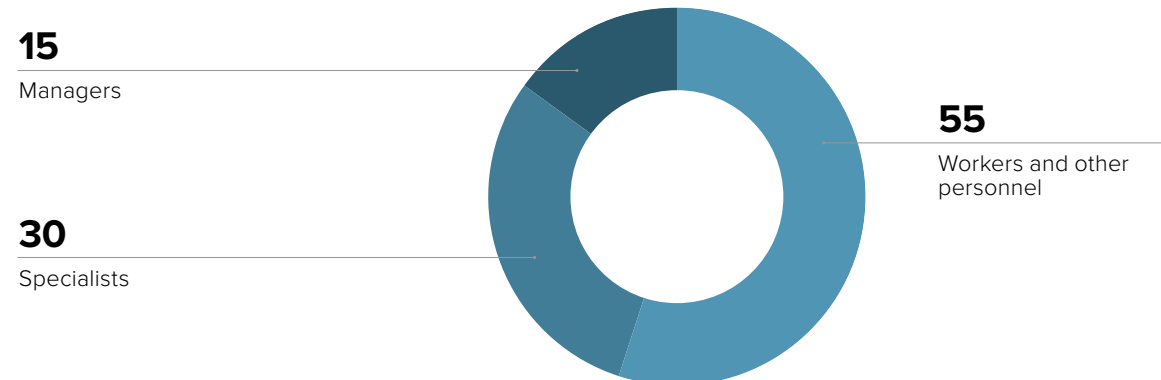
The main DLS goal is to ensure that employees possess the level of knowledge required by the Company. This goal is achieved through training and communication, assessment, and testing. The DLS helps effectively achieve large-scale training objectives, test employee knowledge for compliance with corporate and statutory requirements, and develop professional and managerial competencies, as well as enhance personal effectiveness skills of employees. For the sake of convenience, employees can receive DLS training at a time of their choosing, including from their home PCs and mobile devices.

Employee training at the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022
Number of trained employees	people	80,119	83,861	92,493
Average number of training hours per one trained employee	hours	141	103	111

Note. More details are provided in the ESG Databook ([Appendix 9](#)).

Percentage of trained employees (staffing positions) by employee category in 2022, %

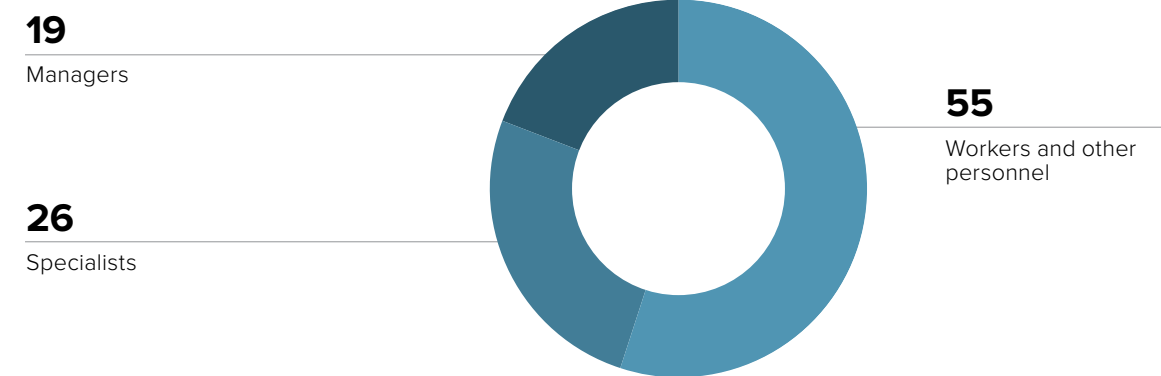


Employee training at the LUKOIL Group entities in distance learning

Indicator	Unit of measurement	2020	2021	2022
Scope of training	hours	6,963,587	4,014,763	4,085,320

Note. More details are provided in the ESG Databook ([Appendix 9](#)).

Percentage of employees trained in distant learning programs by employee category, %



Note. The percentage of employees trained under distance learning programs is calculated using the total number of distance learning man-courses.

**LUKOIL Group's sustainable development goal:
Contributing to the socio-economic development
of the regions and countries of operation**

The LUKOIL Group entities procure a significant amount of goods, work, and services annually and interact with a large number of suppliers and contractors from different economic sectors. LUKOIL's supply chain comprises large companies and small and medium-sized businesses, as well as individual and social entrepreneurs. At the same time, LUKOIL supplies its products to a wide range of companies, industries, wholesale and retail consumers worldwide. The Company is open for cooperation with partners (counterparties) and customers, values its reputation and the strong experience of interaction it gathered.

Procurement

Transformation of business chains in 2022 necessitated the need to solve new challenges, thus forcing us to adjust our previous year's plans on further integration of ESG approaches into the procurement activity. Today our priorities include restructuring of the procurement strategy, seeking and building engagement with new counterparties.

For more information on the procurement activity, refer to the [Economic sustainability](#) section.

Business relationships within supply chain

The Company continued to enhance its business relationships with suppliers and contractors.

The organizational structure for procurement management has already been established, with procedures implemented to identify various risks in the procurement system, and requirements formed for each stage of business relationships – from counterparty participation in tenders and other procedures to full compliance with the contractual obligations. Technical audits of the key contractors and suppliers are conducted, and methods were developed to assess the qualifications of contractor employees who perform critical work. Since 2021, a Counterparty Due Diligence Monitoring

System has been in place to help identify changes in the level of risk inherent in interactions with counterparties at all stages of contractual relationships.

A Sustainability Assessment of Suppliers subprocess has been institutionalized; the subprocess serves as the basis for assessing compliance with anti-corruption standards, the level of labor safety and environmental protection. Work and service contracts contain provisions prompting mandatory compliance with the requirements of applicable anti-corruption laws and the [Anti-Corruption Policy of PJSC LUKOIL](#).

The Company intends to further observe high standards of business conduct by implementing best practices and refining corporate LRAs. During 2022, certain instructions and regulations currently in use were updated, new LRAs to optimize the procurement process were devised.

Detailed information is available in the [Sustainability / Supply chain](#) section of our website, including the following: pre-contracting procedures, mechanisms of interaction with counterparties within the framework of fulfilling contractual obligations, tender procedures and Integrity Due Diligence; informing about the Company's position on human rights; methods of control and verification of contractors' compliance with the specified standards and rules.

Category management

PJSC LUKOIL implemented category management in 2021. All purchased goods, work and services are categorized according to the volume / total value of purchases and their significance to LUKOIL Group. The Company develops specific procurement strategies for each of the relevant categories of goods, work, and services.

Since 2022, the Company has been pre-qualifying the related suppliers for compliance with the particular requirements. Given drastic changes in the supply chain, the significance of pre-qualification has considerably risen.

Feedback

LUKOIL endeavors to maintain rewarding business relationships and provides counterparties with the following opportunities:

- ▶ to contact the Company on various issues, including complaints and proposals;
- ▶ to use ethics and anti-corruption hotlines;
- ▶ to make inquiries via the Supply platform;
- ▶ to participate in information events.

Inquiries related to the tender procedures are considered by the Internal Audit Service, and detailed answers are provided.

Indicators

In 2022, 90% of tender participants in Russia and 100% abroad (43 applicants)¹ who were subject to HSE assessment successfully passed the due diligence procedure. The share of local suppliers of material and technical resources (MTR) in Russia remained at a high level both in terms of quantity and in financial terms.

Information on tender applicants that submitted tender bids for the procurement of goods, work, and services on behalf of the LUKOIL Group entities

Reporting period / Consolidation perimeter	Total number of applicants	Including for tenders subject to HSE assessment		Number of applicants admitted to tenders based on the assessment results	
		Number	Percentage of the total number of applicants submitting bids, %	Number	Percentage of the total number of applicants checked, %
Russian entities					
2020	3,181	1,588	50	1,492	94
2021	3,413	2,132	62	1,944	91
2022	2,742	1,843	67	1,666	90

Percentage of local MTR suppliers in Russia

Indicators	Unit of measurement	2020	2021	2022
By number of counterparties	%	93	93	94
By procurement volumes in financial terms	%	96	94	98

Note. Local suppliers are organizations and persons supplying products or services to the Company and regularly operating in significant regions where the Company operates (irrespective of their place of incorporation / registration).

¹ The information relates to the Oil and Gas Production Abroad business sector.

Products

The LUKOIL Group entities produce a wide range of [products](#) for various industries and private consumption. The Company continues to expand the range of products and update approaches to ensuring their quality, for which purpose takes cognizance of customer preferences, industry trends and significant events, and the objective to reduce the environmental and climate impacts of products.

More details on the Company's products are provided on the [website](#). The description of the quality management system is available on our website in the [Sustainability / Supply chain](#) section.

Fuel products

Oil refining products, such as motor gasoline, diesel fuel, jet fuel, and marine fuel, comprise LUKOIL Group's key product mix. Production of products with reduced carbon footprint, that include biofuel blends and liquefied gas, makes it possible to expand the existing product line. The potential for the production of new energy products, such as hydrogen, has been under consideration.

Biofuel blends and biofuel

According to the EU requirements, motor fuels with biocomponents are produced at foreign refineries:

- ▶ motor gasoline with bioethanol content (up to 10 wt%) or a combination of bioethanol and other types of renewable fuel;
- ▶ biodiesel with FAME¹ content (up to 7 wt%) or the new generation biodiesel produced from type A raw materials²).

Our oil refineries in Bulgaria and Italy participate in the ISCC voluntary certification system³. The certificate confirms that biogenous raw materials are used in the production and finished products represent biofuels of the second generation.

The LUKOIL Group entities explore the possibility of producing new energy products.

- ▶ Our oil refinery in Bulgaria, in cooperation with its partner, designed pilot production of the third generation biofuel (biodiesel and green jet fuel, SAF) using AlgenCrude extracted from seaweeds. Yet another project (pyrolysis oil production) was developed together with the municipal government

of Burgas and made ready for the pilot stage.

- ▶ During 2022, the initial batches of biodiesel fuel containing palm oil by-products⁴ were produced at our Oil Refinery in Italy; all the required certificates, including that of REACH⁵, were successfully obtained. Test runs of the hydroprocessing unit for renewable and mineral fuels refining were carried out.

Petroleum products compliant with the EU requirements, including in terms of wt% of blended biofuel components, are sold through fuel stations in Europe. For example, at some fuel stations, customers are offered HVO100 biodiesel, a second-generation biofuel⁶.

Teboil Green+ made from 100% waste and residual stock has been made available to retail and small wholesale customers in Finland. Its carbon footprint is 90% less compared to the traditional fuels. In 2022, supplies of Teboil Green+ to Teboil fuel stations started in three Finnish cities. Prior to 2022, Teboil Green+ was only available for direct container deliveries (2,000 liters as a minimum volume). Currently, customers can fuel up immediately at fuel stations or buy fuel in portable gasoline canisters.

Sales of biofuel blends

Type of product	Unit of measurement	2020	2021	2022
Biofuel blends	mln liters	6,733	8,085	8,457

Electricity for electric vehicles

LUKOIL's filling stations are equipped with electric charging stations (ECS) for electric vehicles. During 2022, LUKOIL Group, together with its partners, installed 55 ECSs at its filling stations in Russia (33 in Moscow Region, 18 in the Southern Federal District, and four – in the Leningrad Region). That said, the pace of development in this area is largely dependent on the growth dynamics of the electric vehicle fleet and government support.

Gas motor fuel

LPG retail sales continue to grow in Russia's southern regions: in 2022, gas motor fuel was available to customers at 96 filling stations (+5.5% compared to 2019). Front-end engineering design work was completed at 9 facilities, with LPG modules scheduled for commissioning in 2023.

LNG production

LUKOIL is a party to a joint project in the Republic of Congo to produce liquefied natural gas (LNG) at two floating LNG plants. LUKOIL specialists are among the Operator's Project Team and are gaining proficiency in the area of LNG production. Launching LNG production will enable to increase oil extraction and capitalize on larger volumes of extracted gas that was previously partly injected in an underground gas storage facility due to the limited demand in the local market.

Motor fuel

The composition of our motor fuels was 100% compliant with Euro 5

(European emission standard 5) as early as 2012. The combustion products of these new types of fuel contain less sulfur. To promote premium quality motor fuels to customers, LUKOIL organizes various information campaigns in the mass media and on the websites of the LUKOIL Group entities.

This helps ensure increased retail sales of fuels with enhanced properties. Specifically, the share of ECTO branded premium fuels in total retail sales in Russia amounted to 83.5% in 2022.

LUKOIL is one of the largest suppliers of bunker fuel in Russia, as well as in the ports of Bulgaria and Romania. Environmentally safe marine fuel with 0.1% sulfur content meets the MARPOL¹ requirements related to the content of air pollutants in exhaust gas in SECAs² and aquatic areas of the European Union.

Sales of products with enhanced properties

Type of product	Unit of measurement	2020	2021	2022
ECTO branded fuel (retail)	thousand tonnes	8,300	8,723	9,345
Percentage of ECTO branded fuels (motor gasoline and diesel fuel) in total retail sales of petroleum products in Russia and abroad	%	61	63	64
Bunker fuel	thousand tonnes	2,733	2,109	1,124
Percentage of environmentally safe marine fuel in sales by LLC LUKOIL-MarinBunker	%	16	23	20
Aviation bunker fuel	thousand tonnes	2,539	3,110	2,812

¹ FAME means fatty acid methyl esters.

² Type A raw materials include spent vegetable oils, etc.

³ ISCC (International Sustainability and Carbon Certification scheme) is an international system of certification for compliance with the requirements on the traceability of sustainable materials; approved by the European Commission.

⁴ POME (palm oil mill effluent) is a by-product of palm oil refining associated with biofuels of the second generation.

⁵ REACH (Registration, Evaluation and Authorization of Chemicals) means Regulation (EC) No. 1907 / 2006 that has been governing the production and circulation of all chemical substances, including their compulsory registration, since June 1, 2007.

⁶ HVO (hydrogenated vegetable oil) means hydrogenated vegetable oil fuel.

¹ The 1973 International Convention for the Prevention of Pollution from Ships, as modified in 1978, MARPOL 73 / 78.

² SECAs (sulfur emission control areas) are aquatic areas in the North and Baltic Seas and part of the US coast.

Managing efficiency and quality at filling stations

Implementation of the concept of continuous improvement at oil product supply entities involves enhancing management process and systems, developing and adopting best practices, and focused employee development. The progress of performance improvement programs is monitored through the use of various tools.

Quality management

A center of excellence was established at LLC LICARD¹ to standardize and harmonize functions applicable in managing activities of oil product supply entities. Territorial managers, regional managers, and operating personnel of filling stations receive training on an annual basis. Thanks to Big Data intelligence tools, specialists receive accurate and most relevant data which they then use to design and develop the loyalty program and shape measures for service quality improvements.

To create a better customer experience and identify priority development areas, the following actions were taken during 2022:

- ▶ A series of webinars, e-courses, and methodological recommendations were developed for filling stations managers to support implementation of corporate rules and requirements for filling stations in line with the Book of Service, as amended, aimed

at improving customer service quality. To encourage learning and application of the updated rules and standards, the Master of Service Standards competition for filling stations managers, territorial managers, and regional managers was organized.

- ▶ Training programs for cooks at filling stations promoting the LUK Cafe catering concept were developed and implemented; these programs included 15 e-courses, an instructions album, internship, and support programs for newly hired cooks.
- ▶ A Preliminary Consideration of Investment Program Objects training program was developed for regional managers; the program is aimed to enhance the efficiency of investment programs at their scoping stage.
- ▶ Knowledge assessment for tank farm managers was organized and carried out at our oil product supply entities to identify priority areas for development and further skill enhancement.

A steady growth in numbers of fuel and loyalty card users is observed in Russia (over 12 million cards were in circulation in 2022). Further work was undertaken to expand partner programs providing for additional rewards for purchases made at filling stations.

Interaction with fuel station customers

The Company reinforces contacts with customers and partners and analyzes their feedback to improve the service quality and raise the level of their

satisfaction with products and services. The key methods of interacting with customers include the mobile application, analysis of reports and proposals received via the Unified Hotline, surveys, social media platforms, and immediate communication at filling stations.

Customer service assessments received via the mobile application are perceived by the Company as a fact-based instrument that reflects the majority opinion. The total number of mobile application users in Russia in 2022 reached approximately 8.5 million people (a 1.4-time increase from 2021). The number of ratings via the mobile application in 2022 grew to 46 million, or 72% above the 2021 level. The share of negative ratings decreased by 0.46 p.p., and the mean score amounted to 4.97 out of possible 5 points.

In 2022, the LUKOIL for Business mobile application developed rapidly and was downloaded by more than 35,700 users (3,700 users in January 2022 only, or a 9.6-time increase). The capability profile of the application includes cardless payments, mapping routes to filling stations, viewing transactions history, available limits and some other useful and high-demand driver options. An online offer agreement mechanism has been implemented to provide customers with the following benefits: no need to visit the office to sign the contract, two-factor authentication, push notifications, user surveys (for feedback purposes). A brisk development of digital services makes it possible to effectively expand the geography of services.

Distribution of LUKOIL Group filling stations as of December 31 of the reporting year

Indicators	2020	2021	2022
Total	5,005	4,965	5,278
Russia	2,474	2,447	2,788
Abroad	2,531	2,518	2,490

Notes. The data include information on LUKOIL Group's owned, leased, and franchised filling stations, as well as those suspended and leased out (as at December 31 of each reporting year). The Group continued to optimize its fuel stations network, including by cutting down the number of unprofitable leased and franchised stations abroad.

¹ LLC LICARD is a Russian entity of LUKOIL Group; for more information, visit its website <https://licard.ru/en/>.

Bringing sustainability initiatives to fuel stations

In addition to promos organized for LUKOIL loyalty program participants, over a span of 10+ years the More Than Just a Purchase¹ social program has been in effect, and new environment- and climate-relevant initiatives are coming along.

The More Than Just a Purchase project is a joint initiative between LUKOIL's fuel stations network in Russia and the Our Future Foundation of Regional Social Programs². Its purpose is to support social entrepreneurs³ who

receive the opportunity to sell their products at LUKOIL's and EKA's filling stations⁴. Buying project-branded goods helps provide jobs for people with disabilities, retirees, and other socially vulnerable groups. As at December 31, 2022, 139 suppliers were involved in the project (132 in 2021), with their goods offered in 56 regions (2,000 sales outlets) and online.

Between September and December 2022, the Bargain Travel promo action was held as part of the Fill Up with

Benefit program. The promo was organized together with the MOST initiative in Moscow. It is a carpooling service available to any car owner who is ready to offer a ride to townspeople. The participants were awarded MOST bonus points by LUKOIL. LUKOIL supported the initiative because ride-sharing contributes to the reduction of CO₂ emissions and considerably eases the road traffic pressure.

Lubricants and technical fluids

As far as lubricants production is concerned, the Company's priorities are to create innovative products for promising new types of equipment and machinery and focus on customer interests.

As part of digitalization of quality control business processes, the LIMS⁵ system was commissioned in 2022 at all the Russian production sites (in Tyumen, Perm, Volgograd, Torzhok). The PLM / R&D⁶ modules are scheduled for implementation in 2023 for product lifecycle management purposes.

Innovative development areas and products

The Company produces innovative lubricants for marine shipping and industrial companies.

- ▶ To achieve better fuel efficiency of conventional ICE vehicles, low-viscosity motor oils are developed, which reduce energy losses from friction in engine components.
- ▶ Biodegradable oils are less harmful to the environment as they completely decompose within a short period of time.

Detailed information on the types of products and their properties is available on the website of [LLC LLK-International](https://llc-llk-international.com/).

During 2022, two formulas of brand-new special-purpose products for the wind power industry were developed – LUKOIL GEYSER WP 32 hydraulic oil and LUKOIL STILO WP 320 gear oil. Both products are meant to be used for the maintenance of equipment at the Kolskaya and Azovskaya wind power plants. In 2023, test batches of products will be supplied for controlled operation at LUKOIL Group facilities.

The Company keeps on producing and promoting energy-efficient products, primarily SAE 0W-20 low-viscosity oils for passenger vehicles which provide for fuel economy and longer oil drain intervals.

Sales of lubricants

Type of product	Unit of measurement	2020	2021	2022
Branded oils (premium group)	thousand tonnes	611	593	568
Percentage of energy-efficient lubricants in total sales of lubricants (PVL + CVL)	%	12	11	18

Notes. Energy-efficient lubricants are oils with low rates of high-temperature viscosity (less than or equal to XXW-30) for light-duty and cargo product lines. Lower sales volumes of branded oils in 2021 and 2022 were driven by the deteriorating market conditions in the first post-pandemic years.

¹ LUKOIL cooperates with the Our Future Foundation only as part of the More Than Just a Purchase project. PJSC LUKOIL has no involvement in the design and implementation of the Foundation's programs.

² Information about the Our Future Foundation can be found at <https://www.nb-fund.ru/en/>.

³ Social entrepreneurship refers to a special type of activity aimed at resolving or mitigating social problems using income from economic activities. Both small businesses and social non-profit organizations can be social entrepreneurs.

⁴ Since 2022, the fuel stations network operated by EKA has become part of LUKOIL Group.

⁵ LIMS (Laboratory Information Management System) – a software application used in managing laboratory data and document flows.

⁶ PLM / RD means Product Lifecycle Management.

Interaction with customers

LLC LUK-International has created and constantly develops the system of customer interaction, the main elements of which are:

- ▶ researching and recording customer requests and complaints to avoid quality issues in future and identify areas for improvement and development;

- ▶ involvement of senior management in the analysis and discussion of research results at all levels – from managers to the CEO of LLC LUK-International;
- ▶ conducting customer feedback sessions to identify areas for improvement;
- ▶ setting targets for improving interaction in identified growth areas.

Key customer interaction tools include:

- ▶ the Customer Satisfaction Platform, which is used to analyze inquiry and complaint statistics;
- ▶ regular customer surveys;
- ▶ Steering Committees with OEM customers¹.

Customer satisfaction with the Company's products has remained at a high level for a long time.

Average customer satisfaction, %

Indicator	Unit of measurement	2020	2021	2022
Average customer satisfaction	%	94	94	94

Notes. The survey was held among dealers, maintenance stations, and industrial end users of oils and lubricants with contractual relationships with the Company of at least six months. In 2022, the averaging technique for the year-end results was refined to ensure better accuracy, i.e., the indicators are now calculated as a weighted average of results of the two waves of the survey, taking into account the number of customers participating in each wave. This helps reduce the risk of inaccuracies caused by variations in the share of customer participation from wave to wave.

To improve service quality and preserve customer preferences, the following initiatives were implemented in 2022:

- ▶ A new oil selection service for customers was added to LLC LUK-International's website and became a success from the very beginning.
- ▶ Answers to frequently asked questions were shared on the website as well.
- ▶ Work to verify the authenticity of oils is carried out.
- ▶ All quality-related claims are investigated in cooperation with independent laboratories.
- ▶ An area for preparing low-tonnage batches was created at our Perm production site; this will help deliver larger numbers of small batches under express orders, including to OEM customers.
- ▶ A data portal, LUKOIL CLIENT HUB, was organized for customers.

Advanced packaging solutions

One of LLC LUK-International's priority areas of work to reduce the environmental impact is seeking ways to improve packaging utilization. Some solutions have already been implemented, while some are scheduled for the near future.

- ▶ **Reduced use of polymer materials and wastes.** The Teboil 4-liter gasoline canister of the new generation is 25% less in weight, which helps reduce plastic consumption for manufacturing purposes and the volume of waste. Manufacturing of gasoline canisters with melted in labels was also launched, which helps prevent wastes presented by adhesive layers of self-adhesive labels; these canisters are fully recyclable.

▶ Recycling of polymer materials.

The Genesis 216.5-liter barrel has no internal coating, which makes the recycling process easier.

▶ Use of recycled materials.

Corrugated boxes with 50% recycled paper content are purchased. The terms of reference and contracts stipulate the requirements that help find suppliers in possession of corrugated box manufacturing technologies with no loss in packaging quality.

▶ Zero metal waste.

Metal oil filling cans have been removed from wide use.

Planned actions. It is planned to shift to using a 2D code printed under the lid for anti-counterfeiting purposes (instead of a self-adhesive label) and returnable containers (trays, angles, etc.), as agreed with the packaging supplier.

Polymer materials

The Company produces a wide range of polymer materials, organic synthesis products, and other petrochemical products. Polymer products are used in many industries, including manufacturing, consumer goods and food production, and medicine among others.

Polymer waste recycling is a critical task for the oil industry, and the right solution

will not only help reduce the environmental stress and slow down the rate of extracting ultimate fossil resources but also create the long-term economic effect and facilitate technological development and cooperation between industries. The LUKOIL Group entities are starting work in this area.

- ▶ LLC Stavrolen has developed a concept for mechanical recycling of the Company's polymer waste to be able to recycle it back

into the economy; the production line is planned to be purchased and the supplier selection process is under way.

- ▶ Our oil refinery in Bulgaria, together with its partner, is developing projects on the depolymerization / thermal conversion of plastic wastes to produce synthetic fuels and new plastic materials.

LUKOIL's best practices. Recyclables for better roads

Contribution to the Safe and Quality Roads national project

To facilitate waste recycling cooperation with customers and suppliers, LLC LUK-International offers road construction companies its RAC proprietary solution (Rubberized Asphalt Concrete LUKOIL), as part of which two components – ROADLINER MVNB-R (cementing agent¹) and RKM-2 (rubber multicomponent modifier²) – are supplied.

LLC LUK-International has developed an exclusive technology to produce the multicomponent rubber modifier from recycled materials: giant tires are processed into rubber crumb by LUKOIL's partner companies engaged in the recovery of waste tires of heavy-duty dump trucks. Where RKM-2 is used in combination with the cementing agent

(produced at our oil refinery in Nizhny Novgorod), better plasticity of the asphalt-concrete mixture is achieved during production, paving, and compaction. Owing to the above, such roadway platform performance characteristics as resistance to track pits and cracks, especially at low temperatures, and road service life improve. It is of essential importance for the construction of roadways with high traffic loads, highways, and paved runways.

Beyond that, processing of tires into rubber crumb represents the best environmentally friendly method of tire recovery. For example, a large holding company in extractive sector alone generates around 6,000 tonnes of recyclable waste tires each year. According to various estimates, something like 30% of waste tires are recycled in Russia now. Doing a better job in this area is a pressing task on the national scale. In the early stages of implementing this technology, the Company worked with one partner holding company but there are plans to expand cooperation later on.

The first control sections of the RAC pavement coated with the use of LUKOIL's materials have successfully been put into operation in Nizhny Novgorod, Tula, and Rostov regions. In 2022, 10 new sections were constructed and taken under control. LLC LUK-International's R&D Center of Bituminous Materials monitors roadway characteristics and summarizes research results to obtain approval from the national highway authority (Rosavtodor) to expand the use of RKM at Russia's federal highways. To validate stability characteristics of materials, LLC LUK-International also files requests to independent laboratories at the leading research centers (Testing Center of INPO Scientific and Research Institute of the Transport and Construction Complex, FAI ROSDORNII (Russian Road Scientific and Research Institute), V.G. Shukhov Belgorod State Technological University, etc.).

¹ OEM customers are automotive manufacturers and Original Equipment Manufacturers.

¹ Cementing agent is a material used in asphalt concrete production, outperforms asphalt paving materials in terms of properties.

² Rubber multicomponent modifier is a rubber crumb-based rubber-polymer mix with addition of other components, added to the mixer in asphalt concrete production.

**LUKOIL Group's sustainable development goal:
Contributing to the socio-economic development
of the regions and countries of operation**

Priorities

We recognize the importance of engagement with the residents of the Russian regions and countries where the LUKOIL Group entities operate. Our external social policy focuses on the interests of territories and local communities and is based on the principles of constructive cooperation and responsible partnership.

non-profit organization and directly by the LUKOIL Group entities.

Social projects make it possible to build and renovate kindergartens, schools, sports facilities, medical centers, hospitals, cultural and educational institutions, and other socially important municipal and village facilities.

Our actions

Thanks to its state-of-the-art production facilities and stable employment, the Company contributes to maintaining the social and economic development of the regions where the Group's entities operate.

Our charity programs are focused on improving the social climate and quality of life of local communities, our employees and their family members. Our social priorities have remained standing for over a quarter of a century and are uniform. Many programs and projects are long-term and are financed both by the LUKOIL Charity Fund (LUKOIL CF)

More information is available on our website, in the [Sustainability / Society](#) section.

In 2022, LUKOIL Group's total expenses on external social support amounted to approximately RUB 8.1 billion, including charity projects and events under 26 cooperation agreements with constituent entities of the Russian Federation.

Three of the LUKOIL Group entities were honored with the public VI ECO BEST Award for the best environmentally-friendly, energy-efficient, and resource-saving products and practices:

- ▶ LLC LUKOIL-Komi in the Environmental Initiative of the Year nomination;
- ▶ LLC LUKOIL-West Siberia in the Best Project for Children nomination;
- ▶ LLC LUKOIL-Ekoenergo in the Project of the Year nomination.

The award is given to socially responsible companies whose voluntary initiatives are aimed at reducing environmental impacts.

Areas of external social policy

SUPPORT FOR CHILDREN, ORPHANED CHILDREN, PEOPLE WITH DISABILITIES, VETERANS, AND FAMILIES IN HARDSHIP

- ✔ The Company supports projects addressed to talented children, orphaned children, and children with disabilities. As a rule, these projects are oriented towards improving their health and ensuring their personal development to help them better prepare for adult life.
- ✔ The Company pays special attention to and provides care for veterans. Every year, on the eve of Victory Day, they receive monetary aid and gifts. The Company also supports the families of military servicemen who died in local conflicts

EDUCATION

- ✔ The Company maintains cooperation with higher and secondary educational institutions, including those in the oil and gas industry, to ensure that the educational process is organized in accordance with the highest standards.
- ✔ The institutions use financial support from the Company to create research centers, laboratories, and academic departments, purchase equipment, and publish new textbooks and collections of articles on petroleum engineering

HUMAN MEDICINE AND HEALTHCARE

- ✔ The Company has for many years supported a number of large specialized medical centers and regional hospitals, out-patient clinics, and first-aid stations, as well as assisted in improving medical services

PRESERVATION OF CULTURAL HERITAGE AND TRADITIONS

- ✔ The Company is committed to supporting initiatives on the preservation of national and cultural traditions and crafts.
- ✔ For many years, we have supported museums, theaters, philharmonic halls, and other cultural institutions. We take part in organizing exhibitions, festivals and concert tours, restoring cultural heritage sites, and renovating cultural and art centers

ENVIRONMENT

- ✔ The LUKOIL Group entities run various environmental campaigns for planting trees, cleaning up natural areas, removing litter from riverbanks and rivers, etc.
- ✔ The Company's volunteers and the Council of Young Specialists play an active role in organizing and holding volunteer clean-up days and other special assignments

SOCIAL AND CULTURAL PROJECTS COMPETITION

- ✔ The Social and Cultural Projects Competition organized by the LUKOIL Charity Fund in partnership with the LUKOIL Group entities as early as 2002 is our most well-known corporate program. Its main goal is to support initiatives from entities to help resolve regional / local issues. The Competition considers entries in the three main categories – Environment, Spirituality and Culture, and Sports¹

SPORTS

- ✔ LUKOIL's sports program is geared towards promoting healthy lifestyles and sports. We support both professional and amateur teams and organize corporate wellness programs.
 - ✔ We continuously support the following sports: soccer, racing, basketball, competitive skiing, water polo, and handball. Special emphasis is placed on the development of children's sports.
 - ✔ The Company also assists in building sports facilities and organizing various competitions and city sports festivals.
 - ✔ All sports projects are operated by the LUKOIL Sports Club.
- Additional information is available at [LUKOIL Sports Club](#)

INDIGENOUS PEOPLES

- ✔ The Company signs economic agreements with the heads of traditional resource use areas in the KhMAA – Yugra and agreements on the social and economic development of deer farms in the NAA.
- ✔ In addition to the above agreements, the Company supports projects aimed to preserve the health of indigenous peoples, their culture and traditions, enhance accessibility of education, and solve other social problems

Please find below a selection of projects supported by the Company in 2022 and delivered as part of the Social and Cultural Projects Competition, agreements with regional and municipal administrations, and other initiatives, or directly supported by the LUKOIL Group entities.

¹ For more information about project funding terms, please visit the website of [PJSC LUKOIL](#).

Regional development and support

Improving the social climate in the regions

In the regions of operation, the Company supports multiple projects¹ that improve the quality of life in large cities, small and single-industry towns, and village communities.

Certain projects contribute to the implementation of the **Housing and Urban Environment and Tourism and Hospitality** national projects.

Russia

- ▶ KhMAA – Yugra: Residential construction is in progress (Kogalym). Sports and recreation areas are created: a skiing center and a soccer field (Pokachi), the Belaya Gorka sports and leisure park (Beloyarsky District), various sporting venues (Nizhnevartovsk and Surgut Districts).

- ▶ Two kindergartens were built in Samara Region.
- ▶ The Youth Center in Nizhny Novgorod Region (Kstovo District) and an open-air cinema in the Semeiny Park (Volgograd) are under construction.
- ▶ Inclusive beaches welcome for people with disabilities (Kaliningrad Region).
- ▶ Children's LUKOIL Filling Station amusement sites (with electric vehicles, traffic signs, and filling stations) were developed in Chelyabinsk and Ufa.

Entrepreneurship and tourism create new economic relations and social bonds among regions and people.

- ▶ The Yugra Economic Forum and the Entrepreneurship Days in Yugra Regional Campaign received support from the Company (KhMAA – Yugra).
- ▶ Social fairs where social entrepreneurs and children from orphanages, residential care facilities, and rehabilitation centers sell their work products are organized on an annual basis (Astrakhan).
- ▶ The Tundra restaurant fest (Arctic cuisine) has been held for four years (NAA).

To improve urban air quality, green public spaces are landscaped and redeveloped.

- ▶ **Russia:** redevelopment of the A. I. Shumlyansky park (Kotovo, Volgograd Region) and a mini park (Pokachi); Remembrance Garden and All-Russian Forest Planting Day campaigns (Nadym, KhMAA – Yugra).
- ▶ **Bulgaria:** the Central Park (Kameno) arrangement.
- ▶ **Romania:** landscape design and flower and tree planting in the Rose Park (Cluj-Napoca) and a park in Iași.

As a result of the actively developing social infrastructure, LUKOIL's core cities – Kogalym, Langepas, Urai, Pokachi – were included in the **Russia's Most Livable Cities Rating**. With the Company's sponsorship, healthcare, culture, sports, and preschool facilities, as well as residential buildings were developed; green zones and public spaces were set up.

Economic stability in Mexican rural communities

In Mexico (the state of Campeche), LUKOIL supported the project intended for women and designed to strengthen the standing of families with unstable or low income. The Company worked in collaboration with a well-known local social entrepreneur who had already been honored with several awards for successful social projects that made a positive impact on the well-being of local communities.

Many families in rural communities are in economic distress and are struggling to pay their expenses because they do not have regular jobs. The concept of the project is to assist such families with domestic poultry breeding and provide them with adequate protein nutrition.

Women who qualified for participation in the project are provided with vaccinated baby

chickens, basic equipment, and poultry feed. Moreover, the participating women receive training, get free vet advice and support from project managers on emerging issues. In the future, women will be able to raise more poultry, increase egg production, and tap into the market to sell surplus products and strengthen their financial standing. In 2022, 100 women took part in the project.

Projects for children

We partner with public agencies, municipal organizations, and foundations that provide various types of social support to children.

Certain projects contribute to the implementation of the **Demographics** national project.

Climate change

- ▶ The Meteorological Station for Preschoolers project helps preschool children understand what climate is and how it affects human life (Republic of Udmurtia).

Talent scouting, general support

Russia

- ▶ Top pupils from general education schools won personalized awards (Komi Republic). During the eight years of the project, over 500 children in the Komi Republic received these awards. A similar project is run in Kogalym, Langepas, Pokachi, and Urai (KhMAA – Yugra).
- ▶ Equipment for the Quantorium School Technopark (Kogalym) was purchased; a robotic technology studio for children aged 5 to 7 years was organized (Urai); a GAMEDEV club was organized at a secondary school for the schoolchildren who are eager to develop computer games and applications using basic programming languages (YaNAA).
- ▶ The Sweet Memories of Childhood Competition of children's handwritten books was held (with 75 books presented). An orthodox summer day camp was organized for children from large and low-income families (KhMAA – Yugra).
- ▶ A fire safety training course was held for preschoolers (Perm).

Finland

Each year, the Finnish Motor Racing Association selects three promising children from low-income families to go in for motor racing sports; such children receive Teboil Motorsport scholarships from Oy Teboil Ab.

Improvement of conditions at child care facilities and foster families

The Company's support helps to solve quite a variety of problems, including those relating to the development of child care facilities, their finishing and furnishing, and the provision of learning materials.

These projects contribute to the implementation of the **Education** national project.

Russia

- ▶ A special bus equipped with the ERA-GLONASS emergency response system, a tachograph, and a power lift was purchased in the Nenets Autonomous Area for the transportation of children with disabilities.
- ▶ Favorable conditions were created for orphaned children and children without parental care who were adopted by foster families (Kogalym).
- ▶ Medications were supplied to a social shelter for children and teenagers to accommodate healthcare services (Rostov-on-Don).
- ▶ Furniture for an orphanage was purchased (Komi Republic).
- ▶ Children's performance groups managed to purchase musical instruments and stage costumes handmade by local craftswomen (Perm Territory).

Uzbekistan

Two kindergartens with rehabilitation centers in Qibray and Qarshi and a kindergarten in Bukhara were built. Residential care facility No. 24 for visually impaired children in Bukhara received tactile books. Laboratory equipment and reagents for screening tests of children with asthma were supplied (Bukhara). Support was provided in furnishing a social shelter for women and children (Bukhara Region).

Support of schools and educational institutions

Programs for schoolchildren are geared towards developing knowledge and skills they will require in their studying and professional engagement. Guidance counseling work is organized for senior pupils. Since 2000, the Company has supported high-potential students, young teachers, and job training instructors by providing personalized scholarships and grants.

These projects contribute to the implementation of the **Education** national project.

Sponsorship programs for students and teachers of higher and secondary education institutions in Russia

Indicators	Unit of measurement	2020	2021	2022
Student scholarships				
Number of scholarship holders	people	196	194	189
Level of financing	RUB mln	6.4	6.4	6.9
Grants to teachers				
Number of teachers	people	86	80	80
Level of financing	RUB mln	10.2	8.7	10.7

Russia

- ▶ A mobile planetarium was purchased for extracurricular astronomy classes and as part of the school camp holiday program (Langepas, KhMAA – Yugra).
- ▶ The following equipment was purchased for secondary schools in KhMAA – Yugra: a digital physics laboratory (Pokachi); computer equipment, socio-dramatic games and training manuals for a preschool training group in Vanzevat (Beloyarsky District).
- ▶ Educational opportunities were expanded: a career guidance class was organized at one school (Volgograd), a geology training course for schoolchildren was developed at the Galaktika lyceum school (Kazan).

¹ This section provides information on selected projects to highlight the implementation of LUKOIL Group's social policy. The list of projects receiving support from the Company on an annual basis is much broader.

Supporting the healthcare sector

For many years, the Company has supported a number of specialized medical centers and regional medical institutions, thus helping to improve the quality of healthcare services in the regions where we operate.

These projects contribute to the implementation of the **Healthcare** national project.

Russia

- ▶ The Amiable Bus campaign. LUKOIL's young employees at their own expense purchased baby food, toys, medications and delivered them to the patients of the Volgograd Regional Oncology Center (Volgograd).
- ▶ Support was provided to R.I. Batmanova Nenets District Hospital in taking a next step forward in the development of the air ambulance aviation (NAA).
- ▶ Medical electric beds with memory foam mattresses were purchased for the Usinsk Central Republican Hospital (Komi Republic).

Belarus

Improvement of living conditions at the Care Home for Veterans, the Elderly and Disabled No. 1 (Minsk) and the Psychoneurologic Nursing Home for the Elderly and Disabled, support to the District Organization of the Belarus Association of Veterans.

Bulgaria

Support to an organization rendering help to elderly diabetic patients (Burgas) by procuring blood glucose monitoring materials.

Croatia

Purchase of a hand-carried ultrasound device for the surgical intensive care unit (Zagreb Municipal Hospital).

Uzbekistan

Purchase of wheelchairs for underprivileged families from Bukhara and Qarshi.

Sports

LUKOIL's amateur sports program for adults and children is aimed at promoting sports and healthy lifestyles, increasing the number of mass sports projects, and diversifying their formats.

These projects contribute to the implementation of the **Healthcare** national project.

Russia

- ▶ The following events were organized: the Night Hockey League tournament (Langepas), the indoor soccer competition (Salekhard), the Irtysh Land Dawns artistic gymnastics competition (Omsk), a special Swimming Olympiad (Kazan), the Martial Arts Week (Ukhta),

LLC LUKOIL Komi's prize contest – the V Interregional Ice Hockey Tournament (Usinsk), the YaNAA figure skating championship (Salekhard), and other sports events.

- ▶ Since 2008, the rural sports and athletic contest has been held to get villagers involved in regular physical training and sports (Komi Republic).
- ▶ Sports equipment and outfit for the Hawks children's ice hockey club was purchased (Astrakhan).
- ▶ The Museum of the World Ocean Museum-Reserve acquired sailing and motor boats to increase the number of participants in annual Kaliningrad Region river cruises for cadets (Kaliningrad).

Croatia

- ▶ Sports uniform and equipment were purchased for the children's soccer club.

The LUKOIL Sports Club won the **Sport Business Awards Prize in the ESG Project of the Year nomination**; 100 subject-matter experts evaluated its inclusive approach and achievements. Moreover, joint projects of LUKOIL Group, the LUKOIL Sports Club, and the Our Future Foundation were included in the **Russia's Best Social Projects catalog**.

Environment

These projects contribute to the implementation of the **Ecology** national project.

Every year, the LUKOIL Group entities run their own environmental campaigns and actively participate in regional initiatives and partner organizations, such as the Water of Russia All-Russian campaign on removing litter from water body banks

as part of the Ecology national project. Not only LUKOIL employees but also their family members and, at times, neighbors, employees of contractor and public organizations make their meaningful contribution to the common cause.

Involvement of the LUKOIL Group entities in environmental campaigns in 2022

WATER BODY BANKS WHERE ENVIRONMENTAL CAMPAIGNS WERE HELD IN 2022

- ▶ **KhMAA – Yugra:** Lake Svetloye, the Ingu-Yagun, Konda, and Kolosya Rivers
- ▶ **Komi Republic:** the Ukhta, Pechora, and Kolva Rivers; the Maly Voyvozh and Bezymyanny streams
- ▶ **Rostov Region:** the Don River
- ▶ **Perm Territory:** the Gayva, Pyzh Rivers, Lake Nyukhti
- ▶ **Astrakhan, Nizhny Novgorod, and Volgograd Regions:** the Volga River and tributaries
- ▶ **Kaliningrad Region:** the Baltic Sea, the Angrapa River
- ▶ **Krasnodar Territory:** the Azov-Black Sea silted estuaries
- ▶ **Stavropol Territory:** Lake Buyvol

SPNAS¹, NATURE RESERVES AND OTHER VALUABLE TERRITORIES COVERED BY ENVIRONMENTAL CAMPAIGNS

- ▶ **Perm Territory:** Andronovsky Forest
- ▶ **Voronezh Region:** Forest and parkland zone of the Forest Genetics and Tree Breeding Scientific and Research Institute
- ▶ **Republic of Kalmykia:** Chernye Zemli State Biosphere Reserve.
- ▶ **Uzbekistan:** Sukok Reserve

Russia

- ▶ An illegal dumping spotted by residents of the village of Malaya Tapyra (several tonnes of domestic garbage and construction waste) was cleaned up. LLC LUKOIL-Perm leased heavy-duty machines to remove garbage, employees of LLC LUKOIL-Perm together with villagers and forest rangers joined the clean-up day (Perm Territory).
- ▶ Domestic garbage collection points in non-urban areas were organized (Republic of Udmurtia); household waste accumulation points in municipal and rural settlements in Kondinsky District were eliminated (KhMAA – Yugra).
- ▶ Fire-extinguishing equipment to fight summer fires was purchased (Stavropol Territory).
- ▶ Support was provided to the Rostok (Twig) network of school forestry units where schoolchildren undertake

their research projects (KhMAA – Yugra, Langepas, Rural Settlement of Russkinskaya). In 2021, a project for the development of school forestry units won the prize of the regional stage of the All-Russian Contest Volunteers: Only the Sky is the Limit.

- ▶ Support was provided to the project developed by young naturalists of the Plant Protection biological research station (Kislovodsk).
- ▶ The Bird Haven Ecology Trail dedicated to city birds was organized within the territory of the Kaliningrad Regional Museum of History and Art (Kaliningrad).

Bulgaria

As part of the 2030 Patrol project (Burgas), an interactive ecology plant house was opened to deliver classes to residents of the five districts adjacent to the oil refinery.

Croatia

Support was provided to two volunteer fire brigades in Tisno and Vodice village settlements which suffered from massive fires in 2022.

LUKOIL won the **V.I. Vernadsky National Ecology Award in the Education as a Path to Sustainable Development nomination**. Prizes were granted to environmental awareness projects supported by our Perm oil refinery. According to representatives of the V.I. Vernadsky Foundation, "The key objective of all National Environment Prize winning projects is to contribute to achieving the UN Sustainable Development Goals".

¹ Specially protected natural areas.

Social and Cultural Projects Competition

The best-known LUKOIL program is the Social and Cultural Projects Competition organized by the LUKOIL CF in partnership with the LUKOIL Group entities in Russia and Romania. Support is provided to projects that meet the key nominations criteria. The Report contains a selection of examples to illustrate support provided to special categories of residents of the regions where the LUKOIL Group entities operate.

Support for children in need of medical treatment and rehabilitation

These projects contribute to the implementation of the **Demographics** national project.

Russia

- ▶ Rehabilitation and social adaptation of children with disabilities by initiating them into sewing and weaving and a Psychology Club for adolescents with at-risk status (Langepas).

- ▶ Support for families with autistic children (Republic of Kalmykia); medical treatment and rehabilitation of seriously ill children (Salekhard).
- ▶ The Ekzar Planet Foundation for Support of Innovative Medicine manufactures exoskeletons for children (Volgograd).
- ▶ Procurement of medications for children with cerebral palsy (Perm Territory).
- ▶ Kayaking for persons with hearing disabilities (Kaliningrad); a choreography fest for children with hearing disorders (Volgograd); the Magpie inclusive theater school (Astrakhan).
- ▶ Organization of a site for dog therapy rehabilitation classes for children and adolescents (Volgograd).
- ▶ Support to a theater for children and adults with disabilities in staging the Blue Rose play (Krasnodar).

Serbia

Support was provided to several organizations, including in establishing a school for parents of children with developmental disorders, as well as support to a primary school for children with special educational needs and a care home for children with developmental disorders (Subotica).

Croatia

Sponsorship to a foster home and a non-profit organization engaged in giving curative horse-riding lessons to children with disabilities (Village of Lakernik).

Romania

Support was provided to children with severe malformations and deprived children.

Support for the elderly

These projects contribute to the implementation of the **Demographics** national project.

Russia

- ▶ For people over the age of 60, a recreational gym program of physical exercises and mindset training sessions was developed. Weekly sessions were held at the Social Service Center; 45 people attended the sessions during the entire project period (YaNAA, Tazovsky District).
- ▶ One of the projects was aimed at enhancing computer skills of the elderly (Republic of Kalmykia).
- ▶ The Active Longevity project intended for pensioners of our Perm oil refinery was implemented. Healthcare stations, i. e. express checkup points where the elderly may check their key health parameters, were organized in a number of territories (Perm Territory).

Social and Cultural Projects Competition results

Indicators	Unit of measurement	2020	2021	2022
Number of projects participating in the competition	units	3,461	2,683	2,001
Number of winning projects	units	769	580	545
Financial support for winning projects	RUB mln	157	135	139

Corporate volunteering

The practice of volunteering in campaigns and events for the benefit of residents of cities and villages has long been an integral part of LUKOIL Group's corporate culture. Our younger employees organize their own volunteer projects and participate in local initiatives. Despite the large variety of campaigns, our volunteers from all regions where the Company operates have shared

priorities. These include the following types of support and social participation:

- ▶ Support for war and oil industry veterans: visiting the elderly, helping them around the house, and giving them gifts.
- ▶ Care for children: visits to orphanages and patronage of child welfare institutions, organization of festive events and campaigns.

- ▶ Environmental campaigns: cleaning up natural sites, planting trees in cities.
- ▶ Sporting events: bicycle rides, races, relays, rafting, hiking, etc.
- ▶ Charity fairs and city festivals to encourage residents of cities and villages to provide charitable aid to their neighbors.

Indigenous minorities of the North

The LUKOIL Group entities sign economic agreements with the heads of traditional resource use areas in the KhMAA – Yugra and agreements on the socio-economic development of deer farms in the NAA. Compensation includes cash payments, goods, transportation, and services.

For almost 20 years, we have been running the **Red Tent** project to preserve the health of nomadic indigenous people of the Arctic in the NAA. LUKOIL took part in the implementation of the Socio-Economic Development of Indigenous Minorities of the North in KhMAA – Yugra for 2018–2025 state program.

The Company has established and successfully operates mechanisms that allow indigenous minorities

of the North and their organizations to contact the Company and request assistance or protection of their rights.

In 2022, there were no cases of involuntary resettlement of indigenous peoples during the LUKOIL Group entities' operations in the traditional settlement areas and / or areas of economic activities of the indigenous minorities of the North, and no reports were received regarding violations of rights of indigenous peoples of the North. Certain socially important projects received charitable support.

- ▶ Presents for the 20th anniversary of establishing the Nekutsya kinship community (NAA).
- ▶ Holding of the Xth Congress of the Izvatas Izhma-Komi Interregional Social Movement.

- ▶ Professional excellence competition for reindeer herders (KhMAA – Yugra).
- ▶ The interregional environmental and ethnographic project From River Source to River Mouth – to assess touristic routes in the northern regions, evaluate the state of aquatic bioresources and the environmental situation of rivers of the West Siberian Basin.
- ▶ Participation of representatives of the Russian Association of Indigenous Peoples of the North in the 21st Session of the UN Permanent Forum on Indigenous Issues.
- ▶ Preparation of the Children of the Arctic project proposal to the Arctic Council on the sustainable development of the Arctic.

Supporting indigenous minorities of the North in Russia as part of licensing obligations

Russian region	Unit of measurement	2020	2021	2022
Total	RUB mln	390	370	428
KhMAA – Yugra	RUB mln	359	340	398
NAA	RUB mln	31	30	30

Appendices

Appendix 1. Acronyms and abbreviations

Names of the LUKOIL Group entities

Nizhny Novgorod oil refinery – LLC LUKOIL-Nizhegorodnefteorgsintez

Oil Refinery in Bulgaria – LUKOIL Neftochim Burgas AD

Oil Refinery in Italy – ISAB S.r.l.

Oil Refinery in Romania – PETROTEL-LUKOIL S.A.

Perm oil refinery – LLC LUKOIL-Permnefteorgsintez

PJSC LUKOIL – Public Joint Stock Company Oil Company LUKOIL

Ukhta oil refinery – LLC LUKOIL-Ukhtaneftepererabotka, LLC LUKOIL-UNP

Volgograd oil refinery – LLC LUKOIL-Volgogradneftepererabotka

Names of countries and regions of the Russian Federation

KhMAA – Yugra – Khanty-Mansi Autonomous Area – Yugra

NAA – Nenets Autonomous Area

Russia – the Russian Federation

YaNAA – Yamal-Nenets Autonomous Area

Abbreviations

APG – associated petroleum gas

CBAM – Carbon Border Adjustment Mechanism

CIS – continuous improvement system

CF – charity fund

CHPP – combined heat and power plant

DLS – distance learning system

ECS – electric charging station

EIA – environmental impact assessment

ERT – emergency response teams

ESG – environmental, social and governance

ESP – Environmental Safety Program

GHG – greenhouse gases

GPP – gas processing plant

GRES – state regional power plant

HPP – hydroelectric power plant

HSE – health, safety and environment

ICE – internal combustion engine

IMS – Integrated System of Management of Industrial, Fire, Radiation Safety, Emergency Prevention, and Liquidation, the Protection of Civilians, Occupational Safety, and Environmental Protection

ISC – industrial service center

ISP – Program of Industrial Safety and Occupational Safety

IT – information technologies

ITS – Information Technology Support

JSC – joint stock company

KPI – key performance indicator

LLC – limited liability company

LLP – limited liability partnership

LPG – liquefied petroleum gas

LRA – local regulatory act

M&R – materials and resources

OEM – Original Equipment Manufacturer

OPS – Oil Product Supply

PJSC – public joint stock company

PPE – personal protective equipment

R&D – research and development

RES – renewable energy sources

RES CDA – Renewable Energy Sources Capacity Delivery Agreement

SISCAC – Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors of PJSC LUKOIL

SPP – solar power plant

STO – standard of an organization

STW – scientific technical works

TPU – territorial production unit

VHI – voluntary health insurance

VOC – volatile organic compounds

WPP – wind power plant

Names of organizations and initiatives, other names

EU – European Union

RAS – Russian Academy of Sciences

RSPP – Russian Union of Industrialists and Entrepreneurs

UN – United Nations

VCIOM – Russian Public Opinion Research Center

SDGs – UN Sustainable Development Goals (the UN 2030 Agenda for Sustainable Development)

CDP – Carbon Disclosure Project

ISO – International Organization for Standardization

GRI – Global Reporting Initiative

MARPOL – International Convention for the Prevention of Pollution from Ships

OPEC – Organization of the Petroleum Exporting Countries

SASB – Sustainability Accounting Standards Board

SECA – Sulfur Emission Control Area

TCFD – Task Force on Climate Related Financial Disclosures

UNCTAD – United Nations Conference on Trade and Development

Units of measurement

boe – barrel of oil equivalent

GW, MW – gigawatt, megawatt

p.p. – percentage point

CO₂e – CO₂ equivalent

Appendix 2. Reporting boundaries

The Report discloses sustainability information on Russian and foreign LUKOIL Group entities, in which PJSC LUKOIL holds more than 50% and has operational control. The disclosure boundaries are determined based on the

significant economic, environmental, and social impacts of the Group's entities. The GRI indicator boundaries are specified in [Appendix 5](#). Information on the assets that became part of LUKOIL Group in 2022 are integrated into the Company's

non-financial reporting system and will be included when this work is finalized. The 2022 report includes data on the number of employees at the new assets and related data that were finalized in the reporting year.

Appendix 3. Reporting standards and systems and determining material topics

3.1. Reporting standards and guidelines

In preparing this Report, we used the following non-financial reporting standards and guidelines:

- ▶ Information letter of the Bank of Russia No. IN-06-28/96 dated December 16, 2021 On Recommendations for the Board of Directors of a Public Joint Stock Company to Consider ESG Factors and Sustainability Issues;
- ▶ Standards for sustainability reporting of the Global Reporting Initiative (GRI Standards 2021). The GRI content index of general and specific reporting items is provided in [Appendix 5](#);
- ▶ IPIECA (International Petroleum Industry Environmental Conservation Association) Oil and Gas Industry Guidance on Voluntary Sustainability Reporting, 2020;
- ▶ SASB (Sustainability Accounting Standards Board) reporting standards.

In preparing the data, the Company was also guided by the legislative requirements in the countries of presence and the following initiatives:

- ▶ Information letter of the Bank of Russia No. IN-06-28/49 dated July 12, 2021;
- ▶ Basic Performance Indicators of RSPP and the "Responsibility and Transparency" and "Sustainable Development Vector" indices of the Moscow Exchange – RSPP;

- ▶ UNDP (United Nations Development Programme) SDG Impact Standards for Enterprise 2021;
- ▶ Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD);
- ▶ United Nations Global Compact;
- ▶ Guidance on Core Indicators for Entity Reporting on Contribution Towards Implementation of the Sustainable Development Goals, UNCTAD, 2019.

The list of reporting standards and guidelines used or considered in the preparation of sustainability reports is reviewed based on their applicability and the Company's disclosure capabilities.

3.2. Material topics (GRI 3: Material Topics 2021)

In accordance with the requirements of the non-financial reporting standards and the Regulations on the Preparation of the LUKOIL Group Sustainability Report, the list of material topics and issues is updated on an annual basis. In 2022, the procedure was amended based on GRI 3: Material Topics 2021. It is planned to further improve the procedure for analyzing impacts from the Company's operations and to establish a deeper correlation between material impacts and material topics of reports.

1. Impact identification. At the first stage, the activities of the LUKOIL Group entities were analyzed for impact (effects) on the economy, the environment, and society, including human rights. Both negative and positive impacts, predominantly actual and potential, were identified during the analysis.

2. Sources: The second stage included an analysis of the list of topics determined to be material (or potentially material) in sector standards (GRI, SASB, IPIECA) and complying with the UN Sustainable Development Goals and the Company's priorities set forth in the LUKOIL Group Sustainability Policy. We also analyzed sources that were previously used in the process of determining the material topics, including:

- ▶ analytical reports and reviews published by reputable organizations to identify predictive signals, global and industry trends and risks;
- ▶ publications on trends in non-financial reporting;
- ▶ reports and publications issued by oil and gas companies;
- ▶ industry best practices.

Based on an expert assessment of the results of the analysis of sources, it was concluded that the high-level topics relevant to the priorities of the LUKOIL Group Sustainability Policy remained relevant.

3. Stakeholders' position. The third stage involves stakeholder surveys. Since 2017, the Company has surveyed internal and external stakeholders (once every two years for each of these categories). In 2022, it was decided to conduct an unscheduled survey of PJSC LUKOIL management, the results of which became an important criterion for determining material topics and the concept of the Report.

4. List of the material topics. A list of material topics is compiled based on the procedures indicated in items 1–3.

In the absence of a generally accepted methodology, material topics are not ranked.

5. Approval of the material topics. The list of material topics is reviewed by the Sustainability Task Force and the SISCAC on an annual basis.

6. Material topics disclosure. Information is disclosed in the Sustainability Report, the Annual Report, the ESG Databook, on the corporate website, as well as in

thematic brochures and press releases of PJSC LUKOIL.

Specified in the table below:

- ⊖ Negative
- ⊕ Positive impacts (actual and potential)
- ⊕⊖ Impacts that can have both positive and negative effects in different periods and for various stakeholder groups

Material topics	Compliance with the GRI Sector Standard	Impacts of the LUKOIL Group entities' activities	Management of the Company's impacts
Ethics and corporate governance	11.19 Anti-competitive behavior	⊖ Compliance with laws, voluntary commitments, corporate ethical principles	Section of the Report:
Sustainability management	11.20 Anti-corruption	⊖ Potential deviations in compliance with mandatory and optional requirements	Corporate ethics and behavior, p. 70
	11.21 Payments to governments	⊕ Implementation of programs and projects that facilitate the achievement of the goals and objectives of the 2030 Agenda for Sustainable Development	
	11.22 Public policy		
Economic sustainability during a period of high uncertainty, including:	11.14 Economic impacts	⊕ Capital investments to ensure availability of energy resources	Sections of the Report:
▶ reliability of energy supply under market and technological restrictions		⊖ Involving mineral resources in the economy	Economic sustainability, p. 22
▶ supply chain transformation, ensuring process reliability and product quality stability		⊕ Contribution to the gross national product and gross regional product	Technology policy, p. 13
▶ information security		⊕ Studying and implementing technologies to facilitate the transition to the circular economy	
		⊕ Payments to shareholders, employees, investors, suppliers	
		⊖ Change in the volume and geography of goods and services purchased and the corresponding effect on the counterparties' income and employment level	
		⊖ Encouraging the development and implementation of new technologies and engineering solutions	
		⊕ Scientific cooperation	
Interaction in the supply chain	11.14 Economic impacts	⊖ Change in the volume and geography of goods and services purchased and the corresponding effect on the counterparties' income and employment level	Section of the Report:
	11.2 Climate adaptation, resilience, and transition	⊕ Ensuring the quality of products	Supply chain, p. 86
		⊖ Maintaining a customer-friendly business model	
		⊕ Development of the product portfolio through the production of more environmentally friendly and low-carbon products	

Material topics	Compliance with the GRI Sector Standard	Impacts of the LUKOIL Group entities' activities	Management of the Company's impacts
GHG emissions Implementation of the decarbonization program Climate adaptation Interaction on the climate agenda	11.1 GHG emissions 11.2 Climate adaptation, resilience, and transition	<ul style="list-style-type: none"> ⊖ GHG emissions ⊕ Production of more environmentally friendly and low-carbon products, encouraging a culture of responsible consumption among product consumers 	Section of the Report: Climate change, p. 32
Water resources Emissions and waste Land resources Integrity of facilities and management of critical incidents	11.6 Water and effluents 11.3 Air emissions 11.5 Waste 11.4 Biodiversity	<ul style="list-style-type: none"> ⊖ Impact of production processes on environmental components (air emissions, fresh water withdrawal, wastewater discharges, waste, disruption of natural ecosystems) ⊕ Implementation of measures aimed at improving the reliability of technological processes and equipment operation ⊕ Scientific cooperation 	Section of the Report: Environmental protection, p. 46
Human rights Employment, work with the youth Motivation and training of employees Occupational health and safety of own employees and employees of contractor organizations	11.11 Non-discrimination and equal opportunity 11.10 Employment practices 11.9 Occupational health and safety	<ul style="list-style-type: none"> ⊕ Creation/preservation of jobs in the Company and in the supply chain ⊖ Potential impact on employment opportunity balance ⊖ Local residents employment policy in the countries and regions of presence and respective impact on local labor markets and residents' income ⊕ Labor mechanization ⊖ Digitalization of production and management processes ⊖ Negative impact (potential and actual) of working conditions on the health of employees of the Company and counterparties 	Sections of the Report: Corporate ethics and behavior, p. 70 Our employees, p. 74
Maintenance of socio-economic stability in the regions of presence Interaction with residents in the regions Support for public organizations and vulnerable groups	11.15 Local communities 11.17 Rights of indigenous peoples	<ul style="list-style-type: none"> ⊕ Supply of affordable energy, contribution to improving the quality of life and economic potential of regions ⊖ Potential impact on indigenous peoples' lifestyle ⊕ Creation/preservation of jobs in the Company and in the supply chain ⊕ Training of local professionals ⊖ Potential negative impact on local communities due to environmental impacts in the regions of presence ⊕ Implementation of external social programs 	Sections of the Report: Society, p. 94 Supply chain, p. 86 Our employees, p. 74

Note. The Company's position on the topics from GRI 11: Oil and Gas Sector 2021 not specified in this table is described in [Appendix 5](#).

7. Results of the audit and public assurance of the Report

The results of professional verification (audit) and public assurance of the Report for the preceding reporting period were considered when preparing the Report for 2022.

Recommendations of the RSP Council on Non-Financial Reporting, ESG Indices and Sustainable Development Ratings in respect of LUKOIL Group Sustainability Reports

Comments

A. Recommendations received in the previous reporting periods, and indicated by the Company as plans for the future

1. Identify measurable target indicators for the priority SDGs with expected deadlines for their achievement	The climate goal is set until 2030 (SDG 13). The remaining goals are set as part of annual planning of measures in accordance with the Company's goal-setting procedures
2. Disclose the cost structure by key areas of external social policy, reflect the effectiveness of specific projects	The information is to be disclosed in additional publications

B. Recommendations received based on results of the 2021 Report review

3. Expand information on the Company's contribution to the implementation of national projects and the Company's target/planned indicators	The information is presented in the Society section. The Company has no target indicators relating to national projects
4. Apply a uniform approach to describing areas of support for social projects, disclose information on costs and results	The information is to be disclosed in additional publications
5. Explain the principles of data distribution between the text of the Report and the appendices	The Report includes quantitative indicators characterizing the main impacts of the LUKOIL Group entities, as well as indicators contextually related to the text of the Report. The ESG Databook includes indicators that more fully disclose the results of the reporting year by geography, types of activity and other criteria and requirements contained in the reporting standards/guidelines used in the preparation of the Report
6. Provide information on key aspects of the Company's economic impact in the context of sustainable development	The information is presented in the Products sub-section, p. 88
7. Identify risks the intensification of which may be significant to the Company and its vision of possible actions to mitigate these risks. Focus on sustainability priorities in the context of current changes	The information is presented in the Economic sustainability, p. 22
8. Include information on the regulations, measures and performance of internal control and audit subdivisions of PJSC LUKOIL and the Group's key assets on monitoring the implementation of the internal regulatory documents governing the socio-economic and environmental impact and sustainability aspects	The information is presented in the Corporate governance sub-section, p. 18

Appendix 4. Spills disclosure

In accordance with the commitments declared by the Company, measures were taken in 2022 to eliminate the residual consequences of the 2021 accident at the Oshskoye field¹. The progress was covered in regional mass media.

Land reclamation

Technical and biological reclamation of a land plot with an area of 1.6 hectare located near the culvert crossing at the source of the oil leak location was completed. The site was cleaned up by specialists of LLC LUKOIL-Komi and a contractor organization. The quality of work was confirmed by the results of the samples taken by the accredited laboratories of the Vyatka State University and the Regional Environmental Center (Kirov). The land plot was prepared for acceptance by the NAA specialized commission in 2023.

Aerial monitoring

The assessment of the state of the water surface, pipeline water crossings, and the shoreline area for the presence of an iridescent film was performed regularly (at least once every 9–10 days) using aircraft-type UAVs. In order to enhance measures for safe operation of oilfield pipelines, an

additional agreement was concluded to drone the Oshskoye field pipelines and the culvert crossings near the Kolva River.

During the flooding period, the river water area was inspected by helicopter and visually assessed with the participation of representatives of the state supervisory bodies. As part of the soil and environmental assessment of sites limited to the floodplain of the Kolva River, 483 hectares were examined using UAVs and satellite image interpretation.

Quality of water and bottom deposits in the Kolva River

During the year, water quality observations were performed at five monitoring points. The results of 164 samples showed that no cases were identified during the entire observation period when the maximum permissible concentration of petroleum products and chlorides in water was achieved.

The state of the water area, bottom deposits and the shoreline were studied by scientists from the Research Center of Tomsk State University using the Aeroshchup technology. The scope of work was 207 km along the riverbed; the inspected area exceeded 41.4 square km; more than 8,000 measurements were performed. The results received were generally satisfactory.

Floodplain meadows

The state of floodplain meadows was assessed by scientists of the V. V. Dokuchaev Institute. They examined 80 hectares of land, took soil samples, and described the parameters from 47 points of study. The results attest to the stable condition of agricultural land, and no plant depression was identified. Minor comments were made in relation to the condition of shrubs growing along the river; they are to be addressed in the spring–summer period of 2023.

Appendix 5. GRI Content Index 2021

Statement of the use of the GRI Standards: The data in the LUKOIL Group Sustainability Report for 2022 (for the period from January 1 to December 31, 2022) were prepared with reference to the Global Reporting Initiative Standards (GRI Standards 2021).

GRI 1 Standard: Foundation 2021 – used.

Sector standard: GRI 11: Oil and Gas Sector – used.

Data on **GRI 2 Standard:** General Disclosures 2021 of LUKOIL Group were disclosed.

Legend:  designates partially disclosed indicators.

1. General disclosures

GRI Standards	Disclosure	Sources of 2022 information	Comments/rationale for excluding reporting data
GRI 2: General Disclosures 2021	2-1 Organizational details	Sustainability Report, p. 8 Website https://lukoil.com/ Annual Report	
	2-2 Entities included in the organization's sustainability reporting		The Report covers all assets that have significant economic, environmental, and social impacts in Russia and abroad
	2-3 Reporting period, frequency and contact point	Sustainability Report, p. 6	The reporting period is the period from 1 January to 31 December of each reporting year. The report is published annually
	2-4 Restatements of information	Sustainability Report, p. 109	Restatement of information is applied to the LTIFR calculation technique
	2-5 External assurance	Sustainability Report, p. 6 Appendices 10 and 11	The Company uses two types of external assurance: professional verification by an audit firm (Appendix 10) and public assurance by the RSPP Council on Non-Financial Reporting, ESG Indices and Sustainable Development Ratings (Appendix 11).
	2-6 Activities, value chain and other business relationships	Sustainability Report, p. 8 Website https://lukoil.com/Business Annual Report	
	2-7 Employees	Sustainability Report, p. 74 ESG Databook	
	2-8 Workers who are not employees		The information on employment agreements is consolidated by the Company without a breakdown by permanent and temporary employees. Permanent employees include persons who have concluded an employment contract with the employer. The employees legally recognized as self-employed and persons not employed by the LUKOIL Group entities either permanently or temporarily perform an insignificant scope of work
	2-9 Governance structure and composition	Annual Report	

¹ Detailed information is available in the [LUKOIL Group Sustainability Report for 2021](#).

GRI Standards	Disclosure	Sources of 2022 information	Comments/rationale for excluding reporting data	
GRI 2: General Disclosures 2021	2-10 Nomination and selection of the highest governance body	Annual Report		
	2-11 Chair of the highest governance body	Annual Report		
	2-12 Role of the highest governance body in overseeing the management of impacts	Sustainability Report, p. 18 Annual Report		
	2-13 Delegation of responsibility for managing impacts	Sustainability Report, p. 23 Annual Report		
	2-14 Role of the highest governance body in sustainability reporting	Sustainability Report, p. 20 Annual Report		
	2-15 Conflicts of interest	Annual Report		
	2-16 Communication of critical concerns	Sustainability Report, p. 20 Annual Report		
	2-17 Collective knowledge of the highest governance body	Annual Report		
	2-18 Evaluation of the performance of the highest governance body	Annual Report		
	2-19 Remuneration policies	Annual Report		
	2-20 Process to determine remuneration	Annual Report		
	2-21 Annual total compensation ratio	Annual Report		
	2-22 Statement on sustainable development strategy	Sustainability Report, p. 12		
	2-23 Policy commitments		Sustainability Report, p. 22	
			Website: Sustainability management Document Center: LUKOIL Group Sustainability Policy , LUKOIL Group Human Rights Policy	
	2-24 Embedding policy commitments	Sustainability Report, p. 30-31, 68-69	Commitments are fulfilled through processes and procedures formalized as part of operational management	
	2-25 Processes to remediate negative impacts	Sustainability Report, p. 36, 47, 63	Consequences of negative impacts are prevented and eliminated through the planning and implementation of targeted and investment programs	

GRI Standards	Disclosure	Sources of 2022 information	Comments/rationale for excluding reporting data
GRI 2: General Disclosures 2021	2-26 Mechanisms for seeking advice and raising concerns	Sustainability Report, p. 61	
		Document Center: LUKOIL Group Sustainability Policy , LUKOIL Group Human Rights Policy	
	2-27 Compliance with laws and regulations	Sustainability Report, p. 21, 82	
		Document Center: Code of Business Conduct and Ethics of PJSC LUKOIL	
	2-28 Membership associations		The Council for Professional Qualifications in the Oil and Gas Industry of the Russian Federation: PJSC LUKOIL is a member of the organization. Russian Union of Industrialists and Entrepreneurs: PJSC LUKOIL is a member of the organization
	2-29 Approach to stakeholder engagement	Sustainability Report, p. 72	
Document Center: LUKOIL Group Sustainability Policy , LUKOIL Group Human Rights Policy			
2-30 Collective bargaining agreements	Sustainability Report, p. 82 ESG Databook Website: Collective bargaining		

2. Sector standard







Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
GRI 3: Material Topics 2021	3-1 Process to determine material topics and sources of information		Appendix 3		
	3-2 List of material topics		Appendix 3		
GRI 11: Oil and Gas Sector 2021	11.1 GHG emissions				
GRI 3: Material Topics 2021	Management of material topics	11.1.	Website: Management system CDP questionnaire	LUKOIL Group	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	11.2	Sustainability Report, p. 38 ESG Databook	LUKOIL Group (within the GHG emissions accounting boundaries)	





Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
	302-2 Energy consumption outside of the organization	11.1.3			The Company does not collect these data
	302-3 Energy intensity	11.1.4	Sustainability Report, p. 39 ESG Databook	LUKOIL Group (within the GHG emissions accounting boundaries)	
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	11.1.5	Sustainability Report, p. 44 ESG Databook	LUKOIL Group (operational control)	
	305-2 Energy indirect (Scope 2) GHG emissions	11.1.6	Sustainability Report, p. 44 ESG Databook	LUKOIL Group (operational control)	
	305-3 Other indirect (Scope 3) GHG emissions	11.1.7	CDP questionnaire	LUKOIL Group (within the GHG emissions accounting boundaries)	The indicator is provided in the CDP questionnaire
	305-4 GHG emissions intensity		Sustainability Report, p. 45 ESG Databook	LUKOIL Group (operational control)	Specific indicators for Scope 1 + Scope 2 are provided
GRI 11: Oil and Gas Sector 2021	11.2 Climate adaptation, resilience, and transition				
GRI 3: Material Topics 2021	Management of material topics	11.2.1	Website: Climate risks management Document Center: HSE Policy of LUKOIL Group , CDP questionnaire	LUKOIL Group	
GRI 201: Economic Performance 2016	201-2 Financial implications and other risks and opportunities due to climate change	11.2.2	CDP questionnaire	LUKOIL Group	
GRI 305: Emissions 2016	305-5 Reduction of GHG emissions	11.2.3	ESG Databook	LUKOIL Group (operational control)	
	Approach to participation in public policy and lobbying on climate change issues	11.2.4	Sustainability Report, p. 33	LUKOIL Group	
GRI 11: Oil and Gas Sector 2021	11.3 Air emissions				
GRI 3: Material Topics 2021	Management of material topics	11.3.1	Website: Clean air Document Center: HSE Policy of LUKOIL Group	LUKOIL Group	
GRI 305: Emissions 2016	305-7 Nitrogen oxides (NO _x), sulfur oxides (SO _x), and other significant air emissions	11.3.2	Sustainability Report, p. 54 ESG Databook	LUKOIL Group (operational control)	

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
GRI 416: Customer Health and Safety 2016	416-1 Assessment of the health and safety impacts of product and service categories	11.3.3	Website: Product quality management	LUKOIL Group	The company certifies its products in accordance with technical regulations and other industry-specific requirements
GRI 11: Oil and Gas Sector 2021	11.4 Biodiversity				
GRI 3: Material Topics 2021	Management of material topics	11.4.1	Website: Biodiversity Document Center: HSE Policy of LUKOIL Group Brochure: Conserving biodiversity	LUKOIL Group	
GRI 304: Biodiversity 2016	304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	11.4.2	Sustainability Report, p. 58 Brochure: Conserving biodiversity	LUKOIL Group (operational control)	
	304-2 Significant impacts of activities, products, and services on biodiversity	11.4.3	Brochure: Conserving biodiversity	LUKOIL Group (operational control)	
	304-3 Habitats protected or restored	11.4.4	Sustainability Report, p. 58 Brochure: Conserving biodiversity	LUKOIL Group (operational control)	
	304-4 IUCN Red List species and national conservation list species with habitats in areas affected by operations	11.4.5	Sustainability Report, p. 58 Brochure: Conserving biodiversity	LUKOIL Group (operational control)	
GRI 11: Oil and Gas Sector 2021	11.5 Waste				
GRI 3: Material Topics 2021	Management of material topics	11.5.1	Website: Waste Document Center: HSE Policy of LUKOIL Group	LUKOIL Group	
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	11.5.2	Sustainability Report, p. 56	LUKOIL Group (operational control)	
	306-2 Management of significant waste-related impacts	11.5.3	Website: Waste Sustainability Report, p. 55	LUKOIL Group (operational control)	
	306-3 Waste generated	11.5.4	Sustainability Report, p. 55 ESG Databook	LUKOIL Group (operational control)	
	306-4 Waste diverted from disposal	11.5.5	ESG Databook	LUKOIL Group (operational control)	

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
	306-5 Waste directed to disposal	11.5.6	ESG Databook	LUKOIL Group (operational control)	
GRI 11: Oil and Gas Sector 2021	11.6 Water and effluents				
GRI 3: Material Topics 2021	Management of material topics	11.6.1	Website: Clean water Document Center: HSE Policy of LUKOIL Group	LUKOIL Group	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	11.6.2	Booklet: Zero Discharge Sustainability Report, p. 48	LUKOIL Group (operational control)	
	303-2 Management of water discharge-related impacts	11.6.3	Website: Clean water Document Center: HSE Policy of LUKOIL Group		
	303-3 Water withdrawal	11.6.4	Sustainability Report, p. 50 ESG Databook	LUKOIL Group (operational control)	
	303-4 Water discharge	11.6.5	Sustainability Report, p. 52 ESG Databook	LUKOIL Group (operational control)	
	303-5 Water consumption	11.6.6			The calculation technique is under development
GRI 11: Oil and Gas Sector 2021	11.7 Closure and rehabilitation				
GRI 3: Material Topics 2021	Management of material topics	11.7.1	Website: Abandonment of hazardous production facilities	LUKOIL Group	The Company closed no assets in 2022. The impact is qualified as potential
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	11.7.2		LUKOIL Group	In most countries of presence, the minimum notice period is four to nine weeks
GRI 404: Training and Education 2016	404-2 Programs for upgrading employee skills and transition assistance programs	11.7.3		LUKOIL Group	The Company has programs for upgrading employee skills (see Appendix 6) for all employees, regardless of their employment termination dates

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
GRI 11: Oil and Gas Sector 2021	11.8 Asset integrity and critical incident management				
GRI 3: Material Topics 2021	Management of material topics	11.8.1	Website: Driving Reliability of Pipeline Transport, Safety in the Arctic Zone, Emergency Prevention and Response	LUKOIL Group	Transportation safety issues (except for pipeline system) are not significant as they apply to personnel transfers and transportation of fuel by motor vehicles for retailing and are reported in the corporate occupational safety system. The bulk of products is supplied to foreign and domestic customers using third-party carriers' transport
GRI 306: Effluents and Waste 2016	306-3 Significant spills	11.8.2	Sustainability Report, p. 65 ESG Databook Appendix 4	LUKOIL Group's Russian entities	
	Information on Level 1 and 2 incidents	11.8.3			The calculation technique is to be determined
	Information on shale oil production	11.8.4			The Company does not produce shale oil
GRI 11: Oil and Gas Sector 2021	11.9 Occupational health and safety				
GRI 3: Material Topics 2021	Management of material topics	11.9.1	Website: Integrated management system Document Center: HSE Policy of LUKOIL Group	LUKOIL Group	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	11.9.2	Website: Occupational health and safety, Program of Industrial Safety and Occupational Safety	LUKOIL Group	
	403-2 Hazard identification, risk assessment, and incident investigation	11.9.3	Website: Occupational health and safety	LUKOIL Group	
	403-3 Occupational health services	11.9.4	Website: Occupational health and safety	LUKOIL Group	



Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
	403-4 Worker participation, consultation, and communication on occupational health and safety	11.9.5	Website: Occupational health and safety Leadership and safety culture	LUKOIL Group	
	403-5 Worker training on occupational health and safety	11.9.6	Sustainability Report, p. 76 ESG Databook	LUKOIL Group	
	403-6 Promotion of worker health	11.9.7	Sustainability Report, p. 79	LUKOIL Group	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	11.9.8	Sustainability Report, p. 79	LUKOIL Group	
	403-8 Workers covered by an occupational health and safety management system	11.9.9	Sustainability Report, p. 31 ESG Databook	LUKOIL Group	
	403-9 Work-related injuries	11.9.10	Sustainability Report, p. 78 ESG Databook	LUKOIL Group	
	403-10 Work-related ill health	11.9.11	Sustainability Report, p. 79 ESG Databook	LUKOIL Group	
GRI 11: Oil and Gas Sector 2021	11.10 Employment practices				
GRI 3: Material Topics 2021	Management of material topics	11.10.1	Website: Human Capital Management Policy Document Center: Social Code of PJSC LUKOIL , Human Capital Management Policy of PJSC LUKOIL	LUKOIL Group	
GRI 401: Employment 2016 	401-1 New employee hires and employee turnover	11.10.2	ESG Databook	LUKOIL Group	
	401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	11.10.3	Website: Social programs Sustainability Report, p. 82 ESG Databook	LUKOIL Group	Social benefits are granted to all employees, regardless of the type of employment and the Company's region of presence. The social package does not include any benefits intended exclusively for people with disabilities

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
	401-3 Parental leave	11.10.4			The indicator is not used by the Company in the accounting system for reporting purposes
GRI 402: Labor/Management Relations 2016	402-1 Minimum notice periods regarding operational changes	11.10.5		LUKOIL Group	Refer to 11.7.2
GRI 404: Training and Education 2016 	404-1 Average hours of training per year per employee	11.10.6	Sustainability Report, p. 84 ESG Databook	LUKOIL Group	The indicator disclosure methodology is being refined
	404-2 Programs for upgrading employee skills and transition assistance programs	11.10.7	Website: Personnel training and development Sustainability Report, p. 84	LUKOIL Group	The Company has programs for upgrading employee skills (see Appendix 6) for all employees regardless of their employment termination dates
GRI 414: Supplier Social Assessment 2016 	414-1 New suppliers that were screened using social criteria	11.10.8	Sustainability Report, p. 87	LUKOIL Group's Russian entities. Foreign entities of the Exploration and Production business segment	These data relate to all counterparties that submitted bids to participate in tenders, including new organizations and organizations that had contractual relations with the LUKOIL Group entities earlier (due to the technical inability to distinguish between them).
	414-2 Negative social impacts in the supply chain and actions taken	11.10.9	Sustainability Report, p. 87	LUKOIL Group's Russian entities. Foreign entities of the Exploration and Production business segment	In 2022, the Company made every effort to implement the effective contracts; no negative impacts were identified
GRI 11: Oil and Gas Sector 2021	11.11 Non-discrimination and equal opportunity				
GRI 3: Material Topics 2021	Management of material topics	11.11.1	Website: Principles of business ethics , Personnel training and development Document Center: Human Capital Management Policy , LUKOIL Group Human Rights Policy , Code of Business Conduct and Ethics of PJSC LUKOIL	LUKOIL Group	
GRI 202: Market Presence 2016 	202-2 Proportion of senior management hired from the local community	11.11.2	Sustainability Report, p. 80 ESG Databook	LUKOIL Group in significant regions of presence	The indicator is only significant for the foreign entities of the Group

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
GRI 401: Employment 2016	401-3 Parental leave	11.11.3			The indicator is not used by the Company for reporting purposes
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	11.11.4		LUKOIL Group	Human rights training is to be provided starting in 2023. The indicator disclosure methodology is being refined
GRI 405: Diversity and Equal Opportunities 2016	405-1 Diversity of governance bodies and employees	11.11.5	Sustainability Report, p. 80 ESG Databook	LUKOIL Group	
	405-2 Ratio of basic salary and remuneration of women to men	11.11.6	Website: Labor relations	LUKOIL Group's Russian entities	The base salary does not depend on the employee's gender
GRI 406: Non-discrimination 2016	406-1 Incidents of discrimination and corrective actions taken	11.11.7	Sustainability Report, p. 81 ESG Databook	LUKOIL Group	
GRI 11: Oil and Gas Sector 2021	11.12 Forced labor and modern slavery				For the purposes of this Report, the topic is not material (see comment on indicator 11.12.1)
GRI 3: Material Topics 2021	Management of material topics	11.12.1	Document Center: LUKOIL Group Human Rights Policy , Human Capital Management Policy of PJSC LUKOIL	LUKOIL Group	All assets (100% share of PJSC LUKOIL, within the reporting boundaries) are located in countries where forced labor and modern slavery are prohibited by law. The impact is qualified as potential
GRI 409: Forced or Compulsory Labor 2016	409-1 Operations and suppliers at significant risk for incidents of forced or compulsory labor	11.12.2			
GRI 414: Supplier Social Assessment 2016	414-1 New suppliers that were screened using social criteria	11.12.3			These data relate to all counterparties that submitted bids to participate in tenders, including new organizations and organizations that had contractual relations with the LUKOIL Group entities earlier (due to the technical inability to distinguish between them)

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
GRI 11: Oil and Gas Sector 2021	11.13 Freedom of association and collective bargaining				For the purposes of this Report, the topic is not material (see comment on indicator 11.13.1)
GRI 3: Material Topics 2021	Management of material topics	11.13.1	Website: Social partnership Document Center: LUKOIL Group Human Rights Policy , Human Capital Management Policy of PJSC LUKOIL	LUKOIL Group	At large production assets under PJSC LUKOIL operational control (100% share), collective bargaining agreements were concluded with the participation of trade unions (if any)
GRI 407: Freedom of Association and Collective Bargaining 2016	407-1 Operations and suppliers in which the right to freedom of association and collective bargaining may be at risk	11.13.2			This information is not collected by the Company
GRI 11: Oil and Gas Sector 2021	11.14 Economic impacts				
GRI 3: Material Topics 2021	Management of material topics	11.14.1		LUKOIL Group	Economic impacts are managed through the development, updating and implementation of the strategic development program
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	11.14.2		LUKOIL Group	Information is not disclosed by the Company
GRI 202: Market Presence 2016	202-2 Proportion of senior management hired from the local community	11.14.3	Sustainability Report, p. 80 ESG Databook	LUKOIL Group in significant regions of presence	Refer to 11.11.2
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	11.14.4	Sustainability Report, p. 94	LUKOIL Group in significant regions of presence	A description of sample projects is provided
	203-2 Significant indirect economic impacts	11.14.5	Sustainability Report, p. 95	LUKOIL Group in significant regions of presence	A description of sample impacts is provided
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	11.14.6	Sustainability Report, p. 87	LUKOIL Group's Russian entities	

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
GRI 11: Oil and Gas Sector 2021	11.15 Local communities				
GRI 3: Material Topics 2021	Management of material topics	11.15.1	Website: External social policy priorities Document Center: Social Code of PJSC LUKOIL , LUKOIL Group Human Rights Policy , LUKOIL Group Sustainability Policy	LUKOIL Group	
GRI 413: Local Communities 2016 	413-1 Operations with local community engagement, impact assessments, and development programs	11.15.2	Sustainability Report, p. 94	LUKOIL Group	All the LUKOIL Group entities of the Exploration and Production and Refining and Distribution business segments, as well as major entities of the Corporate Center and Other Activities business segment, have programs to engage and support local communities
	413-2 Operations with significant actual and potential negative impacts on local communities	11.15.3	Sustainability Report, p. 60	LUKOIL Group	Impact analysis identified primarily environmental impacts that may have a negative effect on the residents in the regions of presence, refer to the Komi Republic case
	Number and content of complaints from local communities, including: <ul style="list-style-type: none"> ▶ the percentage of complaints that were considered and resolved ▶ the percentage of complaints that were resolved by rectifying the situation 	11.15.4	Sustainability Report, p. 101		
GRI 11: Oil and Gas Sector 2021	11.16 Land and resource rights				
GRI 3: Material Topics 2021	Management of material topics	11.16.1		LUKOIL Group	The Company does not resolve land allocation issues and is not involved in making such decisions. Land rights issues are regulated by the laws of the country of presence




Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
	The location of the sites with activities that necessitated involuntary resettlement of local residents, or their resettlement continues	11.16.2			In 2022, there were no facts of involuntary resettlement of local residents at the Company's initiative
GRI 11: Oil and Gas Sector 2021	11.17 Rights of indigenous peoples				
GRI 3: Material Topics 2021	Management of material topics	11.17.1	Website: Indigenous minorities of the North Document Center: LUKOIL Group Human Rights Policy , Social Code of PJSC LUKOIL	LUKOIL Group	
GRI 411: Rights of Indigenous Peoples 2016	411-1 Incidents of violations involving rights of indigenous peoples	11.17.2	Sustainability Report, p. 101	LUKOIL Group	
	Places of residence of indigenous peoples whose interests are or may be affected by the entity's activities	11.17.3	Booklet: Preserving traditions of the North	LUKOIL Group	
	Indicate whether the entity has been involved in obtaining the free, prior, and informed consent of indigenous peoples to any of the entity's activities, including, in each case: <ul style="list-style-type: none"> ▶ whether the process was mutually acceptable for the entity and indigenous peoples; ▶ whether an agreement was reached 	11.17.4	LUKOIL Group Human Rights Policy Website: Indigenous minorities of the North	LUKOIL Group	
GRI 11: Oil and Gas Sector 2021	11.8 Conflict and security				
					For the purposes of this Report, the topic of security services is not material. The impact is qualified as potential
GRI 3: Material Topics 2021	Management of material topics	11.18.1	LUKOIL Group Human Rights Policy	LUKOIL Group	
GRI 410: Security Practices 2016	410-1 Security personnel trained in human rights policies or procedures	11.18.2	Website: Human rights	LUKOIL Group	

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
GRI 11: Oil and Gas Sector 2021	11.19 Anti-competitive behavior				
GRI 3: Material Topics 2021	Management of material topics	11.19.1	Website: Antimonopoly Policy	LUKOIL Group	
GRI 206: Anticompetitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	11.19.2	Sustainability Report, p. 21	LUKOIL Group	
GRI 11: Oil and Gas Sector 2021	11.20 Anti-corruption				
GRI 3: Material Topics 2021	Management of material topics	11.20.1	Website: Anti-Corruption Policy Document Center: Anti-Corruption Policy of PJSC LUKOIL	LUKOIL Group	The Company does not engage in or encourage corrupt practices, including those by business partners, and makes every effort to prevent them. The Company does not tolerate any payments or other forms of incentives provided to representatives of government authorities
GRI 205: Anticorruption 2016	205-1 Operations assessed for risks related to corruption	11.20.2	Sustainability Report, p. 71, 86	LUKOIL Group	The Report outlines a general approach to managing sustainability risks. The indicator disclosure methodology is under development
	205-2 Communication and training about anti-corruption policies and procedures	11.20.3	Website: Anti-Corruption Policy	LUKOIL Group	The Report outlines a general approach to managing sustainability risks. The indicator disclosure methodology is under development
	205-3 Confirmed incidents of corruption and actions taken	11.20.4	Sustainability Report, p. 71 ESG Databook	LUKOIL Group	

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
	Approach to the public nature of contracts concluded: ▶ whether the contracts and licenses are public, and if so, where they are published; ▶ if the contracts or licenses are not publicly available, indicate the reason for this and the actions taken to make them available in the future	11.20.5			The information is not disclosed by the Company
	List of beneficial owners of the organization. How the organization identifies beneficial owners of business partners, including joint ventures and suppliers	11.20.6			The information is not disclosed by the Company. Information on beneficial owners of business partners is not collected
GRI 11: Oil and Gas Sector 2021	11.21 Payments to governments				
GRI 3: Material Topics 2021	Management of material topics	11.21.1	Website: Tax policy	LUKOIL Group	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	11.21.2		LUKOIL Group	The information is not disclosed by the Company
	201-4 Financial assistance received from government	11.21.3		LUKOIL Group	The Company received no financial aid from government in 2022
GRI 207: Tax 2019	207-1 Approach to tax	11.21.4	Website: Tax policy	LUKOIL Group	
	207-2 Tax governance, control, and risk management	11.21.5	Website: Tax policy	LUKOIL Group	

Standard	Material topics and indicators	Indicator number	Sources of information	Reporting Boundaries	Comments/rationale for excluding reporting data
	207-3 Stakeholder engagement and management of concerns related to tax	11.21.6		LUKOIL Group	The Company constantly interacts with the tax authorities, as well as with the relevant government authorities as part of statutory processes
	207-4 Country-by-country reporting	11.21.7			The information is not disclosed by the Company
	In respect of oil and gas purchased from the governments or third parties appointed by the governments for sale on their behalf, the following information should be provided: <ul style="list-style-type: none"> ▶ volumes and types of oil and gas purchased ▶ names of the buyer and the payment recipient ▶ purchase payment 	11.21.8			The information is not disclosed by the Company
GRI 11: Oil and Gas Sector 2021					
11.22 Public policy					
GRI 3: Material Topics 2021	Management of material topics	11.22.1	Website: Anti-Corruption Policy Document Center: Anti-Corruption Policy of PJSC LUKOIL	LUKOIL Group	According to the Anti-Corruption Policy of PJSC LUKOIL, the Group is not involved in any political activity, does not exert, either directly or indirectly, any influence on any decisions of public officials or any other persons that affect the preservation or expansion of the Group's operations or may be treated as such. The Group provides no financing for political parties and movements or any other activity benefiting political parties and their representatives (either in Russia or abroad)
GRI 415: Public Policy 2016	415-1 Political contributions		Website: Anti-Corruption Policy Document Center: Anti-Corruption Policy of PJSC LUKOIL	LUKOIL Group	In 2022: no political contributions; no incentive payments to government officials

3. Additional indicators

GRI content index	Indicator	Section and/or page of the Report	Indicator boundaries	Comment
201-3	Defined benefit plan obligations and other retirement plans	Payroll and social support, p. 83	LUKOIL Group	
308-1 	New suppliers that were screened using environmental criteria	Procurement, p. 87	LUKOIL Group's Russian entities.	These data were provided in respect of new and existing suppliers in the aggregate due to the technical inability to distinguish between them
308-2 	Negative environmental impacts in the supply chain and actions taken		Foreign entities of the Exploration and Production business segment	
202-1 	Ratios of standard entry level wage by gender compared to local minimum wage	Payroll and social support, p. 81	LUKOIL Group	

Appendix 6. Individual GRI Indicators

GRI 404-2		Programs for upgrading employee skills and transition assistance programs
Type of training	Training programs and courses	
Internal training courses	DLS: more than 300 training courses on the following topics: quality management and lean manufacturing, organizational change management, project management, management, personal effectiveness, foreign languages, corporate spirit, IT courses (Outlook, Excel, PowerPoint), public speaking and presentations, human resources management, effective negotiations, production focus, oil product supply, risk management, IT security, civil defense and emergency protection, industrial safety, occupational safety, fire safety	
External training or education	Professional retraining, education under MBA, EMBA, DBA programs If an employee wants to receive additional professional education, including a postgraduate degree, not on the employer's initiative, the employee is entitled to an academic leave and a guarantee that the employee's position in the Company is kept by the employer for the entire term of studies	

Appendix 7. SASB Content Index

In preparing the Report, the SASB standards for the oil and gas sector were used: Oil & Gas – Exploration & Production; Oil & Gas – Refining & Marketing; Oil & Gas – Midstream.

Topic	Code	Definition	Response / reference to indicators in the Sustainability Report for 2022 or other source of information
Oil & Gas – Exploration & Production			
Greenhouse Gas Emissions	EM-EP-110a.1	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	LUKOIL discloses Scope 1 emissions data based on the operations control criterion. For details, see Appendix 9 and the Report, p. 44
	EM-EP-110a.2	Amount of gross global Scope 1 emissions from: (1) flared hydrocarbons, (2) other combustion, (3) process emissions, (4) other vented emissions, and (5) fugitive emissions	For more details, see the CDP questionnaire
	EM-EP-110a.3	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	CDP questionnaire Report: sub-section Climate agenda (Climate change section), p. 33
Air Quality	EM-EP-120a.1	Air emissions of the following pollutants: (1) NOx (excluding N2O), (2) SOx, (3) VOCs, (4) particulate matter (PM10)	For details, see Appendix 9 . Information on particulate matter emissions is provided without indicating the level of dispersion.
Water Management	EM-EP-140a.1	1) Total fresh water withdrawn; 2) total fresh water consumed, percentage of each in regions with High or Extremely High Baseline Water Stress	Sub-section Water resources (Environmental protection), p. 48 For details, see Appendix 9 .
	EM-EP-140a.2	Volume of produced water and flowback generated: percentage (1) discharged to land, (2) injected in underground formations, (3) recycled; hydrocarbon content in discharged water	For details, see Appendix 9 . 1) Percentage discharged to land – 0. 2) All produced water is injected in the formation pressure maintenance system or absorbing formations. 3) The technologies used allow to ensure that the hydrocarbon content in injected water is in compliance with the national engineering standards and deposit development sites
Biodiversity Impacts	EM-EP-160a.1	Description of environmental management policies and practices for active sites	Information is published on the corporate website. Document Center Integrated management system Abandonment of hazardous production facilities Environmental monitoring
	EM-EP-160a.2	Number and aggregate volume of hydrocarbon spills, volume in Arctic, volume impacting shorelines with ESI rankings 8–10, and volume recovered	Sub-section Reliability of pipeline transportation in Russia (Industrial safety section), p. 65 In 2022, there were no category 8–10 ESI spills affecting the coast
Security, Human Rights & Rights of Indigenous Peoples	EM-EP-210a.3	Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	Sub-section Indigenous minorities of the North (Society section), p. 101 Website: Indigenous minorities . Document Center: LUKOIL Group Human Rights Policy

Topic	Code	Definition	Response / reference to indicators in the Sustainability Report for 2022 or other source of information
Community Relations	EM-EP-210b.1	Discussion of process to manage risks and opportunities associated with community rights and interests	Sub-sections Integrated management system, Komi Republic case study (Environmental protection section), p. 65 Sub-section Indigenous minorities of the North (Society section), p. 101
Workforce Health & Safety	EM-EP-320a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, (3) near miss frequency rate (NMFR), and (4) average hours of health, safety, and emergency response training for (a) full-time employees, (b) contract employees, and (c) short-service employees	The indicator is partly disclosed: 1) and 2) Sub-section Occupational safety (Our employees section), p. 78 . For details, see Appendix 9 ; 3) Instruments to be used in recording near miss incidents are being implemented; 4) No data on the average duration of training of contractors' personnel and short-service employees are provided, as such data are not used by the Company
	EM-EP-320a.2	Discussion of management systems used to integrate a culture of safety throughout the exploration and production lifecycle	Sub-section Occupational safety (Our employees section), p. 76-77 Website: Integrated management system
Reserves Valuation & Capital Expenditures	EM-EP 420 a.1	Sensitivity of hydrocarbon reserve levels to future price projection scenarios that account for a price on carbon emissions	CDP questionnaire
	EM-EP 420 a.2	Estimated carbon dioxide emissions embedded in proved hydrocarbon reserves	No calculations were performed by the Company
	EM-EP 420 a.3	Amount invested in renewable energy, revenue generated by renewable energy sales	For details, see Appendix 9
	EM-EP 420 a.4	Discussion of how price and demand for hydrocarbons and/or climate regulation influence the capital expenditure strategy for exploration, acquisition, and development of assets	Website: Climate change
Business Ethics & Transparency	EM-EP 510 a.1	Percentage of (1) proved and (2) probable reserves in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Among such 20 countries there are no countries where the activities of the LUKOIL Group entities were included in sustainability reporting boundaries
	EM-EP-510a.2	Description of the management system for prevention of corruption and bribery throughout the value chain	Corporate ethics and behavior section, p. 70-71 Website: Ethics and statutory compliance
Management of the Legal & Regulatory Environment	EM-EP-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Sub-section Climate agenda (Climate change section)
Activity Metrics	EM-EP-000.A	Production of: (1) oil, (2) natural gas, (3) synthetic oil, and (4) synthetic gas	Sub-paragraphs 1 and 2: About the Company section p. 8-9 and the Annual Report Sub-paragraphs 3 and 4 are not relevant to the Company
	EM-EP-000.B	Number of offshore sites	Information is not disclosed by the Company
	EM-EP-000.C	Number of terrestrial sites	Information is not disclosed by the Company

Topic	Code	Definition	Response / reference to indicators in the Sustainability Report for 2022 or other source of information
Oil & Gas – Refining & Marketing			
Greenhouse Gas Emissions	EM-RM 110a.1	Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	LUKOIL discloses Scope 1 emissions data based on the operations control criterion. For indicators, see Appendix 9
	EM-RM 110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Climate change section, p. 33
Air Quality	EM-RM 120 a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) particulate matter (PM ₁₀), (4) H ₂ S, and (5) VOCs	For details, see Appendix 9 . Information on particulate matter emissions is provided without indicating the level of dispersion
	EM-RM 120 a.2	Number of refineries in or near areas of dense population	LUKOIL Group comprises seven oil refineries (within the reporting boundaries), of which three are located in cities with a population exceeding 1,000,000 people (all located in Russia). For details, see Appendix 9 (Emissions)
Water Management	EM-RM 140 a.1	(1) Total fresh water withdrawn, (2) percentage recycled, (3) percentage in regions with High or Extremely High Baseline Water Stress	Sub-paragraphs 1 and 2: for details, see Appendix 9
	EM-RM 140 a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	The indicator calculation technique is under development
Hazardous Materials Management	EM-RM 150 a.1	Amount of hazardous waste generated, percentage recycled	For details, see Appendix 9
Workforce Health & Safety	EM-RM 320 a.1	(1) Total recordable incident rate (TRIR), (2) fatality rate, and (3) near miss frequency rate (NMFR) for (a) full-time employees and (b) contract employees	Sub-paragraphs 1 and 2.; see Appendix 9 . 3: no NMFR data are provided, as the calculation technique was under development in 2022. No data on contract employee injury rates are provided (except on the number of fatalities), as the Company does not collect such data
	EM-RM 320 a.2	Discussion of management systems used to integrate a culture of safety	Information is published on the corporate website: Leadership and safety culture

Topic	Code	Definition	Response / reference to indicators in the Sustainability Report for 2022 or other source of information
Product Specifications & Clean Fuel Blends	EM-RM-410a.1	Percentage of Renewable Volume Obligation (RVO) met through: (1) production of renewable fuels, (2) purchase of “separated” renewable identification numbers (RIN)	No biocomponents are produced at the Company’s foreign entities. Biocomponents to be used in the production of marketable products are procured from suppliers. A number of voluntary certification schemes in supply chains were approved in the EU, for example the ISCC scheme (International Sustainability and Carbon Certification scheme ¹). Those participating in such schemes are granted PoS (Proof of Sustainability) documents for each fuel batch produced or imported to the EU. Companies engaged in selling fuels on the market and bound by the obligation to add biofuels to mineral fuels use PoS documents as a proof that biocomponents have been added. On the basis of PoS, declarations of compliance for each fuel batch are issued
	EM-RM-410a.2	Total addressable market and share of market for advanced biofuels and associated infrastructure	The issue of the prospects for next generation renewable fuels is being considered within the framework of LUKOIL Group’s climate strategy
Pricing Integrity & Transparency	EM-RM-520a.1	Total amount of monetary losses as a result of legal proceedings associated with price fixing or price manipulation	Sub-section Corporate governance (Strategy and corporate governance section), p. 21
Management of the Legal & Regulatory Environment	EM-RM-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	Appendix 5 Topic 11.22 Public policy
Activity Metrics	EM-RM-000.A	Refining throughput of crude oil and other feedstocks	Annual Report
	EM-RM-000.B	Refining operating capacity	Annual Report
Oil & Gas – Midstream			
Greenhouse Gas Emissions	EM-MD-110a.1	Gross global Scope 1 emissions, percentage methane, percentage covered under emissions-limiting regulations	LUKOIL discloses Scope 1 and 2 emissions data based on the operations control criterion. For indicators, see Appendix 9
	EM-MD-110a.2	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Climate change section, p. 33

¹ ISCC is a global certification system covering sustainability-based supply chains and encompasses all types of raw materials, including agricultural and forest biomass, recyclables and biomaterials, as well as types of renewable energy.

Appendix 8. References: definitions and calculation formulas

Indicators, calculation formulas

Refinery yield is calculated by the following formula:

$$\text{Refinery yield} = \frac{Q - (\text{FFO} + L)}{Q} \cdot 100\%$$

where: Q is the actual volume of oil feed processed in crude distillation units (Atmospheric and Vacuum Distillation Units and Atmospheric Distillation Units), as well as received feed processed in secondary refining processes (catalytic cracking, delayed coking, etc.);

FFO is the gross amount of furnace fuel oil (fuel oil for sale + liquid fuel for technological (own) needs);

L is the amount of irretrievable losses of oil refining, excluding losses at a crude oil electric desalting and dehydration plant.

When calculating the aggregated Oil refinery yield indicator, the actual volume of oil feed (Q) comprises the feedstock (oil, gas condensate) processed in crude distillation units (Atmospheric and Vacuum Distillation Units and Atmospheric Distillation Units), excluding other types of feed processed in secondary refining processes (intragroup supplies).

Lost Time Accident Frequency Rate, LTAFR = Number of accidents x 1,000 employees / Average employee headcount.

Lost Time Injury Frequency Rate, LTIFR = Number of employees injured in workplace accidents (including fatalities) x 1,000,000 man-hours / Number of man-hours worked by all employees.

Rate of Fatalities as a Result of Work-Related Injury = Number of fatalities x 1,000,000 man-hours / Number of man-hours worked by all employees.

Rate of High-Consequence¹ Work-Related Injuries = Number of high-consequence work-related injuries (excluding fatalities) x 1,000,000 man-hours / Number of man-hours worked by all employees. The severity of the injury is counted according to the criteria for determining the severity of health damage as a result of a workplace accident established in the national legislation. In the absence of such criteria, this category includes accidents (except fatalities), as a result of which an employee cannot recover, has not recovered, or is not expected to recover health within six months from the date of injury.

Total Recordable Injury Frequency Rate, TRIFR = Number of employees injured in workplace accidents + Number of employees injured who suffered microtraumas x 1,000,000 man-hours / Number of man-hours worked by all employees.

The employee turnover rate is defined as the ratio of the number of employees dismissed due to turnover to the average headcount for a reporting period. The number of employees dismissed due to turnover includes employees dismissed for absenteeism and other violations of labor discipline, as well as due to the employee's unsuitability for their position because of lack of skill; those who left on their own without serious cause (due to relocation, retirement, care for a child under 14 years of age, etc.) or by agreement between the parties (except for employees who were re-employed on the next day).

Rounding values

The aggregate values of the Report and [Appendix 9 \(ESG Databook\)](#) indicators may differ insignificantly from the sum of indicators as a result of rounding (not more than by 1).

Definitions

Claim relating to the breach of law means an administrative or criminal claim filed against PJSC LUKOIL, the LUKOIL Group entities, an employee of PJSC LUKOIL or an employee of a LUKOIL Group entity. For public reporting purposes, only completed cases in which a final decision has been rendered that is not subject to further appeal are taken into account. Cases in which the entity was found not guilty are not taken into account for the disclosure of indicators.

Key performance indicators are a set of indicators characterizing the key success factors of LUKOIL Group, taking account of the industry specifics and determining the level of achievement of strategic goals.

Microtrauma is an event resulting in abrasions, hematomas, soft tissue bruises, flesh wounds and other injuries of employees and other individuals engaged in the employer's operating activities in the course of performance of their respective job duties or any work on instruction from the employer (their representative), and also in carrying out other lawful activities arising from employment relations with the employer or performed in the best interests thereof, where such events do not cause health impairment or temporary disability.

Topic	Code	Definition	Response / reference to indicators in the Sustainability Report for 2022 or other source of information
Air Quality	EM-MD 120 a.1	Air emissions of the following pollutants: (1) NO _x (excluding N ₂ O), (2) SO _x , (3) VOCs, (4) particulate matter (PM ₁₀)	For details, see Appendix 9 . Information on particulate matter emissions is provided without indicating the level of dispersion
	EM-MD 160 a.1	Description of environmental management policies and practices for active operations	Information is published on the corporate website. Document Center . Integrated management system
	EM-MD 160 a.3	Terrestrial acreage disturbed, percentage of impacted area restored	Sub-section Waste and land reclamation (Environmental protection section), p. 57
	EM-MD 160 a.4	Number and aggregate volume of hydrocarbon spills, volume in Arctic, and volume recovered	The indicator is presented as a summary of Upstream / Midstream. Sub-section Reliability of pipeline transportation in Russia (Industrial safety section), p. 62
Operational Safety, Emergency Preparedness & Response	EM-MD-540a.1	Number of reportable pipeline incidents, percentage significant	The Report and Appendix 9 contain the "Number of significant spills" indicator
	EM-MD-540a.2	Percentage of (1) natural gas and (2) hazardous liquid pipelines inspected	A description of the management system and a list of comprehensive measures on the inspection of Upstream and Midstream pipelines are available on the corporate website
	EM-MD-540a.3	Number of (1) accident releases and (2) non-accident releases (NARs) from rail transportation	The impact applies to the supply chain. All railway transportation operations are performed by contractors (see GRI 11.8.1 in Appendix 6). Contractors are responsible for transportation safety. The Company does not collect the related data
	EM-MD-540a.4	Discussion of management systems used to integrate a culture of safety and emergency preparedness throughout the value chain and throughout project lifecycles	Data are being processed

¹ High-Consequence Work-Related Injury is an injury having the following consequences: an employee died or was injured, as a result of which an employee cannot recover, has not recovered, or is not expected to recover health within six months from the date of injury.

Young employees are employees of PJSC LUKOIL and the LUKOIL Group entities under the age of 35, including young professionals.

Young professionals are employees under 30 years of age with a higher or secondary vocational education, who have started working for the Company in the area of their education, including blue-collar jobs, within six months immediately after graduation or within three months after serving in the Armed Forces of the Russian Federation.

Seconded employees are employees with the necessary competence and meeting the job/vacancy requirements of the accepting entity, temporarily assigned to an accepting entity from the region of permanent residence to perform certain job functions with subsequent return to the seconding entity or termination of labor relations with the seconding entity.

Occupational incident or accident is an event resulting in an injury or other health impairment or damage of an employee in the course of performance of their respective duties under an employment contract and in other cases set forth by laws, entailing the transfer of such employee to another job, temporary or permanent occupational disability or death.

Payroll means the indicator calculated in accordance with the instructions for filling out forms of federal statistical monitoring. Payroll includes labor pay to employees in monetary and non-monetary forms accrued by an entity (including personal income tax and other withholdings) for worked and non-worked time, compensation payments related to the work schedule and working conditions, additional payments and increments, bonuses, one-time incentive payments, as well as regular allowances for meals and accommodation in accordance with the methodology for filling out the payroll field in Form No. P-4 Information on Headcount and Labor Pay.

Circulating water means multiple use of water in technological processes based on the principle of closed systems without

discharging into surface water bodies or sewage systems.

Reused water supply is the use of water that retained its quality after being used in a technological process and is supplied without treatment for reuse or returned to natural objects. Water produced as by-product with oil, which is used to maintain the formation pressure during oil production, is considered reused.

Significant claim relating to the breach of the antimonopoly law means a claim that is considered material if one or more of the following criteria are met:

1. criminal prosecution of officials of PJSC LUKOIL or the LUKOIL Group entities in accordance with the sentence passed and entered into legal force;
2. administrative action in the form of disqualification of officials of PJSC LUKOIL or the LUKOIL Group entities in accordance with the court decision passed and entered into legal force;
3. entry into force within a calendar year of the resolution on the imposition of an administrative fine against PJSC LUKOIL or the LUKOIL Group entities calculated based on the amount of revenue of the relevant entity or the amount of the offender's expenses on the acquisition of goods (work, service).

Significant claim related to the breach of the environmental law means a claim that is considered material if one of the following criteria is met:

1. an award has become effective within a calendar year bringing PJSC LUKOIL, the LUKOIL Group entities and/or their officials to administrative responsibility for the offense provided for in Chapter 8 of the Code of Administrative Offenses of the Russian Federation, with the imposition of the maximum possible fine provided for in the relevant article and/ or a sanction in the form of administrative suspension of operations for up to 90 days;
2. a court decision has become effective to collect from PJSC LUKOIL, the LUKOIL Group entities damages caused to the environment in accordance

with the requirements of the Federal Law "On Environmental Protection," in the amount not less than the one determined in accordance with the Regulations on Collecting and Processing Data on Material Contingent Liabilities and Uncertainties with Regard to Income Taxes for the purposes of the consolidated financial statements of PJSC LUKOIL for a respective year.

Significant violation of laws and regulatory requirements in the social sphere means violations for which decisions on penalties in amounts exceeding RUB 1 million were rendered by the governmental authorities in relation to claims in the sphere of labor relations.

Significant violation of human rights is an established non-compliance with the standards set forth in the laws of the countries where LUKOIL Group operates and the Company's local regulatory acts which govern the areas formalized in LUKOIL Group Human Rights Policy, when one of the following criteria is met:

- ▶ decisions on penalties in amounts exceeding RUB 1 million regarding the established non-compliance have been rendered by the governmental authorities in relation to claims in the sphere of labor relations;
- ▶ the established non-compliance has not been remedied by the end of the reporting year.

Significant digression/weakness in the implementation of local regulatory acts means a violation of the mandatory corporate requirements, as well as shortcomings in the activities of the LUKOIL Group entities that have resulted or could have resulted in incurred financial losses and risks that are assessed at least as significant in accordance with the provisions of the Group's internal documents.

Significant spill is an emergency with environmental consequences (incident or accident) resulting in consequences that meet one or more of the following criteria:

1. the amount of potential financial risks for a LUKOIL Group entity exceeded USD 1 million;

2. the area of contamination exceeded 5 hectares;
3. the volume of the pollutant spilled exceeded 10 tonnes;
4. damage was caused to water bodies.

Significant operating regions are countries and constituent entities of the Russian Federation where the LUKOIL Group entities operate, including their branches and

regional divisions that meet the following criteria:

1. in the Russian Federation, constituent entities where the headcount of one LUKOIL Group entity is 500 employees or more;
2. outside the Russian Federation, countries where at least one entity with the headcount of 500 employees or more operates; respective indicators are calculated including all other entities (with the headcount less than 500

employees) operating in the country that is a significant region.

In 2022, 76% of LUKOIL Group's headcount were employed in significant regions.

Appendix 9. ESG Databook

CLIMATE

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The ESG Databook should be read in conjunction with the Sustainability Report.

The Independent Practitioner JSC "Kept" issued Limited Assurance Report on Sustainability Report for 2022.

The aggregate values of the ESG Databook indicators may differ insignificantly from the sum of indicators as a result of rounding (not more than by 1).

The ESG Databook discloses indicators according to multiple reporting systems. The corresponding reporting systems are indicated for the respective indicators.

Reporting system and initiative designations used:

GRI – Global Reporting Initiative

RSPP – Russian Union of Industrialists and Entrepreneurs

SASB – Sustainability Accounting Standards Board

UNCTAD – United Nations Conference on Trade and Development

IPIECA – International Petroleum Industry Environmental Conservation Association

The World Bank's Initiative – The World Bank's "Zero Routine Flaring by 2030" initiative

Other abbreviations

GHG – greenhouse gases

IMS – integrated management system

APG – associated petroleum gas

HSE – health, safety and environment

RES – renewable energy sources

R&D – research and development

Climate

Greenhouse gases

2017 is the base year to account for GHG emissions reduction.

Gross GHG emissions and GHG emissions intensity (Scope 1 + 2) of LUKOIL Group

GHG emissions by the LUKOIL Group entities, Scope 1 + Scope 2 (operational control)

Indicator	Unit of measurement	2017	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
GHG emissions (Scope 1 + Scope 2)	mIn tonnes of CO ₂ e	50,897	48,433	43,651	41,491	46,887				

Notes. Organizational GHG emissions reporting boundaries (Scope 1 + Scope 2) for the Russian entities include all of the Oil and Gas Production entities, all of the Oil Refining, Petrochemicals, Gas Refining, and Power Generation entities, all of the Oil Product Supply entities (Scope 2 only), LLC LLK-International, and 3 Transportation entities. As for the foreign entities, the reporting boundaries include the hydrocarbon production project in Uzbekistan (LUKOIL Uzbekistan Operating Company LLC) and three oil refineries in Europe (in Romania, Bulgaria and Italy), as well as 14 Oil Product Supply entities (Scope 2 only).

GHG emissions (Scope 1 + 2) intensity by business activity of the LUKOIL Group entities

Indicator	Unit of measurement	2017	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
Exploration and Production	kg of CO ₂ e / boe	23,954	21,009	21,622	19,321	22,125	GRI 305-4		CCE-4 C4	RSPP
	g of CO ₂ e / MJ	4,008	3,585	3,690	3,297	3,776	GRI 305-4		CCE-4 C4	
Oil Refining and Petrochemicals	tonnes of CO ₂ e / tonne of processed raw materials	0,293	0,291	0,305	0,276	0,302	GRI 305-4		CCE-4 C4	RSPP
Power Generation	tonnes of CO ₂ e / MWh of generated electricity and heat	0,340	0,328	0,350	0,339	0,327	GRI 305-4		CCE-4 C4	RSPP

Notes. The GHG emissions intensity by the Oil Refining and Petrochemicals entities is calculated based on the volume of GHG emissions from oil refineries and petrochemical complexes (in total), excluding LLC LLK-International (the business activity is production of lubricants). The emissions intensity by the Power Generation entities is calculated with the exception of LLC LUKOIL-Energoseti (the business activity is power transmission).

GHG emissions (Scope 1)

GHG emissions by the LUKOIL Group entities Scope 1 (operational control)

Indicator	Unit of measurement	2017	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
GHG emissions (Scope 1), by composition	mIn tonnes of CO₂e	40,448	39,796	36,705	36,388	41,202	GRI 305-1	EM-EP-110a.1	CCE-4 C1	RSPP UNCTAD B.3.1
Carbon dioxide (CO ₂)	mIn tonnes of CO ₂ e	39,024	38,999	35,764	35,160	40,606	GRI 305-1		CCE-4 C1	
Methane (CH ₄)	mIn tonnes of CO ₂ e	1,396	0,772	0,916	1,193	0,567	GRI 305-1		CCE-4 C1	
Methane percentage in total GHG emissions (Scope 1)	%	3.5	1.9	2.5	3.3	1.4				
Nitrogen monoxide (N ₂ O)	mIn tonnes of CO ₂ e	0,028	0,025	0,024	0,035	0,028	GRI 305-1		CCE-4 C1	
Other GHGs	mIn tonnes of CO ₂ e	0	0	0	0	0	GRI 305-1		CCE-4 C1	

GHG emissions (Scope 1) by business activity

Exploration and Production	mIn tonnes of CO ₂ e	10,267	10,425	10,216	10,836	13,132	GRI 305-1	EM-EP-110a.1	CCE-4 C3	UNCTAD B.3.1
Oil Refining and Petrochemicals	mIn tonnes of CO ₂ e	17,635	17,802	16,397	16,110	19,523	GRI 305-1	EM-RM-110a.1	CCE-4 C3	UNCTAD B.3.1
Power Generation	mIn tonnes of CO ₂ e	12,468	11,479	9,980	9,239	8,346	GRI 305-1		CCE-4 C3	UNCTAD B.3.1
Transportation	mIn tonnes of CO ₂ e	0,078	0,091	0,111	0,203	0,201	GRI 305-1	EM-MD-110a.1	CCE-4 C3	UNCTAD B.3.1

GHG emissions (Scope 1) by geography

Russian entities	mIn tonnes of CO ₂ e	34,043	32,851	30,780	31,786	33,972	GRI 305-1		CCE-4 C3	RSPP
Foreign entities	mIn tonnes of CO ₂ e	6,405	6,945	5,924	4,602	7,230	GRI 305-1		CCE-4 C3	
Percentage of emissions (Scope 1) covered under the emissions-limiting regulations (Romania, Bulgaria, Italy)	%	15	17	15	12	17		EM-RM-110a.1		

Notes. The data for Oil Refining and Petrochemicals include the data on the Oil Refining, Petrochemicals, Gas Chemicals, Production of Lubricants entities (LLC LLK-International).

Flaring GHG emissions (Scope 1) by LUKOIL Group

Indicator	Unit of measurement	2017	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Flaring GHG emissions	mln tonnes of CO ₂ e	2.721	1.490	1.512	1.599	2.488			CCE-7 C1	
Flaring emissions percentage in total GHG emissions (Scope 1)	%	6.7	3.7	4.1	4.4	6.0			CCE-7 C4	

Notes. The data refer to the Oil and Gas Production, Oil Refining, Petrochemicals, Gas Refining, and Power Generation entities.

APG utilization and flaring (Russian entities of LUKOIL Group)

Indicator	Unit of measurement	2017	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Total APG flaring	mln cubic meters	507	282	260	291	384			CCE-7 C1 (partially)	The World Bank's Initiative
APG utilization rate	%	95.6	97.6	97.7	97.5	96.8				

Notes. The data was calculated within GHG reporting boundaries (only Russian entities included). There is no APG production from the project in Uzbekistan.

GHG emissions (Scope 2)

GHG emissions by the LUKOIL Group entities Scope 2 (operational control, regional method)

Indicator	Unit of measurement	2017	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
GHG emissions (Scope 2)	mln tonnes of CO₂e	10.450	8.636	6.947	5.103	5.685	GRI 305-2		CCE-4 C2	UNCTAD B.3.2
▶ Exploration and Production	mln tonnes of CO ₂ e	7.988	6.386	4.838	3.305	3.621	GRI 305-2		CCE-4 C3	UNCTAD B.3.2
▶ Oil Refining and Petrochemicals	mln tonnes of CO ₂ e	2.154	1.920	1.680	1.432	1.726	GRI 305-2		CCE-4 C3	UNCTAD B.3.2
▶ Power Generation	mln tonnes of CO ₂ e	0.159	0.132	0.209	0.182	0.179	GRI 305-2		CCE-4 C3	UNCTAD B.3.2
▶ Transportation	mln tonnes of CO ₂ e	0.046	0.052	0.033	0.026	0.024	GRI 305-2		CCE-4 C3	UNCTAD B.3.2
▶ Oil Product Supply	mln tonnes of CO ₂ e	0.103	0.146	0.187	0.158	0.135	GRI 305-2		CCE-4 C3	UNCTAD B.3.2

GHG emissions (Scope 2) by geography

Russian entities	mln tonnes of CO ₂ e	9.479	7.689	6.166	4.474	4.921	GRI 305-2		CCE-4 C2	UNCTAD B.3.2
Foreign entities	mln tonnes of CO ₂ e	0.970	0.948	0.781	0.628	0.764	GRI 305-2		CCE-4 C2	UNCTAD B.3.2

Notes. Global warming potentials were determined in accordance with the IPCC Fourth Assessment Report: for methane, GWP = 25 t of CO₂ equivalent/t, for Nitrogen monoxide, GWP = 298 t of CO₂ equivalent/t.

The data for Oil Refining and Petrochemicals include data on the Oil Refining, Petrochemicals, Gas Chemicals, Production of Lubricants entities (LLC LLK-International).

Reduction of GHG emissions by the LUKOIL Group entities resulting from renewable energy consumption

Indicator	Unit of measurement	2020	2021	2022	Reporting systems				
					GRI	SASB	IPIECA	Other	
Reduced GHG emissions	tonnes of CO ₂ e	5,573	6,372	67,069	GRI 305-4			CCE-3 C1	

Notes. Reduced GHG emissions mean the GHG emissions that did not occur at the Company's facilities due to substitution of grid electricity with electricity produced at the RES facilities of LUKOIL Group and consumed for the Group's own needs and also purchased under free (non-regulated) bilateral contracts with qualified RES generating facilities.

Supplies of low-carbon energy

Reduction of GHG emissions by external consumers resulting from the consumption of renewable energy supplied to the grid by the Group entities

Indicator	Unit of measurement	2020	2021	2022	Reporting systems			
					GRI	SASB	IPIECA	Other
Avoided GHG emissions	tonnes of CO ₂ e	334,411	436,435	393,739	GRI 305-4		CCE-3 C1	

Notes. Avoided GHG emissions mean the GHG emissions that did not occur for external consumers from purchased electricity produced at renewable energy facilities of LUKOIL Group.

Energy

Energy consumption for production purposes within the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Energy consumption for production purposes (1.1 + 1.2 + 1.3 – 1.4)	mIn GJ	502	502	465	477	524	GRI 302-1		CEE-6 C1	RSPP
1.1. Energy purchased for consumption for production purposes (excl. RES)	mIn GJ	79	74	69	66	71	GRI 302-1		CEE-6 C1	
▶ Electricity	mIn GJ	59	57	54	51	55	GRI 302-1		CEE-6 C1	
▶ Heating	mIn GJ	20	17	15	15	16	GRI 302-1		CEE-6 C1	
▶ Cooling	mIn GJ	0	0	0	0	0	GRI 302-1		CEE-6 C1	
▶ Steam	mIn GJ	0	0	0	0	0	GRI 302-1		CEE-6 C1	
1.2. Non-renewable fuel consumed by stationary production facilities (supporting power generation)	mIn GJ	553	545	515	518	556	GRI 302-1		CEE-6 C1	
1.3. Renewable electric energy consumed	mIn GJ	0.005	0.037	0.049	0.054	0.55	GRI 302-1		CEE-6 C1	
1.4. Energy sold and supplied	mIn GJ	130	117	119	107	103	GRI 302-1		CEE-6 C1	
▶ Electricity	mIn GJ	74	66	68	57	57	GRI 302-1		CEE-6 C1	
▶ Heating	mIn GJ	56	51	51	50	46	GRI 302-1		CEE-6 C1	
▶ Cooling	mIn GJ	0	0	0	0	0	GRI 302-1		CEE-6 C1	
▶ Steam	mIn GJ	0	0	0	0	0	GRI 302-1		CEE-6 C1	

Notes. Energy consumption for production purposes was calculated within the GHG emissions reporting boundaries (Scope 1+2).

Energy consumption for production purposes does not include either household electricity/heat consumption or energy consumption by mobile sources. When converting data from one unit to another, the following conversion factors under GOST R 51750-2001 were used: 1,000 kWh = 3.6 GJ, 1 Gcal = 4.19 GJ, 1 tonne of oil equivalent = 29.3 GJ.

Consumption of renewable electric energy (point 1.3) through 2021 indicates the consumption of energy produced from own RES (supporting power generation); starting from 2022, it includes the energy consumption from own RES and under contracts for the sale and purchase of electricity from the Group's generating entities.

Energy consumption by business activity of the LUKOIL Group entities and geography

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Exploration and Production	mIn GJ	179	182	172	181	202	GRI 302-1			
▶ Russian entities	mIn GJ	176	178	169	177	199	GRI 302-1			
▶ Foreign entities	mIn GJ	2.9	4.4	3.1	3.8	3.2	GRI 302-1			
Refining and Distribution	mIn GJ	323	320	293	296	322	GRI 302-1			
▶ Oil Refining	mIn GJ	240	240	219	214	241	GRI 302-1			
Russian entities	mIn GJ	161	159	151	156	161	GRI 302-1			
Foreign entities	mIn GJ	79	81	68	58	80	GRI 302-1			
▶ Petrochemicals (Russian entities)	mIn GJ	8.4	7.6	7.7	7.2	8.0	GRI 302-1			
▶ Power Generation (Russian entities)	mIn GJ	72	69	64	72	70	GRI 302-1			
▶ Oil Product Supply and Transportation (Russian and foreign entities)	mIn GJ	3	3	3	3	3	GRI 302-1			

Notes. For the purposes of calculating the "Energy Consumption by Business Activity" indicator, LLC LLK-International is accounted for together with the oil refining entities. In the organizational structure of LUKOIL Group, the entity is included in the Other Entities Related to Refining and Distribution Business Segment business sector.

Energy intensity

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Exploration and Production	GJ / boe	0.224	0.227	0.247	0.247	0.266	GRI 302-3		CEE-6 A2	RSPP
Oil Refining	GJ / tonne of manufactured products	3.9	3.7	4.0	3.6	3.8	GRI 302-3		CEE-6 A2	RSPP
▶ Russian entities	GJ / tonne of manufactured products	3.7	3.5	3.7	3.6	3.6	GRI 302-3		CEE-6 A2	RSPP
▶ Foreign entities	GJ / tonne of manufactured products	4.3	4.3	4.8	3.7	4.0	GRI 302-3		CEE-6 A2	
Petrochemicals	GJ / tonne of processed basic raw materials		4.2	4.1	4.1	4.1	GRI 302-3		CEE-6 A2	RSPP

Notes. The Energy Intensity calculation formula in the Exploration and Production business segment: Total energy consumption for production purposes / Total production of oil and gas condensate, natural gas and APG, and liquid hydrocarbons manufactured at the Lokosovsky gas-processing plant (due to the technological specifics of hydrocarbon production at LLC LUKOIL-West Siberia).

Oil refining: the data are displayed for all refineries taking into account gas-processing products (LLC LUKOIL-Permnefteorgsintez) and petrochemical products (LUKOIL Neftohim Burgas AD and ISAB S.r.l.). Data for Russian oil refineries are calculated taking into account intragroup supply of oil products transferred for further processing.

Dynamics of Solomon EII as compared to 2014

Indicators	Unit of measurement	2016	2018	2020	Reporting systems			
					GRI	SASB	IPIECA	Other
Energy Intensity Index	%	98.8	96.5	96.6			CEE-6 A4	

Notes. The EII reflects the ratio of the actual energy consumption of a given refinery to the standard energy consumption; both indicators are calculated pursuant to the HSB Solomon Associates LLC methodology, using factors developed within the methodology. The Index values are calculated once every two years. The lower the Index, the better.

Renewable electric energy generation by LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Total amount of renewable energy generated (1+2)	mIn kWh	1,367	1,110	836	1,021	1,071				
1. Commercial renewable electric energy generation (supplies to external consumers)	mIn kWh	1,365	1,100	822	1,008	1,057				
▶ wind power	mIn kWh	192	218	211	204	214				CEE-6
▶ solar power	mIn kWh	17	14	12	14	36				CEE-6
▶ hydroelectric energy	mIn kWh	1,156	868	599	790	807				CEE-6
including by geography:										
▶ in Russia	mIn kWh	1,161	880	611	804	843				CEE-6
▶ abroad	mIn kWh	204	220	211	204	214				CEE-6
Total electric energy produced by all commercial power generating facilities (including RES)	mIn kWh	19,919	18,307	17,139	15,801	16,808				
Percentage of renewable electric energy in total electric energy produced by all commercial power generating facilities	%	6.9	6.0	4.8	6.4	6.3				
2. Supporting power generation (for own use)	mIn kWh	1.5	10	14	13	14				
Total electric energy produced by all self-generating facilities (including RES)	mIn kWh	7,319	7,453	7,080	7,171	7,781				
Percentage of renewable electric energy in total electric energy generated (commercial + supporting power generation)	%	5.0	4.3	3.5	4.4	4.4				

Notes. The supporting power generation data change is due to the commissioning of RES facilities at production facilities and fuel stations of the LUKOIL Group entities.

Renewable energy consumption for production purposes

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
LUKOIL Group	mIn kWh	1.5	10.4	13.6	15.1	153	GRI 302-1		CEE-6	
▶ Russian entities	mIn kWh	0	0	0	2.3	140	GRI 302-1		CEE-6	
▶ Foreign entities	mIn kWh	1.5	10.4	13.6	12.8	13	GRI 302-1		CEE-6	
Percentage of renewable energy consumption in total energy consumption for production purposes by the LUKOIL Group entities	%	0.001	0.007	0.01	0.01	0.1				UNCTAD B.5.1
Consumption by energy type										
▶ Geothermal energy	mIn kWh	0	0	0	0	0				CEE-6
▶ Wind power	mIn kWh	0	0	0	0	0				CEE-6
▶ Solar power	mIn kWh	1.5	10.4	13.6	15	47				CEE-6
▶ Hydroelectric energy	mIn kWh	0	0	0	0	106				CEE-6
▶ Energy from biomass	mIn kWh	0	0	0	0	0				CEE-6

Notes. Data for 2018 refer to the Oil Refinery in Bulgaria (LUKOIL Neftochim Burgas AD). The renewable energy consumption increase in 2019 was due to the commissioning of new renewable energy facilities; starting from 2022, it was due to the conclusion of free (non-regulated) bilateral contracts for supply of electricity from the LUKOIL generating entities and agreements for the supply of RES capacity.

Economic indicators of the LUKOIL Group's RES advancement projects

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Investments in RES advancement	RUB mln	2,580	526	1,865	2,023	200				UNCTAD A3.1
Percentage of investments in RES projects in the Power Generation business sector CAPEX	%	47	12	37	18	1.8				EM-EP-420a.3
Percentage of income from sales of renewable electric energy	%	11	12	14	14	15				EM-EP-420a.3

Notes. The indicator "Percentage of investments in RES projects in the Power Generation business sector CAPEX" = Amount of capital investments in RES projects / CAPEX in the Power Generation business sector. Investments in RES advancement include costs for projects that are at various stages of design and implementation; the indicator change depends on the projects' implementation schedules.

The indicator "Percentage of income from sales of renewable electric energy" = Income received from the sale of renewable electric energy / Total income received from the sale of electric energy produced by commercial generation facilities of LUKOIL Group.

Certification of management system

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Percentage of the Russian LUKOIL Group entities' employees covered by the certificates confirming their energy management systems' compliance with the ISO 50001 standard	%	68	68	69	68	68				(RSPP)

Notes. Percentage of employees covered by the certificates confirming the energy management systems' compliance = Headcount of employees at the entities with certificates confirming their management systems' compliance with the requirements of the specified international standards / Headcount of the LUKOIL Group entities in the reporting year.

Economic impact of the implementation of the Energy Conservation Program

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Russian entities	RUB mln	1,165	1,445	1,261	1,387	2,637				(RSPP)

Health, safety and environment

Integrated HSE Management System

Certification of management systems

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Percentage of the LUKOIL Group entities' employees covered by certificates confirming their HSE management systems' compliance with ISO 14001 and ISO 45001 standards	%	84	83	82	81	85	(GRI 403-8)	(SHS-1 C3)	(RSPP)	
Number of the LUKOIL Group entities that have certificates confirming their HSE management systems' compliance with ISO 14001 and ISO 45001 standards	Entities	48	44	42	44	45		(SHS-1 C3)		

Notes. 100% of the LUKOIL Group employees are covered by the Integrated Management System (IMS). Percentage of the employees covered by the certificates confirming HSE management systems compliance = Headcount of employees of the entities which have certificates confirming their management system compliance with the specified international standards' requirements / Headcount of the LUKOIL Group entities. Changes in the number of organizations covered by certificates as well as changes in the number of employees are mainly due to the asset reorganization (for example, the merger of entities, or new assets).

Number of the LUKOIL Group entities where the state of HSE management systems was inspected

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
External audits for compliance with ISO 14001 and ISO 45001 standards	Entities	19	20	16	17	20			(SHS-3 A4)	
Internal audits for compliance with legislative and corporate requirements	Entities	27	23	17	19	18			(SHS-3 A4)	

Notes. External audits are conducted in a three-year cycle in accordance with the ISO Committee recommendations. During this period, all the LUKOIL Group entities declared for certification or supervisory audits are audited.

Total costs for HSE targeted and investment programs at LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
LUKOIL Group	RUB mln	45,702	47,968	53,630	54,041	54,832				(RSPP)
Environmental safety program (ESP)	RUB mln	35,529	35,903	22,440	21,384	17,914				
▶ Capital expenditures	RUB mln	28,498	30,046	17,857	14,337	12,344				
Program of Industrial Safety, Improvement of Labor Conditions and Occupational Safety, and Emergency Prevention and Liquidation (ISP)	RUB mln	10,093	12,008	31,161	32,620	36,867				
▶ Costs to improve labor conditions and protect health, reduce occupational injury and occupational disease rates	RUB mln	4,946	5,281	6,532	7,406	9,520				(UNCTAD C3.1)
▶ Costs to reduce accident, incident, fire, and emergency risks	RUB mln	5,147	6,727	24,629	25,214	27,347				
R&D, experimental engineering, and scientific technical works in Russia	RUB mln	80	57	29	37	51				
▶ Environmental protection	RUB mln	58	34	19	34	50				
▶ Industrial safety	RUB mln	22	23	10	3	1				

Notes. In 2020, following the decision of the HSE Committee, expenses for the activities related to emergency prevention and response (including activities to improve the reliability of pipeline transportation) were reallocated from ESP to ISP. Changes in R&D costs are in line with the funding schedules of the approved projects.

HSE training for the LUKOIL Group employees

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Scope of training	man-courses	60,106	59,314	65,220	71,066	86,836			(SOC-7)	(RSPP)
▶ Russian entities	man-courses	46,485	46,869	52,685	62,130	77,541			(SOC-7)	(RSPP)
▶ Foreign entities	man-courses	13,621	12,445	12,535	8,936	9,295			(SOC-7)	
By employee category										
▶ Managers	man-courses		14,385	16,334	19,746	25,244			(SHS-3 A4)	
▶ Specialists	man-courses		11,194	12,257	13,158	19,386			(SHS-3 A4)	
▶ Workers and other employees	man-courses		33,735	36,629	38,162	42,206			(SHS-3 A4)	
Training costs (Employee Training and Advanced Vocational Training category)	RUB mln	323	264	340	256	247			(SHS-3 A4)	(RSPP)
Number of managers and specialists trained on environmental protection activities (Russian entities)	man-courses				1,511	1,954				
▶ Managers	man-courses				207	818				
▶ Specialists	man-courses				1,304	1,136				

Notes. The data on the scope of the HSE training refer to the mandatory HSE training and the training under certification programs and includes both in-person and distance learning.

Water

Water withdrawal by the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
1. Water withdrawal and retrieval (1 = 1.1 + 1.2 + 1.3 of the table "Water withdrawal by sources")	mIn cubic meters	449.8	694.0	611.0	680.9	725.6	(GRI 303-3)			(RSPP)
By geography										
▶ Russian entities	mIn cubic meters	428.5	441	394.8	460.2	477.1	(GRI 303-3)			(RSPP)
including by electric energy entities	mIn cubic meters	297.7	303.6	252.7	298.8	293.2	(GRI 303-3)			
▶ Foreign entities	mIn cubic meters	21.3	253	216.2	220.7	248.5	(GRI 303-3)			
Water withdrawn by sources										
▶ sea water	mIn cubic meters	11.4	61.5	57.8	44.9	63.0	(GRI 303-3)			
▶ fresh water	mIn cubic meters	340.3	342.7	290.5	331.5	333.1	(GRI 303-3)			(ENV-1 C1)
▶ other water (mineralized, wastewater, centralized water supply, etc.)	mIn cubic meters	98.1	289.8	262.7	304.5	329.5	(GRI 303-3)			
Share of fresh water withdrawn in the total water withdrawal by LUKOIL Group	%	75.7	49.4	47.5	48.7	45.9				(ENV-1 A8)
▶ Share of fresh water withdrawn by Russian entities in the total water withdrawal in Russia	%	75	73	69	68	66				(ENV-1 A8)
▶ Share of fresh water withdrawn by foreign entities in the total water withdrawal in foreign countries	%	91	9	9	9	8				(ENV-1 A8)

Notes. For all the water-related indicators in this ESG Databook section, the reporting boundaries for the foreign entities from 2018 include LUKOIL Neftohim Burgas, PETROTEL-LUKOIL SA (two oil refineries in the European Union) and LUKOIL Uzbekistan Operating Company (hydrocarbon production project in the republic of Uzbekistan). The reporting boundaries from 2019 include the same entities plus ISAB S.r.l. (oil refinery in Italy), IOOO LUKOIL Belorussia, and LUKOIL-BULGARIA EOOD (fuel stations in Bulgaria and Belarus). LLC Volgodonsk Heat Supply Networks (Russia) has been included in the reporting boundaries since 2021, LLC INTESMO – since 2022.

The data exclude water produced as a by-product with hydrocarbons and subsequently used to maintain the formation pressure during oil production.

Almost all of the water withdrawn is taken from the own water intakes of the LUKOIL entities. In Russia, water is mainly withdrawn from the Ob, Pechora, Volga, Don, and Kuban river basins in accordance with permits and within the established quotas.

Water withdrawal by sources

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
1.1. From surface sources	mln cubic meters	287.0	340.5	285.5	311.5	326.4	GRI 303-3			UNCTAD B1.3
Russian entities	mln cubic meters	267.6	269.7	227.5	269.0	262.7	GRI 303-3			UNCTAD B1.3
▶ sea water	mln cubic meters	11.4	11	16.7	17.1	14.3	GRI 303-3			
▶ water from other surface sources (fresh water)	mln cubic meters	256.2	258.7	210.8	251.9	248.4	GRI 303-3		ENV-1 C1	
Foreign entities	mln cubic meters	19.4	70.8	58.0	42.5	63.7	GRI 303-3			UNCTAD B1.3
▶ sea water	mln cubic meters	0	50.5	41.1	27.8	48.7	GRI 303-3			
▶ water from other surface sources (fresh water)	mln cubic meters	19.4	20.3	16.9	14.7	15	GRI 303-3		ENV-1 C1	
1.2. From underground sources	mln cubic meters	99.0	104.8	114.0	122.9	149.8	GRI 303-3			UNCTAD B1.3
Russian entities	mln cubic meters	97.1	99.7	108.3	117.3	144.2	GRI 303-3			UNCTAD B1.3
▶ fresh water	mln cubic meters	64.7	61.2	60.1	59.4	64.3	GRI 303-3		ENV-1 C1	
▶ other water	mln cubic meters	32.4	38.5	48.2	57.9	79.9	GRI 303-3			
Foreign entities	mln cubic meters	1.9	5.1	5.7	5.6	5.6	GRI 303-3			UNCTAD B1.3
▶ fresh water	mln cubic meters	0	2.5	2.7	5.5	5.4	GRI 303-3		ENV-1 C1	
▶ other water	mln cubic meters	1.9	2.6	3	0.1	0.2	GRI 303-3			
1.3. From other sources	mln cubic meters	63.8	248.7	211.5	246.5	249.4	GRI 303-3			UNCTAD B1.3
▶ Russian entities	mln cubic meters	63.8	71.6	59	73.9	70.2	GRI 303-3			UNCTAD B1.3
▶ Foreign entities	mln cubic meters	0	177.1	152.5	172.6	179.2	GRI 303-3			UNCTAD B1.3

Notes. Water withdrawal from underground sources (other water, 1.2) includes water produced as a by-product with hydrocarbons and subsequently pumped into absorbing subsoil horizons.

Water withdrawal from other sources (point 1.3) includes water taken from centralized water supply sources, as well as wastewater received and used by Group entities.

Water produced as a by-product with hydrocarbons and subsequently used to maintain the formation pressure during oil production

Indicators	Unit of measurement	2020	2021	2022	Reporting systems			
					GRI	SASB	IPEICA	Other
LUKOIL Group	mln cubic meters	350.1	374.5	426.0	GRI 303-3 GRI 303-4	EM-EP-140a.2 (partially)		ENV-1 A5
▶ Russian entities	mln cubic meters	350.1	374.5	426.0	GRI 303-3 GRI 303-4	EM-EP-140a.2 (partially)		ENV-1 A5
▶ Foreign entities	mln cubic meters	0.02	0.03	0.03	GRI 303-3 GRI 303-4	EM-EP-140a.2 (partially)		ENV-1 A5

Volumes of circulating water supply and reused water in the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
LUKOIL Group	mln cubic meters	3,380.7	3,322.2	3,178.2	3,384.2	3,230.0				UNCTAD B1.1
Russian entities	mln cubic meters	3,180.7	3,106.0	2,967.6	3,186.2	2,998.4				UNCTAD B1.1 (RSPP)
▶ Volume of circulating water supply	mln cubic meters	2,284.2	2,240.9	2,160.9	2,396.9	2,275.8				
▶ Volume of sequentially reused water	mln cubic meters	896.5	865.1	806.7	789.3	722.6				
Foreign entities	mln cubic meters	200.0	216.2	210.6	198.0	231.6				UNCTAD B1.1
▶ Volume of circulating water supply	mln cubic meters	198.9	214	207.8	194.1	228.4				
▶ Volume of sequentially reused water	mln cubic meters	1.1	2.2	2.8	3.9	3.2				

Notes. Circulating water supply means multiple use of water in technological processes based on the principle of closed systems without discharging into surface water bodies or sewage systems. Sequentially reused water supply is the use of water that retained its quality after being used in a technological process and is supplied without treatment for reuse. Water produced as a by-product with oil and used to maintain the formation pressure during oil production is considered reused.

Water usage by the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Water consumption for own needs (household, industrial, other)	mln cubic meters	374.4	609.0	543.2	588.0	628.4				
▶ Russian entities	mln cubic meters	354.9	358	328.7	369	381.7				
▶ Foreign entities	mln cubic meters	19.5	251	214.5	219	246.7				
Other operations	mln cubic meters	34.5	28.9	0.0	4.3	11.6				
▶ Russian entities	mln cubic meters	34.5	28.1	0	3.8	11.1				
▶ Foreign entities	mln cubic meters	0	0.8	0	0.5	0.5				
Unused water transferred to third-party consumers without the LUKOIL Group entities using it	mln cubic meters	40.9	56.1	63.1	88.3	98.2	GRI 303-4			ENV-1 A5
▶ Russian entities	mln cubic meters	39.1	54.9	62	87.2	96.9	GRI 303-4			ENV-1 A5
▶ Foreign entities	mln cubic meters	1.8	1.2	1.1	1.1	1.3	GRI 303-4			ENV-1 A5

Notes. In 2020, the approach to accounting for "Other operations" was revised: through 2019, this category included both water pumped into subsoil horizons and domestic sewage received from third parties and used in the Group's production processes. Since 2020, these water volumes are accounted for in the "Unused water transferred to third-party consumers without the LUKOIL Group entities using it" and "Water usage for own needs" categories respectively. Since 2021, this category reflects water transportation losses. Since 2022, water received from third parties and used for own treatment facilities of the LUKOIL Group entities with subsequent discharge is also included in the category "Other operations," and the data for 2021 have been retrospectively recalculated.

Water usage for own needs by business activity of the LUKOIL Group entities

Indicators	Unit of measurement	2020	2021	2022	Reporting systems			
					GRI	SASB	IPEICA	Other
Exploration and Production	mln cubic meters	104.9	101.7	108.3		EM-EP-140a.1	ENV-1 A2	
Oil Refining and Petrochemicals	mln cubic meters	249.3	253.1	283.2		EM-RM-140a.1	ENV-1 A2	
Power Generation	mln cubic meters	188	231.9	235.7			ENV-1 A2	
Oil Product Supply, Transportation	mln cubic meters	1.2	1.3	1.3			ENV-1 A2	

Notes. For the purposes of calculating the “Water usage for own needs by business activity” indicator, LLC LLK-International and LLC INTESMO (business activity of both entities – lubricants production) are accounted for together with Oil Refining and Petrochemicals entities; LLC LUKOIL-AERO (business activity – aircraft bunkering operations) is accounted for together with Oil Product Supply and Transportation entities. In the organizational structure of the LUKOIL Group all three entities are included in the business sector Other entities related to Oil Refining and Distribution business segment.

In 2021, the data on LLC KGPZ were included in the Oil Refining and Petrochemicals line of activity, as this entity was reorganized and merged with LLC LUKOIL-Volgogradneftepererabotka, and the data for 2020 were retrospectively recalculated. In 2021, LLC LUKOIL-AERO was excluded from the calculation in connection with its liquidation.

Water consumption intensity used for own production needs in the Russian entities of LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Exploration and Production	cubic meters / tonne of oil equivalent in extracted hydrocarbon resources	1	1	1	1.1	1.1				RSPP
Oil Refining	cubic meters / tonne of processed raw materials	0.5	0.5	0.5	0.5	0.5				RSPP
Petrochemicals	cubic meters / tonne of processed raw materials	6.4	6.9	6.8	6.8	6.8				RSPP
Oil Product Supply	cubic meters / tonne of oil products sold	0.1	0.07	0.07	0.1	0.1				RSPP
Transportation	cubic meters / tonne of oil, oil products transported	0.02	0.01	0.02	0.02	0.017				RSPP
Power Generation	cubic meters / tonne of oil equivalent in consumed fuel	34	35.3	32.9	38.5	41.6				RSPP

Notes. The indicator for the Power Generation business sector is calculated according to the formula: The volume of primary withdrawn water used for own production needs/ Fuel consumed for energy products generation (electric energy and heat). The following business sector entities are excluded from the calculation: LLC LUKOIL-Ekoenergo (due to the absence of fuel consumption) and LLC LUKOIL-Energoseti (due to the fact that the entity is not engaged in electric and heat generation activities). Data on entities engaged in heat transmission are recorded as part of data on power generating entities, which is explained by the specifics of technological processes.

Water discharge by the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
1. Water discharge consolidated (1 = 1.1 + 1.2 + 1.3 + 1.4 + 1.5)	mln cubic meters	352.5	568.0	485.3	529.6	572.4	GRI 303-4		ENV-2 A6	RSPP
▶ Russian entities	mln cubic meters	337.6	344.3	297.5	325.3	348.3	GRI 303-4		ENV-2 A6	RSPP
▶ Foreign entities	mln cubic meters	14.9	223.7	187.8	204.3	224.1	GRI 303-4		ENV-2 A6	RSPP
<i>By destination</i>										
1.1. Water discharge into surface water bodies (excluding water discharge into the sea)	mln cubic meters	218.1	216.6	161.7	210.3	211.4	GRI 303-4		ENV-2 A6	
▶ Russian entities	mln cubic meters	203.4	203.4	151.3	197.8	198.4	GRI 303-4		ENV-2 A6	
▶ Foreign entities	mln cubic meters	14.7	13.2	10.4	12.5	13	GRI 303-4		ENV-2 A6	
1.2. Water discharge into the sea	mln cubic meters	11.3	221.2	188.4	202.7	220.4	GRI 303-4		ENV-2 A6	
▶ Russian entities	mln cubic meters	11.3	10.9	12.7	12.7	11.8	GRI 303-4		ENV-2 A6	
▶ Foreign entities	mln cubic meters	0	210.3	175.7	190	208.6	GRI 303-4		ENV-2 A6	
1.3. Water discharge into subsoil horizons	mln cubic meters	104.2	106.7	109.7	83.6	108.1	GRI 303-4		ENV-2 A6	
▶ Russian entities	mln cubic meters	104	106.5	109.5	83.5	108	GRI 303-4		ENV-2 A6	
▶ Foreign entities	mln cubic meters	0.2	0.2	0.2	0.1	0.1	GRI 303-4		ENV-2 A6	
1.4. Water transferred to third parties after use by the LUKOIL Group entities (excluding intra-group exchange)	mln cubic meters	18.4	23.4	25.5	33.0	32.5	GRI 303-4		ENV-2 A6	
▶ Russian entities	mln cubic meters	18.4	23.4	24	31.3	30.1	GRI 303-4		ENV-2 A6	
▶ Foreign entities	mln cubic meters	0	0	1.5	1.7	2.4	GRI 303-4		ENV-2 A6	
1.5. Other water discharge	mln cubic meters	0.5	0.1	0	0	0	GRI 303-4		ENV-2 A6	
▶ Russian entities	mln cubic meters	0.5	0.1	0	0	0	GRI 303-4		ENV-2 A6	
▶ Foreign entities	mln cubic meters	0	0	0	0	0	GRI 303-4		ENV-2 A6	

Notes. Water discharge into subsoil horizons (1.3) includes water produced as a by-product with hydrocarbons and subsequently pumped into absorption wells.

Water discharge into surface water bodies and into the sea by the LUKOIL Group entities by wastewater quality

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
Water discharge into surface water bodies and the sea (1 + 2)	mIn cubic meters	437.8	350.1	413.0	431.8	GRI 303-4				
▶ Russian entities	mIn cubic meters	214.7	214.3	164.0	210.5	210.2	GRI 303-4			
▶ Foreign entities	mIn cubic meters	223.5	186.1	202.5	221.6	GRI 303-4				
1. Water discharge into surface water bodies by wastewater quality (1 = 1.1 + 1.2 + 1.3)	mIn cubic meters	216.6	161.7	210.3	211.4	GRI 303-4				
▶ Russian entities	mIn cubic meters	203.4	151.3	197.8	198.4	GRI 303-4				
▶ Foreign entities	mIn cubic meters	13.2	10.4	12.5	13.0	GRI 303-4				
1.1. Clean standard-quality wastewater	mIn cubic meters	185.0	126.4	172.5	172.5	GRI 303-4				
▶ Russian entities	mIn cubic meters	186.3	176.1	126.4	172.5	172.5	GRI 303-4			
▶ Foreign entities	mIn cubic meters	8.9	0	0	0	GRI 303-4				
1.2. Wastewater treated to standard quality	mIn cubic meters	20.2	26.7	29.3	30.6	GRI 303-4				
▶ Russian entities	mIn cubic meters	27.5	16.8	16.3	16.8	17.6	GRI 303-4			
▶ Foreign entities	mIn cubic meters	3.4	10.4	12.5	13	GRI 303-4				
1.3. Polluted wastewater	mIn cubic meters	11.4	8.6	8.5	8.3	GRI 303-4				
▶ Russian entities	mIn cubic meters	0.9	10.5	8.6	8.5	8.3	GRI 303-4			
▶ Foreign entities	mIn cubic meters	0.9	0	0	0	GRI 303-4				
2. Water discharge into the sea by wastewater quality (2 = 2.1 + 2.2 + 2.3)	mIn cubic meters	221.2	188.4	202.7	220.4	GRI 303-4				
▶ Russian entities	mIn cubic meters	10.9	12.7	12.7	11.8	GRI 303-4				
▶ Foreign entities	mIn cubic meters	210.3	175.7	190.0	208.6	GRI 303-4				
2.1. Clean standard-quality wastewater	mIn cubic meters	220.6	188.0	202.3	219.6	GRI 303-4				
▶ Russian entities	mIn cubic meters	10.7	12.5	12.5	11.7	GRI 303-4				
▶ Foreign entities	mIn cubic meters	209.9	175.5	189.8	207.9	GRI 303-4				
2.2. Wastewater treated to standard quality	mIn cubic meters	0.4	0.2	0.0	0.7	GRI 303-4				
▶ Russian entities	mIn cubic meters	0.001	0	0	0	GRI 303-4				
▶ Foreign entities	mIn cubic meters	0.4	0.2	0	0.7	GRI 303-4				
2.3. Polluted wastewater	mIn cubic meters	0.2	0.2	0.4	0.1	GRI 303-4				
▶ Russian entities	mIn cubic meters	0.2	0.2	0.2	0.1	GRI 303-4				
▶ Foreign entities	mIn cubic meters	0	0	0.2	0	GRI 303-4				

Notes. Polluted water is insufficiently treated wastewater and wastewater that is not treated.

Specific discharge of insufficiently treated wastewater into water bodies by the Russian entities of LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems				
							GRI	SASB	IPECA	Other	
Oil and Gas Production	cubic meters / tonne of oil equivalent in hydrocarbon resources	0.004	0.004	0.0005	0.0000003	0					RSPP
Oil Refining	cubic meters / tonne of processed raw materials	0	0.037	0.2	0.185	0.177					RSPP
Oil Product Supply	cubic meters / tonne of oil products sold	0.003	0.002	0.002	0.004	0					RSPP
Transportation	cubic meters / tonne of oil, oil products transported	0.009	0.008	0.008	0.008	0.005					RSPP

Notes. The discharge of insufficiently treated wastewater into water bodies is no longer carried out by the Oil and Gas Production and Oil Product Supply entities (since 2022), and by the Petrochemicals and Power Generation entities (terminated until 2018).

The specific discharge of insufficiently treated wastewater by oil refining entities is calculated based on the volume of production wastewater from LLC LUKOIL-Ukhtaneftepererabotka, excluding any utility wastewater received from a third party (Municipal Institution Ukhtavodokanal).

Emissions

Air emissions (net of CO₂) at LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Total pollutant emissions	thousand tonnes	451	429	395	425	457	GRI 305-7		ENV-5 C1	RSPP
▶ Russian entities	thousand tonnes	433	402	376	403	437	GRI 305-7		ENV-5 C1	RSPP
▶ Foreign entities	thousand tonnes	18	26	19	22	20	GRI 305-7		ENV-5 C1	RSPP
Percentage of air pollutant emissions from production facilities located in cities with a population of more than 1 million people. (Volgograd, Perm, Nizhny Novgorod)	%					7.6		EM-RM-120a.2		
Number of oil refineries located in densely populated cities (over 1 mln people)	oil refineries					3		EM-RM-120a.2		
Emissions by pollutant type:										
NO_x emissions	thousand tonnes	49	49	45	42	41	GRI 305-7		ENV-5 C1	
By business activity										
▶ Exploration and Production	thousand tonnes				17	15	GRI 305-7	EM-EP-120a.1	ENV-5 C1	
▶ Oil Refining, Petrochemicals	thousand tonnes				7	9	GRI 305-7	EM-RM-120a.1	ENV-5 C1	
▶ Power Generation	thousand tonnes				17	17	GRI 305-7		ENV-5 C1	
▶ Oil Product Supply, Transportation	thousand tonnes				0.3	0	GRI 305-7	EM-MD-120a.1	ENV-5 C1	
By geography										
▶ Russian entities	thousand tonnes	47	46	42	40	37	GRI 305-7			
▶ Foreign entities	thousand tonnes	2	3	3	2	3.5	GRI 305-7			
SO₂ emissions	thousand tonnes	38	41	31	35	33	GRI 305-7		ENV-5 C1	
By business activity										
▶ Exploration and Production	thousand tonnes				19	15	GRI 305-7	EM-EP-120a.1	ENV-5 C1	
▶ Oil Refining, Petrochemicals	thousand tonnes				15	16	GRI 305-7	EM-RM-120a.1	ENV-5 C1	
▶ Power Generation	thousand tonnes				0.3	0.6	GRI 305-7		ENV-5 C1	
▶ Oil Product Supply, Transportation	thousand tonnes				0.7	0.6	GRI 305-7	EM-MD-120a.1	ENV-5 C1	
By geography										
▶ Russian entities	thousand tonnes	25	22	19	19	20.5	GRI 305-7			
▶ Foreign entities	thousand tonnes	12	19	12	16	12	GRI 305-7			
Solid particle discharges	thousand tonnes	15	15	14	18	21	GRI 305-7		ENV-5 A1	
By business activity										
▶ Exploration and Production	thousand tonnes				18	20	GRI 305-7	EM-EP-120a.1	ENV-5 A1	
▶ Oil Refining, Petrochemicals	thousand tonnes				0.4	0.6	GRI 305-7	EM-RM-120a.1	ENV-5 A1	
▶ Power Generation	thousand tonnes				0.03	0.03	GRI 305-7		ENV-5 A1	
▶ Oil Product Supply, Transportation	thousand tonnes				0.04	0.03	GRI 305-7	EM-MD-120a.1	ENV-5 A1	
By geography										
▶ Russian entities	thousand tonnes	15	15	14	18	20	GRI 305-7			
▶ Foreign entities	thousand tonnes	0.2	0.2	0.2	0.2	0.2	GRI 305-7			

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
CO emissions	thousand tonnes	156	155	143	177	198	GRI 305-7		ENV-5 A1	
By business activity										
▶ Exploration and Production	thousand tonnes				167	189	GRI 305-7		ENV-5 A1	
▶ Oil Refining, Petrochemicals	thousand tonnes				5	6	GRI 305-7		ENV-5 A1	
▶ Power Generation	thousand tonnes				4	4	GRI 305-7		ENV-5 A1	
▶ Oil Product Supply, Transportation	thousand tonnes				0.2	0.3	GRI 305-7		ENV-5 A1	
By geography										
▶ Russian entities	thousand tonnes	154	152	141	175	196.5	GRI 305-7			
▶ Foreign entities	thousand tonnes	2	2	2	2	1.7	GRI 305-7			
Hydrocarbon emissions	thousand tonnes	74	61	49	37	40	GRI 305-7			
By business activity										
▶ Exploration and Production	thousand tonnes				35	37	GRI 305-7			
▶ Oil Refining, Petrochemicals	thousand tonnes				2	2	GRI 305-7			
▶ Power Generation	thousand tonnes				0.2	0.5	GRI 305-7			
▶ Oil Product Supply, Transportation	thousand tonnes				0.02	0.03	GRI 305-7			
By geography										
▶ Russian entities	thousand tonnes	73	60	47	35	38	GRI 305-7			
▶ Foreign entities	thousand tonnes	1	1	2	2	2	GRI 305-7			
Volatile organic compounds emissions	thousand tonnes	115	106	111	116	124	GRI 305-7		ENV-5 C1	
By business activity										
▶ Exploration and Production	thousand tonnes				87	95	GRI 305-7	EM-EP-120a.1	ENV-5 C1	
▶ Oil Refining, Petrochemicals	thousand tonnes				15	16	GRI 305-7	EM-RM-120a.1	ENV-5 C1	
▶ Power Generation	thousand tonnes				0.6	0.5	GRI 305-7		ENV-5 C1	
▶ Oil Product Supply, Transportation	thousand tonnes				13	13	GRI 305-7	EM-MD-120a.1	ENV-5 C1	
By geography										
▶ Russian entities	thousand tonnes	115	106	111	115	123	GRI 305-7			
▶ Foreign entities	thousand tonnes	0.00	0.05	0.03	0.52	0.50	GRI 305-7			
Emissions of other pollutants	thousand tonnes	4	2	2	1	1	GRI 305-7		ENV-5 A1	
By business activity										
▶ Exploration and Production	thousand tonnes				0.5	1.1	GRI 305-7		ENV-5 A1	
▶ Oil Refining, Petrochemicals	thousand tonnes				0.2	0.2	GRI 305-7		ENV-5 A1	
▶ Power Generation	thousand tonnes				0.1	0.02	GRI 305-7		ENV-5 A1	
▶ Oil Product Supply, Transportation	thousand tonnes				0.1	0.2	GRI 305-7		ENV-5 A1	
By geography										
▶ Russian entities	thousand tonnes	4	1	2	1	1	GRI 305-7			
▶ Foreign entities	thousand tonnes	0.01	0.56	0.02	0.02	0.02	GRI 305-7			

Notes. For all the emissions-related indicators in this ESG Databook section, the reporting boundaries for foreign entities from 2018 include LUKOIL Neftohim Burgas, PETROTEL-LUKOIL SA (two oil refineries in the European Union) and LUKOIL Uzbekistan Operating Company (hydrocarbon production project in the republic of Uzbekistan). The reporting boundaries from 2019 include the same entities plus ISAB S.r.l. (oil refinery in Italy), IOOO LUKOIL Belorussia, and LUKOIL-BULGARIA EOOD (fuel stations in Bulgaria and Belarus). LLC Volgodonsk Heat Supply Networks (Russia) has been included in the reporting boundaries since 2021, and LLC INTESMO has been included since 2022.

For the purposes of calculating the “Pollutant emissions by business activity” indicator, LLC LUK-International is accounted for together with Oil Refining and Petrochemicals entities; LLC LUKOIL-AERO is accounted for together with Oil Product Supply and Transportation entities. In the organizational structure of the LUKOIL Group both entities are included in the Other entities related to Refining and Distribution business sector.

“Emissions of other pollutants” category includes specific substances subject to accounting according to the state statistical forms (except for those listed in the table), and the percentage of which is less than 1% of total emissions.

In 2020, the methodology for accounting for the “Other pollutants” category for foreign entities was revised: substances belonging to the categories listed in the table are identified and taken into account in the corresponding lines of the table. Data for 2019 have been recalculated.

Specific air emissions by the Russian entities of LUKOIL Group by business activity

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Exploration and Production	kg / tonne of oil equivalent in extracted hydrocarbon resources	3.4	3.2	3.3	3.5	3.7				(RSPP)
Oil Refining	kg / tonne of processed raw materials	0.8	0.9	0.8	0.8	0.8				(RSPP)
Petrochemicals	kg / tonne of processed raw materials	1.1	1.4	1.6	1.5	1.7				(RSPP)
Oil Product Supply	kg / tonne of oil products sold	0.8	0.7	0.7	0.9	0.8				(RSPP)
Transportation	kg / tonne of oil, oil products transported	0.2	0.2	0.2	0.2	0.2				(RSPP)
Power Generation	kg / tonne of oil equivalent in consumed fuel	2.9	2.9	3.5	3.2	3.4				(RSPP)

Notes. Specific pollutant emissions in the Power Generation business sector are calculated using the following formula: Total pollutant emissions / Fuel consumed for power product generation (electric energy and heat). LLC LUKOIL-Ekoenergo, LLC LUKOIL-Energoseti and LLC Volzhsk Heat Supply Networks were excluded from the calculation.

Land and waste

Waste generation and waste management at the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Waste at the beginning of the reporting year	thousand tonnes	956	910	947	913	965				
▶ Russian entities	thousand tonnes	933	885	920	885	939				
▶ Foreign entities	thousand tonnes	23	25	27	28	26				
Waste generated during the reporting year	thousand tonnes	1,556	1,783	2,178	2,065	2,056	(GRI 306-3)	(ENV-7 C3)	(UNCTAD B2.1)	
▶ Russian entities	thousand tonnes	1,529	1,672	1,960	1,968	1,958	(GRI 306-3)	(ENV-7 C3)	(UNCTAD B2.1)	(RSPP)
▶ Foreign entities	thousand tonnes	27	111	218	97	98	(GRI 306-3)	(ENV-7 C3)	(UNCTAD B2.1)	
Waste received from third parties	thousand tonnes	6	5	4	6	4				
▶ Russian entities	thousand tonnes	6	5	4	6	4				
▶ Foreign entities	thousand tonnes	0	0.1	0.1	0.2	0				
Amount of waste eliminated (recovered, neutralized, transferred to specialized entities, as well as landfill waste)	thousand tonnes	1,609	1,751	2,217	2,020	1,997		(ENV-7 C3)	(UNCTAD B2.2)	
▶ Russian entities	thousand tonnes	1,582	1,642	2,000	1,921	1,897		(ENV-7 C3)	(UNCTAD B2.2)	(RSPP)
▶ Foreign entities	thousand tonnes	27	109	217	99	100		(ENV-7 C3)	(UNCTAD B2.2)	

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Waste recovery	thousand tonnes					1,642				(GRI 306-4)
▶ Waste recovered at entities	thousand tonnes					1,163				(GRI 306-4)
▶ Transferred to third parties for recovery	thousand tonnes					479				(GRI 306-4)
Neutralization and disposal operations	thousand tonnes					355				(GRI 306-5)
▶ Waste neutralized at entities	thousand tonnes					39				(GRI 306-5)
▶ Transferred to third parties for processing	thousand tonnes					6				(GRI 306-5)
▶ Transferred to third parties for neutralization	thousand tonnes					171				(GRI 306-5)
▶ Transferred to third parties for disposal at third-party facilities	thousand tonnes					125				(GRI 306-5)
▶ Including landfilled at own disposal facilities	thousand tonnes					14				(GRI 306-5)
Percentage of waste landfilled at the Group's own facilities	%		3.9	4.0	3.6	0.7				
Waste at the end of the reporting year	thousand tonnes	904	947	912	964	1,028				
▶ Russian entities	thousand tonnes	885	920	884	938	1,004				
▶ Foreign entities	thousand tonnes	19	27	28	26	24				

Notes. For all the indicators related to emissions in this ESG Databook section, the reporting boundaries for foreign entities from 2018 include LUKOIL Neftohim Burgas, PETROTEL-LUKOIL SA (two oil refineries in the European Union), and LUKOIL Uzbekistan Operating Company (hydrocarbon production project in the republic of Uzbekistan). The reporting boundaries from 2019 include the same entities plus ISAB S.r.l. (oil refinery in Italy), IOOO LUKOIL Belorussia, and LUKOIL-BULGARIA EOOD (fuel stations in Bulgaria and Belarus). LLC Volgodonsk Heat Supply Networks (Russia) has been included in the reporting boundaries since 2021, and LLC INTESMO has been included since 2022.

The amount of waste at the end of each reporting year (waste remaining in accumulation) depends mainly on the production process and the schedules for disposal of the generated waste. Drilling waste from construction of cluster sites comprises the main share of waste remaining in the accumulation. If the drilling began at the end of the reporting year, the drilling waste is disposed in the next reporting year, after the drilling of the entire cluster site is completed. Thus, the volume of "transition" waste depends on the scope of drilling operations.

The "Percentage of waste landfilled at the Group's own facilities" indicator is calculated from the total amount of waste disposed of at the LUKOIL Group entities during the reporting year.

The difference between the data on waste as at the end of 2018 and as at the beginning of 2019 was due to the reporting boundaries extension and taking into account the waste that was at the beginning of 2019 at ISAB S.r.l. Similarly, the difference between the data on waste as at the end of 2020 and as at the beginning of 2021 was due to the reporting boundaries extension and taking into account the waste that was at LLC Volgodonsk Heat Supply Networks at the beginning of 2021.

The data on waste across the Russian entities are provided without taking into account rock formed as a result of mine oil production at LLC LUKOIL-Komi.

Rock waste formation at the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Rock waste at the beginning of the year	thousand tonnes	2,105	2,294	2,420	2,610	2,688				
Rock waste generated during the year	thousand tonnes	189	126	190	78	61	GRI 306-3			
Rock waste at the end of the year	thousand tonnes	2,294	2,420	2,610	2,688	2,749				

Notes. Rock waste is a hazard class V waste (virtually non-hazardous waste) that is generated only as a result of mine oil production at LLC LUKOIL-Komi. In accordance with the Rosprirodnadzor's No. 113 dated March 1, 2017, the only way to handle this waste after March 1, 2017 is to store it. The rock waste disposal facilities have no direct adverse impact on the environment.

Waste by hazard class at LUKOIL Group

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems				
						GRI	SASB	IPIECA	Other	
Waste generated per year	thousand tonnes		2,178	2,065	2,056	GRI 306-3		ENV-7 C3		
By business activity										
Exploration and Production	thousand tonnes			1,640	1,655	GRI 306-3		ENV-7 A1		
▶ hazardous	thousand tonnes			267	311	GRI 306-3		ENV-7 C3		
▶ non-hazardous and low-hazardous	thousand tonnes			1,373	1,344	GRI 306-3		ENV-7 C3		
Oil Refining and Petrochemicals	thousand tonnes			337	318	GRI 306-3		ENV-7 A1		
▶ hazardous	thousand tonnes			144	147	GRI 306-3	EM-RM-150a.1	ENV-7 C3		
▶ non-hazardous and low-hazardous	thousand tonnes			193	171	GRI 306-3		ENV-7 C3		
Power Generation	thousand tonnes			29	26	GRI 306-3		ENV-7 A1		
▶ hazardous	thousand tonnes			3	2	GRI 306-3		ENV-7 C3		
▶ non-hazardous and low-hazardous	thousand tonnes			26	24	GRI 306-3		ENV-7 C3		
Oil Product Supply and Transportation	thousand tonnes			59	57	GRI 306-3		ENV-7 A1		
By geography										
Russian entities	thousand tonnes	1,672	1,960	1,968	1,958	GRI 306-3		ENV-7 C3		
▶ hazardous (Hazard Classes I-III)	thousand tonnes	253	304	362	417	GRI 306-3		ENV-7 C3	UNCTAD B2.3	
▶ non-hazardous and low-hazardous (Hazard Classes IV-V)	thousand tonnes	1,419	1,656	1,606	1,541	GRI 306-3		ENV-7 C3		
Foreign entities	thousand tonnes		218	97	98	GRI 306-3		ENV-7 C3		
▶ hazardous	thousand tonnes		143	51	44	GRI 306-3		ENV-7 C3	UNCTAD B2.3	
▶ non-hazardous and low-hazardous	thousand tonnes		75	46	54	GRI 306-3		ENV-7 C3		

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPIECA	Other
Waste at the end of the year at LUKOIL Group	thousand tonnes		912	964	1,028			ENV-7 C3	RSPP
▶ hazardous	thousand tonnes		45	50	45			ENV-7 C3	
▶ non-hazardous and low-hazardous	thousand tonnes		867	914	983			ENV-7 C3	
Russian entities	thousand tonnes	920	884	938	1,004			ENV-7 C3	RSPP
▶ Hazard Class I	thousand tonnes	0.002	0.0016	0.001	0.007			ENV-7 C3	RSPP
▶ Hazard Class II	thousand tonnes	0.0043	0.0089	0.004	0.001			ENV-7 C3	RSPP
▶ Percentage of waste of Hazard Classes I and II	%	0.0007	0.0012	0.0005	0.0008			ENV-7 C3	RSPP
▶ Hazard Class III (incl. oil-containing)	thousand tonnes	21	21	25	22			ENV-7 C3	RSPP
▶ Percentage of waste of Hazard Classes I, II, and III	%	2.3	2.4	2.7	2.2			ENV-7 C3	RSPP
TOTAL non-hazardous and low-hazardous (Classes IV and V)	thousand tonnes	21	21	25	22			ENV-7 C3	RSPP
▶ Hazard Class IV	thousand tonnes	868	829	878	948			ENV-7 C3	RSPP
▶ Hazard Class V	thousand tonnes	31	34	35	34			ENV-7 C3	RSPP
TOTAL non-hazardous and low-hazardous (Classes IV and V)	thousand tonnes	899	863	913	982			ENV-7 C3	RSPP
Foreign entities	thousand tonnes		28	26	24			ENV-7 C3	RSPP
▶ hazardous	thousand tonnes		24	25	23			ENV-7 C3	RSPP
▶ non-hazardous	thousand tonnes		3.5	0.9	1.1			ENV-7 C3	RSPP

Notes. In Russia, waste is classified into hazard classes (I to V) according to the criteria approved by the Ministry of Natural Resources and Environment of the Russian Federation, and all waste is considered hazardous. A similar accounting system has been adopted in Uzbekistan. Most substances categorized as hazardous waste in the international accounting system are contained in waste of Hazard Classes I and II. The division of waste generated by the Russian entities and LUKOIL Uzbekistan Operating Company into hazardous and non-hazardous is conditional and was made solely for reporting purposes in response to stakeholders' requests.

For the purposes of calculating the "Waste generated by business activity" indicator, LLC LUKOIL-International is accounted for together with Oil Refining and Petrochemicals entities; LLC LUKOIL-AERO is accounted for together with Oil Product Supply and Transportation entities. In the organizational structure of the LUKOIL Group both entities are included in the Other entities related to Refining and Distribution business sector.

Pre-privatization waste

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPIECA	Other
Waste eliminated in the reporting year										
LUKOIL Group	thousand tonnes	107	69	52	25	36	GRI 306-2		ENV-7 A3	
▶ Russian entities	thousand tonnes	50	51	39	3,1	12	GRI 306-2		ENV-7 A3	
▶ Foreign entities	thousand tonnes	57	18	13	22	24	GRI 306-2		ENV-7 A3	
Waste at the end of the reporting year										
LUKOIL Group	thousand tonnes	666	601	549	523	487	GRI 306-2		ENV-7 A3	
▶ Russian entities	thousand tonnes	269	223	184	180	168	GRI 306-2		ENV-7 A3	
▶ Foreign entities	thousand tonnes	397	378	365	343	319	GRI 306-2		ENV-7 A3	

Contaminated land formation and reclamation

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Land contaminated during the reporting year										
LUKOIL Group	hectares	52	40	58	38	32	EM-MD-160a.3			
▶ Russian entities	hectares	52	40	58	38	32	EM-MD-160a.3			
▶ Foreign entities	hectares	0	0	0	0	0	EM-MD-160a.3			
Land reclaimed during the reporting year										
LUKOIL Group	hectares	50	57	44	49	71	GRI 304-3	EM-MD-160a.3		
▶ Russian entities	hectares	50	57	44	45	71	GRI 304-3	EM-MD-160a.3		
▶ Foreign entities	hectares	0	0	0	4	0	GRI 304-3	EM-MD-160a.3		
Contaminated land area at the end of the reporting year										
LUKOIL Group	hectares	63	46	60	49	10				
▶ Russian entities	hectares	59	42	56	49	10				
▶ Foreign entities	hectares	4	4	4	0	0				

Notes. The 2020 data for “Land contaminated during the reporting year” and “Contaminated land area at the end of the reporting year” are adjusted as compared to the previously published data due to the fact that an investigation by a forensic commission for a case of a bottom water spill that occurred in 2019 in the Komi Republic was completed in 2021.

Industrial safety

Indicators of the Russian LUKOIL Group entities’ preparedness for emergencies

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Number of trainings conducted	trainings	178	200	163	126	120	ENV-6 C4			
▶ including training on the elimination of a potential oil/oil product spill	trainings	91	117	94	78	105	ENV-6 C4			
Number of people involved in trainings	people	5,810	6,692	4,631	3,573	3,255	ENV-6 C4			
Number of employees trained to act in case of an accident or emergency	people			57,087		57,564	ENV-6 C4			

Notes. The “Number of people involved in trainings” indicator takes into account the following categories of training participants: employees of the LUKOIL Group entities, personnel of emergency rescue teams, personnel of contractor (service) organizations, employees of organizations with which trainings were held (during joint trainings).

Reliability indicators of the pipeline system in Russia

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Percentage of corrosion-resistant pipelines	%	26.8	30.4	32.2	34.2	37	ENV-6 C4			

Notes. Percentage of corrosion-resistant pipelines excluding inhibited protection (in Russia) = Total length of active corrosion-resistant field pipelines in Russia at the end of the reporting period / Total length of active field pipelines in Russia at the end of the reporting period.

Oil and other substances spills at LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Volume of oil spilled in accidents in Russia	tonnes	32	16	43	73	7	GRI 306-3 (2016)	EM-MD-160a.4	ENV-6 C2	
▶ As a result of significant spills	tonnes	0	0	6	71	0.01	GRI 306-3 (2016)	EM-MD-160a.4	ENV-6 C2	
Number of significant oil spills in Russia	incidents	0	0	4	4	1	GRI 306-3 (2016)	EM-MD-540a.1	ENV-6 C2	
Specific oil spill coefficient in Russia	kg of spilled oil/1,000 tonnes of extracted oil and gas condensate	0.4	0.2	0.6	0.97	0.09				
Spills of other substances										
▶ Combustible-lubricative materials	tonnes	0	0	0.6	0	1	GRI 306-3 (2016)			
▶ Highly toxic substances (acids, alkalis, process solutions)	tonnes	0	0	0	0	0	GRI 306-3 (2016)			
▶ Technological products	tonnes	0	0	0	0	0	GRI 306-3 (2016)			
▶ Other substances	tonnes	0	0	0	0	0	GRI 306-3 (2016)			

Notes. The data on oil spills are provided for all the Russian oil and gas production entities that are under the operational control of PJSC LUKOIL. The specific oil spill coefficient = Volume of oil spilled in accidents / Volume of oil and gas condensate production in Russia (excluding the share in affiliates).

Number of emergency rescue teams (staff and non-staff)

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems				
							GRI	SASB	IPEICA	Other	
Total	people			2,095	2,137	2,121					ENV-6 C4
Komi Republic	people			392	460	475					ENV-6 C4
Khanty-Mansi Autonomous Area – Yugra, Yamal-Nenets Autonomous Area, Nenets Autonomous Area	people			423	441	441					ENV-6 C4
Astrakhan Region	people			159	146	146					ENV-6 C4
Perm Territory	people			391	418	407					ENV-6 C4
Volgograd Region	people			188	188	155					ENV-6 C4
Kaliningrad Region	people			66	66	66					ENV-6 C4
Stavropol Territory	people			95	94	94					ENV-6 C4
Other regions	people			381	324	337					ENV-6 C4

Social aspects

Occupational safety

Number of occupational accidents and employees injured in workplace accidents at the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems				
							GRI	SASB	IPEICA	Other	
Total number of occupational accidents	incidents	21	19	28	17	18					RSPP
▶ fatal	incidents	1	2	2	0	1					SHS-3 C1 UNCTAD C3.2
▶ high-consequence work-related injuries	incidents	5	8	7	5	6					
▶ minor injuries	incidents	15	9	19	12	11					
Number of cases resulting in microtraumas	incidents	3	7	4	1	4					
Number of employees injured in workplace accidents and who suffered microtraumas	people	26	32	32	18	40					GRI 403-9
Number of employees injured who suffered microtraumas	people	3	7	4	1	14					
Number of employees injured in workplace accidents	people	23	25	28	17	26					
▶ Number of fatalities (FA)	people	1	2	2	0	1					GRI 403-9 RSPP
▶ Number of lost-time injuries (LTI)	people	22	23	26	17	25					
• Including high-consequence injuries	people					7					GRI 403-9
• Including minor injuries	people					18					

Notes. The term "workplace accident" is used in accordance with the Corporate Standard, it corresponds to Article 227 of the Russian Labor Code and is similar to the term "Occupational Accident" according to the International Labor Organization methodology. When calculating the injury frequency, a group accident is counted as one incident. The term "employee injured" is used to mean "an employee who was injured in a workplace accident". If during the reporting period an employee suffered more than one injury, each case is counted as a separate injury. Microtrauma is not counted as an accident.

The "Number of employees injured in workplace accidents and who suffered microtraumas" and "Number of microtraumas" indicators are calculated taking into account first-aid cases only in accordance with the corporate accounting system.

Indicators related to occupational injuries at LUKOIL Group

Indicators	2018	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPEICA	Other
Lost Time Accident Frequency Rate (LTAFR)	0.2	0.19	0.28	0.17	0.17				
Lost Time Injury Frequency Rate (LTIFR)	0.13	0.14	0.17	0.10	0.15				SHS-3 C1 RSPP
Fatal Injury Frequency Rate (FIFR)	0.01	0.01	0.01	0	0.01	GRI 403-9	EM-EP-320a.1 EM-RM-320a.1		SHS-3 C1
Rate of high-consequence injuries (net of fatalities)	0.03	0.05	0.04	0.03	0.04	GRI 403-9			
Total Recordable Injury Frequency Rate (TRIFR)	0.15	0.18	0.19	0.11	0.23	GRI 403-9	EM-EP-320a.1 EM-RM-320a.1		SHS-3 C1

Notes. The lower all the indicators are the better. Full-time employee (FTE) coverage is 100%.

Lost Time Accident Frequency Rate, LTAFR = Number of accidents × 1,000 employees / Average employee headcount.

Lost Time Injury Frequency Rate, LTIFR = Number of employees injured in workplace accidents including fatalities × 1,000,000 man-hours / Number of man-hours worked by all employees.

Fatal-Incident Frequency Rate (FIFR) = Number of fatalities × 1,000,000 man-hours / Number of man-hours worked by all employees.

Rate of High-Consequence Work-Related Injuries = Number of high-consequence work-related injuries (excluding fatalities) × 1,000,000 man-hours / Number of man-hours worked by all employees. See the full definition in [Appendix 8](#).

Total Recordable Injury Frequency Rate (TRIFR) = Number of employees injured in workplace accidents and who suffered microtraumas × 1,000,000 man-hours / Number of man-hours worked by all employees. The cases with only first aid administered are counted when calculating the indicator in accordance with the corporate accounting system.

Amount of working time spent by employees of LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems				
							GRI	SASB	IPEICA	Other	
Number of man-hours worked	mIn man-hours	176	174	169	170	177					GRI 403-9

Occupational illness at the Russian entities of LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Occupational disease rate (ODR)										
▶ per 1,000 employees		0.19	0.13	0.083	0.092	0.113				(SHS-3 A1)
▶ per 1,000,000 man-hours		0.11	0.08	0.05	0.057	0.067				(SHS-3 A1)
Number of employees with newly diagnosed occupational diseases	people	16	11	7	8	10	(GRI 403-10)		(SHS-3 A1)	(RSPP)

Notes. Occupational disease rate (ODR) = Number of persons with newly diagnosed occupational diseases x 1,000 employees / Average headcount
 ODR = Number of persons with newly diagnosed occupational diseases x 1,000,000 man-hours / Number of man-hours worked

The Company understands the indicator “The number of cases of recordable work-related ill health” (GRI) as the number of employees with newly diagnosed occupational diseases, as this formulation of the indicator ensures collection of reliable data characterizing the social impacts of Group entities and is used when planning measures to protect employees’ health.

Number of occupational accidents and employees with work-related injuries at contractor organizations of LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Number of accidents	incidents	9	13	10	16	15				
▶ fatal	incidents	1	6	3	3	3				
▶ high-consequence work-related injuries	incidents	3	1	1	6	3				
Number of employees injured in workplace accidents	people	9	16	11	17	17	(GRI 403-9)			
▶ Number of fatalities (FA)	people	1	7	4	3	3	(GRI 403-9)			
▶ Number of lost-time injuries (LTI)	people	8	9	7	14	14				
• Including high-consequence injuries	people					3	(GRI 403-9)			
• Including minor injuries	people					11				

Notes. The Company does not collect information on the number of employees of contractor organizations who suffered microtraumas.

Employees details

Headcount and personnel characteristics

Average headcount of LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
LUKOIL Group	people	102,508	101,374	100,768	102,424	104,323	(GRI 2-7)			(RSPP)
▶ Russian entities	people	85,105	84,356	84,383	86,541	88,861	(GRI 2-7)			(RSPP)
▶ Foreign entities	people	17,403	17,018	16,385	15,883	15,462	(GRI 2-7)			

LUKOIL Group headcount (as at December 31 of each reporting year)

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
LUKOIL Group	people	105,991	105,624	104,264	106,835	109,047	(GRI 2-7)			(RSPP)
▶ Russian entities	people	88,019	88,434	87,858	90,808	93,550	(GRI 2-7)			(RSPP)
	%	83	84	84	85	86				(RSPP)
▶ Foreign entities	people	17,972	17,190	16,406	16,027	15,497	(GRI 2-7)			
	%	17	16	16	15	14				

Turnover rate at LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
LUKOIL Group	%	7.8	7.5	6.7	9.1	9.0	(GRI 401-1)		(SOC-6 A1)	(RSPP)
▶ Men	%				7.6	7.8	(GRI 401-1)		(SOC-6 A1)	(RSPP)
▶ Women	%				11.6	11.0	(GRI 401-1)		(SOC-6 A1)	(RSPP)
Russian entities	%	7	6.6	6.1	8.8	8.2	(GRI 401-1)		(SOC-6 A1)	(RSPP)
▶ Men	%				7.1	6.9	(GRI 401-1)		(SOC-6 A1)	(RSPP)
▶ Women	%				11.3	10.1	(GRI 401-1)		(SOC-6 A1)	(RSPP)
Foreign entities	%	11.5	11.7	10.2	10.7	13.9	(GRI 401-1)		(SOC-6 A1)	(RSPP)
▶ Men	%				9.7	12.0	(GRI 401-1)		(SOC-6 A1)	(RSPP)
▶ Women	%				13.5	19.4	(GRI 401-1)		(SOC-6 A1)	(RSPP)

Information on newly hired employees

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
LUKOIL Group	people	26,358	16,624	13,295	18,878	22,028	GRI 401-1			
▶ Men	people		8,620	6,468	9,313	11,880	GRI 401-1			
▶ Women	people		8,004	6,827	9,565	10,148	GRI 401-1			
Percentage of men hired	%		52	49	49	54	GRI 401-1			
Percentage of women hired	%		48	51	51	46	GRI 401-1			
Russian entities	people	13,544	10,878	16,441	19,008		GRI 401-1			
▶ Men	people		6,460	4,927	7,460	9,835	GRI 401-1			
▶ Women	people		7,084	5,951	8,981	9,173	GRI 401-1			
Foreign entities	people	3,080	2,417	2,437	3,020		GRI 401-1			
▶ Men	people		2,160	1,541	1,853	2,045	GRI 401-1			
▶ Women	people		920	876	584	975	GRI 401-1			

Personnel characteristics by type of employment, employment contract and gender as at December 31 of each reporting year

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
Headcount of LUKOIL Group	people	105,991	105,624	104,264	106,835	109,047				
Employee breakdown by gender										
▶ Men	people	62,205	62,007	61,183	63,034	64,393	GRI 2-7	SOC-5 C2	RSPP	
▶ Women	people	43,786	43,617	43,081	43,801	44,654	GRI 2-7	SOC-5 C2	RSPP	
Percentage of men / women headcount										
▶ Men	%	59	59	59	59	59	GRI 405-1	SOC-5 C2		
▶ Women	%	41	41	41	41	41	GRI 405-1	SOC-5 C2		
Employee breakdown by type of employment										
▶ Full-time	people	86,319	105,168	103,972	106,500	108,731	GRI 2-7			
▶ Part-time	people	406	456	292	335	316	GRI 2-7			
Percentage of employees in each employment category in the headcount										
▶ Full-time	%	99.5	99.6	99.7	99.7	99.7	GRI 2-7			
▶ Part-time	%	0.5	0.4	0.3	0.3	0.3	GRI 2-7			
Employee breakdown by type of employment contract										
Permanent contract	people	79,542	98,020	96,659	98,914	100,498	GRI 2-7			
Percentage of the employees in the category "Permanent contract" in the headcount	%	92	93	93	93	92	GRI 2-7			
▶ Men	people		58,808	57,854	59,446	60,267	GRI 2-7	SOC-5 C2		
▶ Percentage of men in the headcount	%		95	95	94	94	GRI 2-7	SOC-5 C2		
▶ Women	people		39,212	38,805	39,468	40,231	GRI 2-7	SOC-5 C2		
▶ Percentage of women in the headcount	%		90	90	90	90	GRI 2-7	SOC-5 C2		
Fixed-term contract	people	7,167	7,604	7,605	7,921	8,549	GRI 2-7	SOC-5 C2		
Percentage of the employees in the category "Fixed-term contract" in the headcount	%	8	7	7	7	8	GRI 2-7	SOC-5 C2		
▶ Men	people		3,202	3,329	3,588	4,126	GRI 2-7	SOC-5 C2		
▶ Percentage of men in the headcount	%		5.2	5.4	5.7	6.4	GRI 2-7	SOC-5 C2		
▶ Women	people		4,402	4,276	4,333	4,423	GRI 2-7	SOC-5 C2		
▶ Percentage of women in the headcount	%		10.1	9.9	9.9	9.9	GRI 2-7	SOC-5 C2		

Notes. Breakdown by type of employment and by type of employment contract for 2018 was accounted for a limited number of the Group entities in Russia.

Personnel characteristics of LUKOIL Group by category and age as at December 31 of each reporting year

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Headcount	people	105,991	105,624	104,264	106,835	109,047				
Breakdown by category										
▶ Managers	people	12,840	12,806	12,694	12,953	12,953				(RSPP)
▶ Specialists	people	28,091	28,691	28,319	28,793	29,710				(RSPP)
▶ Workers and other employees	people	65,060	64,127	63,251	65,089	66,384				(RSPP)
Russian entities	people	88,019	88,434	87,858	90,808	93,550				(RSPP)
▶ Managers	people	10,873	10,853	10,845	11,129	11,141				(RSPP)
▶ Specialists	people	23,950	24,538	24,141	24,559	25,493				(RSPP)
▶ Workers and other employees	people	53,196	53,043	52,872	55,120	56,916				(RSPP)
Foreign entities	people	17,972	17,190	16,406	16,027	15,497				
▶ Managers	people	1,967	1,953	1,849	1,824	1,812				
▶ Specialists	people	4,141	4,153	4,178	4,234	4,217				
▶ Workers and other employees	people	11,864	11,084	10,379	9,969	9,468				
Breakdown by age										
▶ 35 and younger	people	41,174	39,179	36,955	36,515	35,985				(RSPP)
▶ 36 to 40 years	people	17,346	17,670	17,962	18,694	19,774				(RSPP)
▶ 41 to 50 years	people	29,069	29,793	30,266	31,472	32,397				(RSPP)
▶ 51 and above	people	18,402	18,982	19,081	20,154	20,891				(RSPP)
Russian entities	people	88,019	88,434	87,858	90,808	93,550				(RSPP)
▶ 35 and younger	people	34,700	33,310	31,615	31,468	31,339				(RSPP)
▶ 36 to 40 years	people	14,142	14,624	15,085	15,952	17,187				(RSPP)
▶ 41 to 50 years	people	23,725	24,545	25,136	26,349	27,386				(RSPP)
▶ 51 and above	people	15,452	15,955	16,022	17,039	17,638				(RSPP)
Foreign entities	people	17,972	17,190	16,406	16,027	15,497				(RSPP)
▶ 35 and younger	people	6,474	5,869	5,340	5,047	4,646				(RSPP)
▶ 36 to 40 years	people	3,204	3,046	2,877	2,742	2,587				(RSPP)
▶ 41 to 50 years	people	5,344	5,248	5,130	5,123	5,011				(RSPP)
▶ 51 and above	people	2,950	3,027	3,059	3,115	3,253				(RSPP)

Indicators related to working with young employees and professionals

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Number of young employees	people	41,174	39,179	36,955	36,515	35,985	(GRI 401-1)			(SOC-5)
▶ number of young professionals	people	1,639	1,423	1,317	1,351	1,436	(GRI 401-1)			(SOC-5)
Young employees recruited	people	14,624	9,427	7,603	10,625	11,899	(GRI 401-1)			(SOC-5)
▶ young professionals	people	589	631	523	661	675	(GRI 401-1)			(SOC-5)
Number of students studying under agreements with the LUKOIL Group entities	people	173	281	325	146	136				(SOC-5)

Notes. Young employees are employees of PJSC LUKOIL and the LUKOIL Group entities under the age of 35, including young professionals. Young professionals are employees under 30 years of age with a higher or secondary vocational education, who have started working for the Company in the area of their education, including blue-collar jobs, within six months immediately after graduation or within three months after serving in the Armed Forces of the Russian Federation.

Other characteristics of LUKOIL Group personnel as at December 31 of each reporting year

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems				
						GRI	SASB	IPEICA	Other	
Breakdown of employees by region										
▶ Russia	%	83.7	84.3	85.0	85.8	(GRI 2-7)				
▶ Europe	%	10.8	10.4	9.7	8.8	(GRI 2-7)				
▶ Asia	%	2.8	2.8	2.7	2.7	(GRI 2-7)				
▶ Middle East and Africa	%	2.6	2.4	2.5	2.5	(GRI 2-7)				
▶ North America	%	0.1	0.1	0.1	0.2	(GRI 2-7)				
Breakdown of Group entities employees by business activity										
▶ Exploration and Production	%	36	36	38	38	(GRI 2-7)				
▶ Oil Product Supply and Transportation as well as Other entities from the Refining and Distribution business segment	%	35	35	33	33	(GRI 2-7)				
▶ Power Generation	%	12	12	12	11	(GRI 2-7)				
▶ Oil Refining and Petrochemicals	%	12	12	12	12	(GRI 2-7)				
▶ Corporate center and other activities	%	5	5	5	6	(GRI 2-7)				

Notes. Since 2021, LLC LUKOIL-KGPZ was included in the Oil Refining and Petrochemicals business segment (previously, the entity was included in "Other entities from the Refining and Distribution business segment" sector) due to reorganization through merger of LLC KGPZ with LLC Volgogradneftepererabotka.

Percentage of female managers in the total number of managers of the respective level at the LUKOIL Group entities

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPECA	Other
Employee category									
CEO of a LUKOIL Group entity	%	1	2	4	2	(GRI 405-1)	(SOC-5 C2)	(UNCTAD C1.1)	
Deputy Heads, Chief Engineer, Chief Accountant	%	18	18	16	17	(GRI 405-1)	(SOC-5 C2)	(UNCTAD C1.1)	
Head of a branch, TPU, or another standalone business unit	%	4	7	4	4	(GRI 405-1)	(SOC-5 C2)	(UNCTAD C1.1)	
Heads of departments (excluding mentioned above)	%	26	27	26	26	(GRI 405-1)	(SOC-5 C2)	(UNCTAD C1.1)	

Information on local managers in the foreign entities of LUKOIL Group in significant regions of operations as at December 31 of each reporting year

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
Senior managers	people	89	89	88	89	82				
▶ including locals	people	28	29	31	31	29	(GRI 202-2)			
Percentage of local senior managers	%	31	33	35	35	35	(GRI 202-2)			

Notes. Senior managers include the CEO (Managing Director / General Director) and their deputies for functional areas, Chief Accountant. Local senior managers mean employees who are permanently.

Social support

Percentage of employees covered by collective bargaining agreements at LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
Percentage of employees covered by collective bargaining agreements in the LUKOIL Group entities	%	90	89	90	93	93	(GRI 2-30)		(RSPP)	(UNCTAD C4.1)
Percentage of employees covered by collective bargaining agreements in the Russian entities	%	98	96	98	99.5	99.5			(RSPP)	

Notes. Percentage of employees covered by collective bargaining agreements (in the LUKOIL Group entities or Russian entities) = Headcount of employees (in the LUKOIL Group entities or Russian entities, respectively) that have collective bargaining agreements / Headcount of employees (in the LUKOIL Group entities or Russian entities, respectively).

Scope of services provided under social programs at LUKOIL Group

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
LUKOIL Group	services	430,323	456,495	456,750	478,553	492,541	(GRI 401-2)			(RSPP)
▶ Health protection	services	286,746	322,795	321,215	340,375	351,895	(GRI 401-2)			(RSPP)
▶ Social support for families with children	services	62,241	59,480	60,267	62,334	65,613	(GRI 401-2)			(RSPP)
▶ Private pension coverage	people	12,263	12,115	13,361	12,799	12,170	(GRI 401-2)			(RSPP)
▶ Support for pensioners	people	44,990	42,825	43,468	40,397	41,328	(GRI 401-2)			(RSPP)
▶ Other	services	24,083	19,280	18,439	22,648	21,535	(GRI 401-2)			(RSPP)
Russian entities	services	357,277	387,154	386,541	411,532	429,342				(RSPP)
▶ Health protection	services	229,781	267,830	265,984	287,593	301,509				(RSPP)
▶ Social support for families with children	services	58,664	55,308	56,650	59,350	62,282				(RSPP)
▶ Private pension coverage	people	6,363	6,345	7,308	6,975	7,119				(RSPP)
▶ Support for pensioners	people	44,884	42,689	43,265	40,240	41,170				(RSPP)
▶ Other	services	17,585	14,982	13,334	17,374	17,262				(RSPP)

Notes. A service provided to an employee under social programs means each employee's request (initial or repeated) for any type of social benefits and payments stipulated by collective agreements. Services include various types of social support and assistance provided in cash and in kind, or payment of money to receive a service or to compensate for its cost.

In 2021, the methodology for calculating the indicator was revised: housing-related services were added to the "Other" category.

For reporting purposes, when calculating the total value of services provided under social programs, the indicators in the "Private pension coverage" and "Support for pensioners" areas are taken into account based on the assumption that there is 1 service per person.

Private pension coverage

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
Pension liabilities, LUKOIL Group	RUB mln	8,910	12,544	13,794	12,105	11,532	(GRI 401-2)			(RSPP)
Number of former employees receiving a corporate pension, in Russia	people	49,441	52,854	53,519	53,646	53,512				
Average private (corporate) pension level in Russia	RUB	2,272	2,134	2,241	2,291	2,278				

Training

Employee training at the LUKOIL Group entities

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
Number of trained employees by employee category	people	74,684	78,026	80,119	83,861	92,493			(SOC-7)	(RSPP)
▶ Managers	%			15	15	15				(UNCTAD C2.1)
▶ Specialists	%			27	25	30				(UNCTAD C2.1)
▶ Workers and other employees	%			58	60	55				(UNCTAD C2.1)
Amount of training	man-courses	243,467	258,728	584,621	409,435	427,992				(RSPP)
▶ Managers	%			14	19	19				(UNCTAD C2.1)
▶ Specialists	%			14	18	26				(UNCTAD C2.1)
▶ Workers and other employees	%			72	63	55				(UNCTAD C2.1)
Average number of training hours per employee trained	hour		84	141	103	111	(GRI 404-1)			(RSPP) (UNCTAD C2.1)
Average annual training costs per employee trained	RUB		12,548	9,266	10,186	11,111				(UNCTAD C2.2)

Notes. Average number of training hours per employee trained = Total number of hours of training events held at Russian and foreign entities / Total number of employees who received training in the reporting year. Average annual training costs per employee trained = Total costs to train employees who received training in the reporting year / Total number of employees who received training in the reporting year.

Employee training at the LUKOIL Group entities in distance learning

Indicators	Unit of measurement	2020	2021	2022	Reporting systems			
					GRI	SASB	IPEICA	Other
Scope of training	hour	6,963,587	4,014,763	4,085,320	(GRI 404-1)		(SOC-7)	(RSPP)
▶ Russian entities	hour	6,886,936	3,968,713	4,064,987				(RSPP)
▶ Foreign entities	hour	76,651	46,050	20,333				
Scope of training	man-courses	470,355	267,072	263,190				
▶ Russian entities	man-courses	461,644	259,187	253,091				
▶ Foreign entities	man-courses	8,711	7,885	10,099				
By employee category								
▶ Managers	man-courses	53,242	44,760	45,719	(GRI 404-1)			
▶ Specialists	man-courses	60,231	46,876	75,487	(GRI 404-1)			
▶ Workers and other employees	man-courses	356,882	175,436	141,984	(GRI 404-1)			

Payroll

Average salaries at the Russian LUKOIL Group entities

Indicators	Unit of measurement	2020		2021		2022		Reporting systems			
		Average salary (LUKOIL)	Average salary in the region	Average salary (LUKOIL)	Average salary in the region	Average salary (LUKOIL)	Average salary in the region	GRI	SASB	IPEICA	Other
Regions where production facilities are located											
Astrakhan Region	RUB	95,488	39,037	108,298	41,694	118,200	46,880				(RSPP)
Volgograd Region	RUB	66,904	35,599	74,009	38,055	79,837	42,630				(RSPP)
Kaliningrad Region	RUB	87,477	37,497	103,129	41,645	106,245	47,330				(RSPP)
Nenets Autonomous Area	RUB	138,227	91,677	149,479	95,480	163,247	106,068				(RSPP)
Nizhny Novgorod Region	RUB	73,828	37,449	80,726	41,508	89,960	46,556				(RSPP)
Perm Territory	RUB	79,877	41,203	86,664	45,555	92,547	52,066				(RSPP)
Komi Republic	RUB	106,758	56,780	116,518	59,691	130,472	67,895				(RSPP)
Samara Region	RUB	57,384	38,747	65,238	42,886						(RSPP)
Saratov Region	RUB	64,010	33,365	69,902	37,073	75,206	42,293				(RSPP)
Stavropol Territory	RUB	56,880	33,708	61,906	37,354	70,458	41,396				(RSPP)
Khanty-Mansi Autonomous Area – Yugra	RUB	112,514	79,057	119,812	85,372	131,118	97,486				(RSPP)
Yamal-Nenets Autonomous Area	RUB	136,883	110,759	147,733	116,203	163,842	131,163				(RSPP)
Regions where only Oil Product Supply entities operate, as well as service and management entities											
Moscow (excluding PJSC LUKOIL)	RUB	111,262	100,506	131,591	111,092	182,566	122,824				(RSPP)
Republic of Bashkortostan	RUB	73,561	38,706	79,704	41,662	89,211	48,349				(RSPP)
Vologda Region	RUB	45,549	42,779			53,885	53,289				(RSPP)
Krasnodar Territory	RUB	51,517	37,666	58,034	40,774	65,330	48,399				(RSPP)
Moscow Region	RUB	58,533	57,087	68,853	63,410	80,019	70,182				(RSPP)
Rostov Region	RUB	39,109	35,563	43,167	39,090	51,234	44,766				(RSPP)
Saint-Petersburg (city)	RUB	73,101	68,383	82,531	75,958	91,083	84,489				(RSPP)
Sverdlovsk Region	RUB	48,866	43,154	53,572	48,415	59,925	55,247				(RSPP)
Tyumen Region	RUB	164,825	77,795	176,773	83,928	183,751	94,629				(RSPP)
Chelyabinsk Region	RUB	46,664	38,693	51,344	43,778	57,317	50,100				(RSPP)

Notes. The average salary in the operating regions is given for January through December of each reporting year.

Given the large number of Russian regions where the LUKOIL Group entities operate, the indicator is disclosed by significant regions, i.e., the constituent entities of the Russian Federation, where the headcount of one entity of LUKOIL Group comprises 500 people or more. The average salary in regions where a Group entity operates = Average salary at that entity. The average salary in regions where more than one Group entity operates = Weighted average for all entities operating in the region.

LUKOIL Group staff costs

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPEICA	Other
LUKOIL Group	RUB mln	145,706	147,284	151,528	169,235	180,464				UNCTAD C2.2
Payroll	RUB mln	136,475	138,180	142,809	159,842	170,214				RSPP
Social benefits and payments, social support for employees	RUB mln	8,403	8,125	7,977	8,539	9,222				RSPP
Training	RUB mln	828	979	742	854	1,028				RSPP
Including in the Russian entities	RUB mln	103,903	105,267	107,432	121,705	137,041				RSPP
Payroll	RUB mln	97,386	98,883	101,446	115,006	129,478				RSPP
Social benefits and payments, social support for employees	RUB mln	5,876	5,670	5,403	5,995	6,702				RSPP
Training	RUB mln	641	714	583	704	861				RSPP

Notes. Expenses on social benefits and payments and social support of employees include payments under collective bargaining agreements and do not include social payments from the wage fund.

Management

Corporate governance

Composition of the Board of Directors of PJSC LUKOIL

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPEICA	Other
Chairman of the Board of Directors	people	1	1	1	1	GRI 2-9			
Independence of the Chairman of the Board of Directors at appointment		No	No	No	No	GRI 2-9			
Independent directors	people	6	6	6	3	GRI 2-9			
Non-executive directors	people	2	3	3	3	GRI 2-9			
Executive directors	people	3	2	2	3	GRI 2-9			
Total number of Board members	people	11	11	11	9	GRI 2-9			
Percentage of independent directors	%	55	55	55	33	GRI 2-9			
Number of sustainability and climate-related issues addressed at Board of Directors meetings	issues	20	13	20	24	GRI 2-9		UNCTAD D1.4	RSPP

Notes. In accordance with the recommendations of the Corporate Governance Code of the Bank of Russia, executive directors are defined as persons employed by the Company.

Percentage of independent members of the Board of Directors committees

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPEICA	Other
Strategy, Investment, Sustainability and Climate Adaptation Committee	%	100	50	50	33	GRI 2-9			
Audit Committee	%	100	100	100	67	GRI 2-9			
Human Resources and Compensation Committee	%	100	100	100	67	GRI 2-9			

Gender composition of the Board of Directors of PJSC LUKOIL

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPEICA	Other
Men	people	9	9	9	8	GRI 405-1			
Women	people	2	2	2	1	GRI 405-1			UNCTAD D1.2
Percentage of women	%	18	18	18	11	GRI 405-1			UNCTAD D1.2

Membership in the Board of Directors of PJSC LUKOIL

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPEICA	Other
Up to 5 years	people	4	7	6	8	GRI 2-9			UNCTAD D1.3
Up to 10 years	people	2	1	2	0	GRI 2-9			UNCTAD D1.3
Over 10 years	people	3	3	3	1	GRI 2-9			UNCTAD D1.3

Qualification balance of the Board of Directors members of PJSC LUKOIL

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPEICA	Other
Percentage of members of the Board of Directors of PJSC LUKOIL competent in sustainability and climate-related issues	%	73	73	73	78	GRI 2-9			

Persons responsible

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPEICA	Other
Number of vice-presidents responsible for sustainability issues	people	1	1	1	1	GRI 2-9			

Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors of PJSC LUKOIL

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPECA	Other
Number of members	people	4	4	4	3	GRI 2-9			
Number of meetings (in-person and remote)	meetings	7	7	8	8	GRI 2-9			UNCTAD D1.4
Number of sustainability and climate-related issues addressed	issues	20	10	11	12	GRI 2-9			RSPP
Percentage of women	%	25	25	25	0	GRI 405-1			UNCTAD D1.2

Health, Safety and Environmental Committee of PJSC LUKOIL

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPECA	Other
Number of members	people	11	15	15	13	GRI 2-9			
Number of meetings (in-person and remote)	meetings	2	2	2	2	GRI 2-9			UNCTAD D1.4
Number of sustainability and climate-related issues addressed	issues	7	8	7	9	GRI 2-9			RSPP
Percentage of women	%	0	0	0	0	GRI 405-1			UNCTAD C1.1

Task Forces

Indicators	Unit of measurement	2019	2020	2021	2022	Reporting systems			
						GRI	SASB	IPECA	Other
Decarbonization and Climate Change Adaptation Task Force	people		15	37	54				
Sustainability Task Force	people	13	13	13	13				

Quality of corporate governance

Indicators	Unit of measurement	2018	2019	2020	2021	2022	Reporting systems			
							GRI	SASB	IPECA	Other
Incidents of corruption and theft (number of cases completed in the reporting year)	incidents			0	0	0	GRI 2-27 GRI 205-3			
Incidents of antitrust law violations (number of significant cases completed in the reporting year)	incidents	3	0	0	1	0	GRI 206-1	EM-RM-520a.1		
Number of employee appeals on corporate ethics, employment practices, and human rights issues reviewed	appeals	4	7	9	5	9	GRI 2-26			
Number of incidents of human rights violations (including those related to discrimination)	incidents		0	0	0	0	GRI 2-27 GRI 406-1			

Appendix 10. Independent Practitioner's Assurance Report



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Independent Audit Firm's Limited Assurance Report on Sustainability Report of LUKOIL Group for 2022

To the Shareholders of PJSC LUKOIL

Introduction

We were engaged by the Management of PJSC LUKOIL ("the Management") to report on Sustainability Report of PJSC LUKOIL ("the Group") for 2022 ("the Report") in the form of a limited assurance conclusion on whether the Management's Statement that the Report is prepared with reference to the Global Reporting Initiative Sustainability Reporting Standards ("the GRI Standards") is, in all material respects, fairly stated.

Management's Responsibilities

Management is responsible for the preparation and presentation of the Report that is free from material misstatement with reference to the GRI Standards, and for the information contained therein.

This responsibility includes designing, implementing and maintaining internal control system relevant to the preparation of the Report that is free from material misstatement, whether due to fraud or error. It also includes: determining the Group's objectives in respect of sustainable development performance and reporting, including the identification of key stakeholders groups and their material issues; selecting applicable requirements of the GRI Standards; preventing and detecting fraud; identifying and ensuring that the Group complies with the laws and regulations applicable to its activities; selecting and applying appropriate policies; making judgments and estimates that are reasonable in the circumstances; maintaining adequate records in relation to the information included in the Report; ensuring that staff involved in the preparation of the Report is properly trained; information systems are properly updated and that any changes in the reporting system encompass all key business units.

Our Responsibilities

Our responsibility is to perform procedures to obtain evidence in respect of the Report prepared by Management and to report thereon in the form of a limited assurance conclusion regarding Management's Statement in respect of the Report based on the evidence obtained.

We conducted our engagement in accordance with International Standard on Assurance Engagements 3000 (Revised) *Assurance Engagements Other Than Audits or Reviews of Historical Financial Information* (ISAE 3000) issued by the International Auditing and Assurance Standards Board.

ISAE 3000 requires that we plan and perform our procedures to obtain a limited level of assurance about whether the Management's Statement that the Report is prepared with reference to the GRI Standards is fairly stated in all material respects.

Our Independence and Quality Management

We have complied with the independence and ethical requirements established by the Russian *Rules on Independence of Auditors and Audit Firms* and the Russian *Code of Professional Ethics for Auditors* and by the *International Code of Ethics for Professional Accountants (including International Independence Standards)* issued by the International Ethics Standards Board for Accountants, which are based on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

Engaging entity: PJSC LUKOIL

Audit firm: JSC "Kept"

Registration number in the United State Register of Legal Entities № 102770035769

Principal registration number of the entry in the Register of Auditors and Audit Organizations No. 12006020351

PJSC LUKOIL

Independent Audit Firm's Limited Assurance Report on Sustainability Report of LUKOIL Group for 2022
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kept

We apply the International Standard on Quality Management 1, which requires our organization to develop, implement and operate a system of quality management including policies or procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Procedures Performed

The procedures selected, and our determination of the nature, timing and extent of these procedures is a matter of our professional judgment, including the assessment of risk of material misstatement during the preparation of the Report, whether due to fraud or error, our understanding of the Group's activities, as well as other engagement circumstances.

In making these risk assessments, we considered internal control system relevant to the Management's preparation of the Report in order to design procedures that are appropriate in the circumstances, but not for the purposes of expressing a conclusion as to the effectiveness of the Group's internal control.

Our engagement also included: assessing the appropriateness of the information included in the Report, the suitability of the GRI Standards used by Management in preparation of the Report in the circumstances of the engagement; evaluating the appropriateness of the methods, policies and procedures, used in the preparation of the Report and the reasonableness of estimates made by Management.

The procedures we developed based on the performed risk assessment are a combination of inspections, confirmations, recalculations, analytical procedures and inquiries.

Our procedures included, but were not limited to, the following:

- inspection of the processes used by PJSC LUKOIL to identify topics and issues material to the Group's key stakeholder groups, with the purpose of understanding such processes in the Group, as well as analysis of information from open sources on topics and issues material to key stakeholder groups of other organizations in the industry, with the purpose of determining the level of completeness of disclosure of such topics and issues in the Report;
- interviews with Management representatives and officers at the corporate center and subsidiaries regarding the sustainable development strategy and policies regulating material issues in areas of importance for the Group, stage of implementation of such policies, and procedures for collecting information on sustainable development;
- interviews with employees of the corporate center and subsidiaries responsible for providing the information for the Report;
- conducting procedures at the level of the following subsidiaries:
 - LLC LUKOIL-West Siberia, Kogalym
 - LLC LUKOIL-Komi, Usinsk
 - LLC LUKOIL-Permnefteorgsintez, Perm
 - LLC LUKOIL Belarus, Minsk
 - PJSC LUKOIL, Moscow

which were selected based on risk analysis using qualitative and quantitative criteria;

- comparing the information presented in the Report with data from other sources to determine its completeness, accuracy and consistency;
- assessing the completeness of qualitative and quantitative information on sustainable development against the GRI Standards;
- reading and analyzing information on sustainable development included in the Report to determine whether it is in line with our understanding and knowledge of the Group's sustainable development activity;
- recalculation of quantitative data and inspection of underlying documentation.

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The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

Criteria Used

To evaluate the Report, GRI Standards were used which are available at the link: <https://www.globalreporting.org/standards/>

Management's Statement

Management's Statement is presented in Appendix 5 " GRI Content Index 2021 " to the Report.

Inherent Limitations

Due to the limitations inherent in any internal control structure, it is possible that errors or irregularities in the information presented in the Report may occur and not be detected.

Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report. We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Based on the procedures performed, nothing has come to our attention that causes us to believe that Management's Statement that the Report is prepared with reference to the GRI Standards is not, in all material respects, fairly stated.



Klimanova L.V.
General director, JSC "Kept"
Moscow, Russia

12 July 2023

Appendix 11. Assurance by the RSPP Council on Non-Financial Reporting, ESG Indices and Sustainable Development Ratings

Opinion of the Russian Union of Industrialists and Entrepreneurs' Council on Non-Financial Reporting, ESG Indices and Sustainable Development Ratings on the Public Assurance Review Results of the Sustainability Report of LUKOIL Group for 2022

The Russian Union of Industrialists and Entrepreneurs' (RSPP) Council on Non-Financial Reporting, ESG Indices and Sustainable Development Ratings (the "Council") has reviewed the Sustainability Report for 2022 (the "Report") of LUKOIL Group (the "Company", the "Group", "LUKOIL").

The Company requested RSPP to arrange for a public assurance review of the Report by the Council. The Council forms an opinion on the relevance and completeness of the information disclosed in the Report in relation to the Company's performance in accordance with the principles of responsible business practice, which are set out in the Social Charter of Russian Business and comply with the provisions of the UN Global Compact and Russian and international social responsibility and sustainability standards and guidelines.

The public assurance (confirmation) review was carried out during the period between June 5 and June 28, 2023 in accordance with the Regulations for the Public Assurance Review of Corporate Non-Financial Reporting approved by the Council. This Opinion is based on the expertise and assessment by the Council, analysis of the Report, and review of its assessment by the members of the RSPP Council on Non-Financial Reporting, ESG Indices and Sustainable Development ratings Council.

Members of the Council have the necessary expertise in corporate social responsibility, sustainability, and non-financial reporting, comply with ethical requirements pertaining to independence and objectivity, and express their personal opinions as experts, and not the opinions of the organizations they represent.

The Report was assessed based on the following criteria on the relevance and completeness of the information contained therein:

Information is considered relevant to the extent it presents the Company's activities in implementing the principles of responsible business practices disclosed in the Social Charter of Russian Business (www.rspp.ru).

The completeness implies that the Company has comprehensively presented its activities in the Report – its underlying values and strategic benchmarks, governance system and structure, achievements, and key performance indicators, as well as its system of interacting with stakeholders.

The application of the international reporting systems by the Company is considered during the public assurance review of the Report. However, confirming the Report's level of compliance with international reporting systems is outside the scope of this Opinion.

The Company is responsible for the information and statements contained in the Report. The reliability of the data contained in the Report is not the subject matter of this public assurance review.

This Opinion has been prepared for the Company that may use it for internal corporate purposes and for communications with stakeholders, publishing it without any changes.

CONCLUSIONS

On the basis of the analysis of the Report, as well as public information on the official corporate website of the Company, and a collective discussion of the results of the independent assessment of the Report, the Council on Non-Financial Reporting, ESG Indices and Sustainable Development Ratings of the Russian Union of Industrialists and Entrepreneurs confirms the following:

The Sustainability Report of LUKOIL Group for 2022 contains significant information on key areas of responsible business practice in accordance with the principles of the Social Charter of Russian Business, and adequately discloses information on the Company's operations in these areas.

The recommendations of the Council based on the results of public assurance of the previous Report for 2021 are reflected in the Report for 2022. The description of key aspects of economic impact, plans for the next reporting period for key sustainability activities, risks associated with external challenges, and measures taken by the Company to mitigate these risks has been expanded. Information on the internal audit results in monitoring compliance with the internal regulations on sustainability has been included.

The Company's Report for 2022 contains relevant information on the following aspects of responsible business practices:

Economic freedom and responsibility: The Report presents the performance indicators for 2020–2022, geography and activities by business segments and sectors, events and performance results of the reporting year. The acquisition of new assets and shares in energy and exploration assets is reported. Data on the production and sales of energy products, including oil and oil products, biofuel blends, natural gas motor fuel, as well as electricity, lubricants, and petrochemicals is shown. Measures of adapting to the changed international trade environment by diversifying export supplies and expanding cooperation with suppliers of technologies and analogues of equipment, consumables and material and technical resources in the Russian Federation and in neutral countries are described. Switching the investment program to the existing projects in the oil production segment and the core assets in petrochemicals. The Report points out that the Company's best efforts in the field of information technology have been focused on preventing risks related to the technological and software stability of the information systems in operation, including upgrading the infrastructure at the corporate data center. The Concept for Innovation Management System Development established in 2022 is reported, and innovation areas and products are indicated. The approval of key documents on the continuous improvement system is reported. The corporate governance system is described, the changes made at the end of 2022 are highlighted. The approval of the Sustainability Policy in the reporting year and its compliance with the eleven UN Sustainable Development Goals of priority for the Company are reported. The corporate sustainability and compliance policies are listed. The sustainability management system, including its functional areas, is presented. Information on the sustainability issues discussed at the Board of Directors' meetings is presented. Information on the ESG factors considered in the remuneration system is included. The Company's regulations on business integrity and anti-corruption activities that cover the Company's employees and counterparties are specified. Information on the existence of the Business Ethics Commission and a 24-hour hotline for reporting corruption violations, as well as on the absence of hotline calls in the reporting year, is provided.

Business partnership. The Report highlights the principles, activities and issues of interaction by major stakeholder groups. **Shareholders and investors.** The Report includes the information on interaction with capital market participants and shareholders, which in the reporting period was mainly focused on a prompt response to significant external risks. The Report emphasizes that a targeted work with the shareholders and infrastructure market participants has been carried out, and timely responses have been provided to all the requests received. **Government authorities.** Information on LUKOIL's participation in the discussions of a number of draft federal laws, as well as industry-specific climate adaptation measures as part of the public

discussion of legal acts, is provided. The Report informs that 26 cooperation agreements have been concluded at the regional level. **Employees.** The Company's approaches to talent pool development, including employees' education and development, in particular, trainings to develop managerial competencies and leadership coaching, are highlighted. The approval of the Key Principles of Management Rotation, a document setting out principles of the rotation process for high-potential employees, is mentioned. Information on the targeted incentive system development, social guarantees, and payroll levels exceeding the average pay in the core regions of the Company's presence in Russia is reported. Information on the Company's updated youth policy is presented. The communication channels with employees are indicated, including direct lines and meetings with management, trade union participation in revising the collective bargaining agreements, handling of employees' requests and public opinion polling. The collective bargaining agreement coverage indicator is provided. **Customers and consumers.** Information on the Company's key products in the wholesale and retail markets is presented. Measures to assess customer satisfaction and improve customer service are described. Interaction with fuel station customers is covered, including using the LUKOIL for Business mobile application, as well as the results of analyzing appeals and suggestions received by the Unified Hotline. **Suppliers and contractors.** Information on further integration of ESG approaches into the procurement activities and redesign of the procurement strategy is provided. The Report describes the regulation on sustainability assessment of suppliers, including compliance with anti-corruption, occupational safety and environmental protection requirements, and the inclusion of relevant provisions in the contracts for works and services. **Other partners.** Information on different types of interaction with public and non-profit organizations in the field of environmental protection and implementation of social programs is included.

Human rights: The approval of the LUKOIL Group Human Rights Policy, that provides for observance of labor rights and legal requirements, fair employment practice in the countries of the Company's presence, equal rights and opportunities for women and men, and human dignity of indigenous minorities, is reported. The Report notes that the Company's obligations that supplement those envisaged by the laws of the Russian Federation and the international standards are set out in the Social Code and the Agreement between the employer and the Trade Union of PJSC LUKOIL for 2021–2023. The Report informs that all employees, irrespective of their geographical location or trade union membership, are eligible for the benefits and guarantees provided under the social programs. Information on the absence of violations of human rights in the reporting year, and the absence of identified significant violations as a result of human resource audits carried out in eight organizations of the Group is provided. The Report states that human rights risks are included in the overall risk management system.

Environmental preservation and climate agenda: The Report informs about updates of all the key target programs in the field of environment and climate for 2022–2024. The Report states that the Company has launched the next three-year certification cycle and successfully underwent audit of the integrated environmental impact management system for compliance with the international standard ISO 14001:2015. A new approach for assessing the target functional programs for their compliance with the objectives of LUKOIL climate adaptation measures is highlighted. Information on the climate strategy implementation and establishment of the Decarbonization and Climate Change Adaptation Task Force is provided. The long-term GHG emissions reduction goal until 2030, as well as the results of the reporting year and climate adaptation measures are specified. The Report informs about the implementation of the Energy Management System in the Group's Russian organizations, which is certified for compliance with the international standards ISO 50001:2018. Measures to reduce energy consumption by business sectors are described. The main RES projects are listed, and the economics of RES advancement projects is presented. Details on the various aspects of environmental impact management are provided. A wide range of gross and specific environmental impact and energy efficiency indicators is presented, mainly in three-year dynamics. Examples of projects and activities in the reporting year to improve wastewater quality and reduce air pollutant emissions, including in Bulgaria and Romania, are shown. The support of biodiversity projects is reported. Information on the employees' participation in environmental campaigns, as well as measures aimed at the specialists' awareness and competence building on the environmental aspects of the Company's activity is provided.

Participation in the development of the local community and territories: The Report informs about the Group's participation in the development of Russian regions under the agreements on social and

economic cooperation with constituent entities of the Russian Federation, support for the construction of healthcare, cultural, sports, and pre-school education facilities, as well as residential buildings; green areas and public spaces planning. A number of projects contribute to the implementation of national projects. Economic agreements with the heads of traditional nature management territories in the KhMAA – Yugra and agreements on social and economic development of reindeer farms in NAO, support for projects aimed at preserving the health of indigenous minorities, their culture and traditions, improving access to education and solving other social problems are also reported. The Report covers the management of charity programs in the regions of the Company's presence. Examples of projects supported by the Company in 2022 are provided. The Company's cooperation with public, municipal organizations and funds on social work with children – general support and talent scouting, improvement of conditions in childcare facilities and foster families, as well as cooperation with universities, where LUKOIL implements programs to support students and professors of higher and secondary educational organizations in Russia, is highlighted. The best Company's sports projects, which are implemented in cooperation with Sports Club LUKOIL, as well as environmental education projects for the local residents are noted. The development of corporate volunteering, participation of the Company's employees in such charity initiatives as child care, assistance to veterans, environmental campaigns, sports events and charity fairs with the participation of local communities, are highlighted. The Report describes the traditional More Than Just a Purchase! program of LUKOIL's fuel stations network in Russia and the Our Future Foundation of Regional Social Programs aimed at supporting social entrepreneurs who help employ people with disabilities, pensioners, and other people who need help.

Final provisions

The Sustainability Report of LUKOIL Group for 2022 reflects in full the Company's strategy, management system and practice in the field of sustainable development. The Report contains a wide range of indicators characterizing its impact on society and the environment. The Report shows the balance of performance with the UN Sustainable Development Goals and their implementation objectives, which meet the Company's strategic benchmarks.

The Report was prepared in accordance with the GRI Standards used in Russian and international reporting practices, which ensures consistency of data from various reporting cycles and comparability with the reports of other companies. Other international and Russian sustainability reporting standards and guidelines: IPIECA (International Petroleum Industry Environmental Conservation Association), 2020; SASB (Sustainability Accounting Standards Board); 2021 Bank of Russia Recommendations; RSPB baseline performance indicators; SDG Impact Standards for UNDP enterprises and etc. – were also used in preparing the Report, which allows consideration of the information needs of various stakeholders.

The Report for 2022 is the Company's thirteen non-financial report, which attests to the consistent development of the non-financial reporting process. The Company uses various forms of independent evaluation and confirmation of reporting information (professional audit and public assurance), thereby confirming a responsible attitude to the quality of information disclosed.

The Report contains references to information that supplements and clarifies the reporting information and is provided in the Appendices to the Report, on the Company's website, in the quantitative data guide (ESG Databook) and other corporate sources. This allows to optimize the volume of the Report, while maintaining its informative value.

RECOMMENDATIONS

While noting the merits of the Report, the Council draws the Company's attention to several aspects that are important for stakeholders and relate to the relevance and completeness of the information disclosed and recommends taking them into account in future reporting.

The Council notes that the recommendations based on the analysis of the Company's previous reports will prove useful in future reporting practices.

The Report includes information on the economics of sustainability. However, it would be advisable to disclose direct and indirect economic impact of the Company’s activities in terms of ensuring sustainability development in the next reports.

The Company has taken into account the recommendation to present goals for the next reporting period in key sustainability aspects. The Company is recommended to make consistent progress in this direction, to provide information on plans and targets for a wider range of sustainability aspects in the future, to supplement qualitative indicators with quantitative ones, and to present the actual results in comparison with the planned values.

When disclosing the Company’s contribution to developing the local communities, it is advisable to supplement the descriptive information with quantitative and qualitative indicators that reflect not only the Company's contribution, but also the significance of the implemented projects for the territories and communities, short-term and long-term social effects.

In addition, it is recommended to expand information on the contribution of the Company’s programs to the national project objectives, and to report, if possible, the results achieved.

The Report provides information on social projects supported by the Company, many of which have a long-term nature. It is recommended to disclose in the Report how the project results are considered when planning social programs and improving the external social policy. The Report should also include the opinions of local communities on the efficiency of the Company’s social project development and implementation instruments and interaction on these matters with the stakeholders.

Having issued a positive assessment of the Report, having supported the Company’s commitment to the principles of responsible business practices, and having noted the consistency in the development of its reporting, the RSPP Council on Non-Financial Reporting, ESG Indices and Sustainable Development Ratings does hereby confirm that the Sustainability Report of LUKOIL Group for 2022 has passed the public assurance procedure.

**The Russian Union of Industrialists and Entrepreneurs
Council on Non-Financial Reporting,
ESG Indices and Sustainable Development Ratings**



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The data on future production and investment plans contained in the Report are based on forward-looking information. Such words as 'believe,' 'anticipate,' 'expect,' 'estimate,' 'intend,' 'plan' and similar expressions are indicative of the forward-looking nature of the statement. Actual results may differ from the anticipated results, estimates, and intentions contained in the forward-looking statements. PJSC LUKOIL does not guarantee that the anticipated operating results contained in the forward-looking statements will be actually achieved. In each case, such statements represent one of the many possible outcomes only, therefore, they should not be regarded as the most probable outcome.