



# **RESPONSIBLE ENERGY PRODUCER**



**WE ADHERE TO THE PRINCIPLES THAT ARE SET FORTH IN THE LUKOIL GROUP SUSTAINABILITY POLICY.**

# GOVERNANCE

COMPLIANCE WITH LAWS, RESPECT FOR STAKEHOLDERS' INTERESTS, INFORMATION OPENNESS AND TRANSPARENCY

[For more information, see page 12](#)

# PEOPLE

TAKING INTO ACCOUNT THE SPECIFICS OF REGIONS AND COUNTRIES OF OPERATION AND UNCONDITIONAL OBSERVANCE OF HUMAN RIGHTS

[For more information, see page 76](#)

# NATURE

ENVIRONMENTAL RESPONSIBILITY

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# BUSINESS MODEL

LUKOIL is one of the world's largest companies supplying energy products to over 100 countries

## EXPLORATION AND PRODUCTION



### EXPLORATION

LUKOIL is one of the leaders by volume of proved liquid hydrocarbon reserves and sufficiency of proved reserves. The majority of reserves are conventional.

**15.3**

billion boe proved hydrocarbon reserves

**14**

countries worldwide



### HYDROCARBON PRODUCTION

We develop reserves of varying complexity and produce oil and gas condensate, natural and associated petroleum gas.

**76%**

share of liquid hydrocarbons production

**24%**

share of gas production

- > Leadership in development of hard-to-recover reserves in Russia
- > Offshore and onshore projects
- > Share of international projects hydrocarbon production in total hydrocarbon production – around 17%.

CLIMATE ZONES: from subarctic to equatorial



## REFINING

Our refineries produce products for a variety of means of transport, as well as raw materials for other industries



### OIL REFINING

**4**  
oil refineries in Russia

**4**  
oil refineries in Europe<sup>1</sup>

#### PRODUCTS:

- motor fuel
- bunker and jet fuel
- lubricants and bitumen



### GAS REFINING

**5**  
gas processing plants in Russia

#### PRODUCTS:

- liquid hydrocarbon
- marketable gas



### PETRO-CHEMICALS

**2**  
petrochemical plants in Russia

facilities at oil refineries in Bulgaria and Italy

#### PRODUCTS:

- pyrolysis and organic synthesis products, fuel fractions and polymeric materials



### LUBRICANTS

**4**  
plants in Russia<sup>2</sup>

**6**  
plants abroad<sup>3</sup>

**>800**  
names of lubricants

**30%**  
of lubricant production in Russia

## POWER GENERATION

We generate and supply thermal and electric energy, including low-carbon energy

**15.8**

billion kWh commercial power generation

**1**

billion kWh green energy supplied to consumers

**in 4**

countries renewable energy sources



### HYDROELECTRIC POWER PLANTS

**4**  
facilities



### SOLAR POWER PLANTS

**7**  
facilities



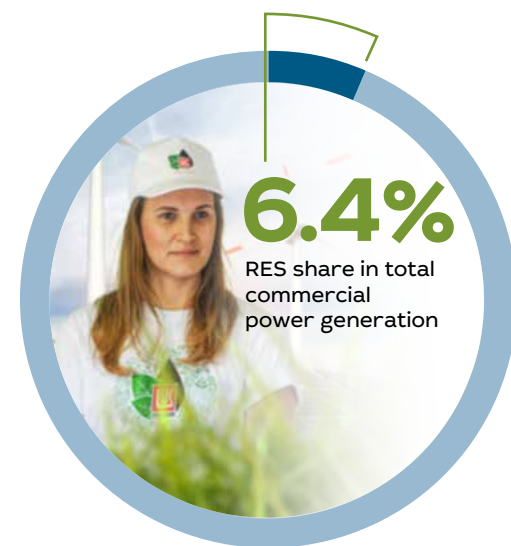
### WIND POWER PLANTS

**1**  
facility



### THERMAL POWER PLANTS AND BOILER HOUSES

in the southern part of Russia



## MARKETING AND DISTRIBUTION

We trade crude oil and marketable gas, sell premium quality fuel products and lubricants both wholesale and retail. We also supply electric power and heat, including green electricity

**19**

countries worldwide fuel stations network



### RETAIL SALES



### AIRCRAFT REFUELING

**23%**

share of environmentally safe marine fuel in total sales of LLC LUKOIL MarinBunker



### MARINE AND RIVER BUNKERING

**11%**

share of energy efficient lubricants in total production of lubricants (PVL + CVL)



### LUBRICANTS AND BITUMEN

<sup>1</sup> Including 45% share in the Dutch refinery.

<sup>2</sup> Including a joint venture of the production of lubricants INTESMO in Volgograd.

<sup>3</sup> Including a joint venture of the production of additives LLC AddiTech in Belarus.



# THE LUKOIL GROUP SUSTAINABILITY POLICY

<b>SUSTAINABLE DEVELOPMENT GOALS OF THE LUKOIL GROUP</b>				<b>SUSTAINABLE DEVELOPMENT GOALS OF THE LUKOIL GROUP</b>			
Maintaining an effective corporate governance system	Continued economic sustainability and development	Embracing ethical business practices	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
<b>UN SDGs</b>				<b>UN SDGs</b>			
<b>CONTRIBUTION TO NATIONAL PROJECTS OF THE RUSSIAN FEDERATION</b>				<b>CONTRIBUTION TO NATIONAL PROJECTS OF THE RUSSIAN FEDERATION</b>			
-	Digital Economy	-	Ecology	Ecology	Labor Productivity and Employment Support	Demographics Education Healthcare	Education Healthcare Culture Housing and Urban Environment Small and medium-sized businesses
<b>KPIs</b>				<b>KPIs</b>			
-	92.2% refinery yield	-	97.5% efficiency of APG usage throughout LUKOIL Group	Ensuring the required level of Health, Safety, and Environmental Protection at LUKOIL Group entities at	RUB 92 mln/person labor productivity	-	-
<b>SUSTAINABLE DEVELOPMENT MANAGEMENT SYSTEM INDICATORS</b>				<b>SUSTAINABLE DEVELOPMENT MANAGEMENT SYSTEM INDICATORS</b>			
20 sustainability issues considered at the Board of Directors meetings	RUB 9.46 trn direct economic value generated	0 human rights violations	18.5% reduction of GHG emissions (Scope 1+2) compared to the base 2017 year	1 generated waste to disposed waste ratio	0 fatalities	93% share of employees covered by collective agreements	580 projects supported as part of the Social and Cultural Projects Competition
82.3% share of the Corporate Governance Code principles in compliance <sup>2</sup>	26 number of patents received	0 cases of corruption and theft	54 thousand GJ industrial consumption of electricity generated from RES	49% share of fresh water withdrawal in total water withdrawal	0.10 lost time injury frequency rate (LTIFR)	103 hours average hours of training per employee	63% share of ECTO branded fuels in total retail sales of petroleum products
For more details see section <a href="#">Sustainable development management system</a>	For more details see sections <a href="#">Strategic planning</a> <a href="#">Technologies</a> <a href="#">Supply chain</a>	For more details see sections <a href="#">Corporate ethics and conduct</a> <a href="#">Stakeholder Engagement</a>	For more details see section <a href="#">Climate Agenda</a>	For more details see sections <a href="#">Environment</a>	For more details see sections <a href="#">Industrial safety</a> <a href="#">Occupational health and safety</a>	For more details see sections <a href="#">Employment relations</a> <a href="#">Social policy</a> <a href="#">Training and development</a>	For more details see sections <a href="#">Products</a> <a href="#">Supply chain</a> <a href="#">Society</a>

<sup>1</sup> All the indicators refer to the LUKOIL Group.  
<sup>2</sup> As of the end of 2021.

# OUR CONTRIBUTION TO THE UN SUSTAINABLE DEVELOPMENT GOALS IN 2021

“ The LUKOIL Group's Sustainability Policy sets 11 global goals in support of the Transforming our world: the 2030 Agenda for Sustainable Development Declaration adopted by the UN General Assembly on September 25, 2015, which are priorities for the Company”

**Expenditure**  
**1,857**  
RUB million

**TARGET 4.4**

**OUR PROGRAMS**

- A comprehensive program of interaction between LUKOIL Group entities and higher education institutions with oil and gas, chemical or energy profiles
- Support programs for students and professors of higher and secondary education institutions in Russia
- Charitable support of schools and educational institutions
- Employee education programs

**Expenditure**  
**2,650**  
RUB million

**TARGETS 7.2, 7.3**

**OUR PROGRAMS**

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

**Expenditure**  
**3,262**  
RUB million

**TARGET 12.5**

**OUR PROGRAMS**

- Environmental Safety Program of LUKOIL Group entities, Waste subprogram

**Expenditure**  
**28,012**  
RUB million

**TARGETS 14.1, 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 the Russian Federation
- Environmental Safety Program of LUKOIL Group, Biodiversity subprogram
- Environmental Safety Program of LUKOIL Group, Remediation subprogram

**Expenditure**  
**776**  
RUB million

**TARGET 5.5**

**OUR PROGRAMS**

- Support for families

**Expenditure**  
**176,797**  
RUB million

**TARGETS 8.3, 8.8**

**OUR PROGRAMS**

- Social programs and remuneration costs
- Industrial safety, workplace safety and occupational health improvement, emergency prevention and response Program of LUKOIL Group entities (Occupational Safety subprogram)

**Expenditure**  
**16,504**  
RUB million

**TARGET 13.1**

**OUR PROGRAMS**

- Environmental Safety Program of LUKOIL Group, Clean Air subprogram
- Program for the rational use of APG by LUKOIL Group entities

**Expenditure**  
**584**  
RUB million

**TARGET 17.17**

**OUR PROGRAMS**

- Participation in the Project of the World Bank and the UN
- Membership in the UN Global Compact Initiative

**Expenditure**  
**2,875**  
RUB million

**TARGET 6.3, 6.4**

**OUR PROGRAMS**

- Environmental Safety Program of LUKOIL Group entities, Clean Water subprogram
- Charity projects and programs in Iraq and Uzbekistan
- Social and Cultural Projects Competition (Ecology nomination)
- Voluntary clean-up campaigns to remove waste from riverbanks

**Expenditure**  
**16,435**  
RUB million

**TARGET 9.4**

**OUR PROGRAMS**

- Program for scientific and technical works
- Functional development program for IT support of LUKOIL Group

Total investment toward achieving the UN Sustainable Development Goals in 2021, ca

# 250

 RUB billion

# ABOUT THE REPORT

PJSC LUKOIL present the 12th Sustainability Report of the LUKOIL Group (the "Report"), summarizing performance for the period from January 1, 2021, to December 31, 2021. The previous report was published in June 2021 (for the reporting period from January 1, 2020, to December 31, 2020).

We have been publishing sustainability reports since 2005. They are addressed to a wide range of stakeholders and seek to provide balanced information relevant to the interests of each stakeholder group. The Company pays significant attention to the continuous improvement of the quality of reported information. An important role is devoted to independent audits of disclosed information about the Company's activities as well as the procedure for external assurance of the Report. The audit firm's opinion is published in [Appendix 11](#). The Opinion of the Russian Union of Industrialists and Entrepreneurs non-financial reporting Council concerning the external assurance of the Report is published in [Appendix 12](#).

In preparing this Report, we used a number of reporting standards and guidelines, which are listed in [Appendix 3](#). In accordance with the standards and Regulations of the preparation of the LUKOIL Group Sustainability Report, the materiality of the topics and issues of the Report is assessed on an annual basis.

## The material topics for 2021 are:

- corporate governance and accounting for ESG factors and sustainability issues;
- climate change;
- safety (occupational health and safety);
- environmental protection;
- employee well-being and engagement with society.

The description of the procedure and its results are given in [Appendix 3](#).

For the first time, we have grouped material topics into three major blocks in this Report. The goal is to emphasize on the correlation of the issues included in them, thereby contributing to a deeper analysis and understanding of the Company's activities in terms of achieving the goals of sustainable development.

**The first block** contains information on accounting for ESG factors and sustainable development issues in LUKOIL Group's strategic planning and corporate governance, which determines the Company's ability to achieve its goals and fulfill its commitments.

**The second block** focuses on climate and the environment, including industrial safety issues, since human health and well-being are directly dependent on the conditions of the natural environment for basic human needs<sup>1</sup>.

**The third block** "People and Relationships" combines issues related to the diversity of economic and social relationships and the connections between people, formed on the basis of rules accepted in society and the business world, ethical principles, and the experience of interaction between different stakeholders.

For the first time, the Report also presents a preliminary assessment of LUKOIL Group's contribution to the UN Sustainable Development Goals (SDGs), based on an analysis of the dynamics of significant impacts of the Group entities' operations on the environment and climate, personnel and local communities over the last five years. The contribution to the SDGs is represented by changes in the Group's performance indicators that have a sustainable positive trend, as well as actions or projects that can have a long-term positive effect on the residents of the regions where we operate and the environment. The Report also provides [an assessment of the financial costs](#) associated with the implementation of LUKOIL Group's policies and programs that correspond to the Company's priority SDGs.

The text of the Report contains links to the corporate website and other sources of corporate information, which disclose detailed information on specific topics of sustainable development. This approach ensures the complementarity of data and optimizes the volume of the Report.

- ▶ In 2021, the [Sustainability section](#) of the corporate website was updated: it contains information on approaches to governance and accounting for ESG factors and sustainable development issues, as well as thematic brochures.
- ▶ [The ESG Data Book](#) has been published, which includes quantitative figures for five years verified by auditors. The data will be updated on an annual basis. The Book is also published in this Report in [Appendix 9](#).

- ▶ The "Sustainability" section of the website contains the [Document Center](#), where the Company's policies and local regulatory acts on sustainable development are available.
- ▶ The 2020 [CDP Report](#) has been published.
- ▶ A new booklet, [Conserving Biodiversity](#), has been placed on the website

Used abbreviations, formulas for calculating indicators, and definitions of terms are given in [Appendices 1 and 8](#). The words "LUKOIL Group", "LUKOIL", "the Company", "the Group", the pronoun "we" and its various related forms refer to PJSC LUKOIL and other LUKOIL Group entities unless specified otherwise.

## AWARDS

The LUKOIL Group Sustainability Report for 2020 was recognized at both Russian and international reports contests.

Annual contest of annual reports of PJSC Moscow Exchange and Securities Market Media Group. Highest award in the Best Corporate Social Responsibility and Sustainability Report for 2020 nomination.

The Report won **Bronze at the ARC Awards** in the Sustainability Report: **Americas & Europe category**. This contest has been held annually for more than 30 years, with organizations from more than 70 countries participating.

LACP (League of American Communications Professionals) awarded LUKOIL a Gold Winner rank among sustainability reports presented by oil and gas companies. The **interactive version** of the Report was also recognized, receiving a Platinum rank.

**Diploma for best practice in highlighting the Company's contribution to achieving the goals of national projects** (organized by the Chamber of Commerce and Industry of the Russian Federation).

<sup>1</sup> A broad interpretation of the term "environment" includes the natural environment (the environment of human activity) and the work environment (the environment of its production activities).

<sup>2</sup> A number of modern concepts consider the planet and the environment as stakeholders in the companies' operations.



# ABOUT THE COMPANY: HIGHLIGHTS OF THE YEAR

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

LUKOIL Group's operations and financial activities are coordinated from its head office located in Moscow in the 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 both geographically and by type of reserves. Our proved reserves of oil and gas are mostly conventional. In 2021, they amounted to 15.3 billion boe<sup>1</sup>, 76% of which was oil and 24% was gas. The Company has proven reserves for 19 years.

In 2021, we continued to develop priority projects in the Northern Caspian, Western Siberia and other Russian regions, including the V. Grayfer field in the Caspian and D-33 in the Baltic, as well as an agreement to develop a large oil and gas cluster with a complex geological structure in Yamal in partnership with PJSC Gazprom Neft was achieved.

LUKOIL Group's oil and gas condensate production in 2021, excluding the West Qurna-2 project, was 79.3 million tonnes, 2.8% higher than in 2020, but slightly lower than

in 2019. The volume and dynamics of oil production in Russia and in some international projects were attributable to the OPEC+ agreement, and in international projects by the effects of production sharing agreements with increased oil prices in 2021, and LUKOIL's withdrawal from the Kumkol project in Kazakhstan in late 2020. Production of gas from international projects increased by 40.6% to 16.1 billion cubic meters due to the recovery of demand in China, development of the Shah Deniz project in Azerbaijan and our entry into the Meleiha joint oil and gas concession in Egypt. Russia's gas production in 2021 was 16.1 billion cubic meters.

## REFINING AND DISTRIBUTION

This business segment includes organizations<sup>2</sup> whose operations relate to the refining of hydrocarbons, transportation, wholesale and retail trade of oil and oil products and trading, and generation of electricity and heat.

LUKOIL produces and supplies energy products to markets, including oil and oil products, biofuel blends<sup>3</sup>, gas motor fuel, and energy generated from renewable and mostly low-carbon energy sources. The Company continually develops new formulas for oils and lubricants, and also produces petrochemical products, fully extracting useful components from extracted natural resources.

In 2021, the Company continued to implement projects for deep oil refining and modernization of Russian oil refineries. The Volgograd oil refinery commissioned a complex for the production of high-indexed oils, which will increase the output of products with enhanced properties. An isomerization unit for production of the high-octane

component of commercial gasoline and a block for production of polymer-bitumen innovative products were built at the Nizhny Novgorod Refinery.

In 2021, refinery throughput at LUKOIL's refineries increased by 7.4% compared to 2020, to 63.0 million tonnes. The increase in domestic and international refining volumes was due to scheduled maintenance in 2020, as well as increased refinery utilization rates due to higher refining margins in 2021. The petrochemical segment has developed considerably.

In 2021 the petrochemical output was 1,134 thousand tonnes, 8% lower than in 2020. The decrease was mainly due to the reduced utilization of LLC Stavrolen due to the scheduled maintenance of the plant.

The Power Generation business sector is represented by a complete production cycle, from generation to transmission and distribution of heat and energy to external consumers (commercial power generation) and for operational needs (supporting power generation). The aggregate installed capacity of our power generating facilities<sup>4</sup> in 2021 was 6.1 GW<sup>5</sup>, including a combined capacity of renewable power generating facilities of 415.5 MW (6.8% of the aggregate installed capacity).

## 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.

## KEY FINANCIAL AND OPERATIONAL INDICATORS

	Unit of measurement	2019	2020	2021
<b>FINANCIAL</b>				
Revenue	RUB billion	7,841	5,639	<b>9,435</b>
EBITDA	RUB billion	1,236	687	<b>1,404</b>
Total debt to EBITDA	%	45	96	<b>54</b>
Capital expenditures	RUB billion	450	495	<b>433</b>
Free cash flow	RUB billion	702	281	<b>694</b>
Research and development costs	RUB billion	6	5	<b>5</b>
Number of patents received	pcs.	30	25	<b>26</b>
Labor productivity	RUB million / person	77	56	<b>92</b>
<b>OPERATIONAL</b>				
Production of oil and gas condensate (including the share in associates)	million barrels of oil equivalent	646	590	<b>599</b>
Production of oil and gas condensate (including the share in associates)	thousand tonnes	87,488	80,049	<b>81,176</b>
Gas production	million cubic meters	35,046	29,005	<b>32,176</b>
· including APG	million cubic meters	9,548	9,176	<b>9,120</b>
Output of petroleum products at LUKOIL Group Refineries	thousand tonnes	65,081	54,964	<b>60,015</b>
Lubricants production (full cycle <sup>6</sup> )	thousand tonnes	963	923	<b>856</b>
Output of marketable petrochemicals	thousand tonnes	1,137	1,228	<b>1,134</b>

## POSITIONS IN ESG RATINGS

Our work and results are closely scrutinized and evaluated by various

stakeholders. In 2021, the Company enhanced or maintained its high positions in international and Russian ratings.

Rating	Previous	Current <sup>7</sup>
CDP	C	<b>B-</b>
SAM S&P Global	46	<b>48</b>
Sustainalytics Risk Rating	33	<b>33</b>
ISS	C	<b>C</b>
MSCI	BBB	<b>BBB</b>
Transition Pathway Initiative	2	<b>3 (out of 4)</b>
Just Transition	-	<b>9.5 (out of 20)</b>

Notes. In terms of Sustainalytics Risk Rating, the assessment corresponds to the level of risk: the lower, the better. For SAM S&P Global, the higher the score, the better.

## POSITIONS IN OTHER RATINGS AND RANKINGS:

- ▶ The MOEX – RSPP Responsibility and Transparency Index (group A) and MOEX – RSPP Sustainable Development Vector Index (Group B).
- ▶ FTSE Russell ESG: 3.1 points (out of 5)
- ▶ Corporate Human Rights Benchmark: 7.5 (the assessment is performed every two years, it was not performed in 2021).

<sup>1</sup> According to the classification of the Securities and Exchange Commission (SEC); boe – barrels of oil equivalent.

<sup>2</sup> This business segment includes several 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 business sector related to Oil Refining and Distribution business segment.

<sup>3</sup> Biofuel blends are blends of motor gasolines and ethanol (up to 10%) or diesel fuel and fatty acid methyl esters (allowing for a motor gasoline density of 0.755 kg/L and a diesel fuel density of 0.845 kg/L). These products are sold in European countries.

<sup>4</sup> The total electric capacity of the Group's entities takes into account facilities owned by the Company but leased out to other legal entities.

<sup>5</sup> The data do not include the West Qurna-2 project.

<sup>6</sup> Base oils and components production.

<sup>7</sup> As at December 31, 2021.

# STRATEGY

## AND CORPORATE GOVERNANCE



The LUKOIL Group has set the following sustainability goals:



**Maintaining an effective corporate governance system**



**Continued economic sustainability and development**

- 16 Sustainable Development Management System
- 22 Strategic Planning
- 24 Technologies





## KEY DEVELOPMENTS AND RESULTS IN THE REPORTING YEAR

The Board of Directors of PJSC LUKOIL has approved the LUKOIL Group's Strategic Development Program for 2022-2031.



LUKOIL Group Sustainability Policy was developed<sup>1</sup>.



Sustainability issues and ESG factors were addressed at 10 of the 19 meetings of the Board of Directors.



## PLANS FOR 2022 AND THE MEDIUM-TERM

Implementation of the LUKOIL Group Sustainability policy.



Implementation of LUKOIL Group's Decarbonization Program for 2022-2024.



Further improvement of non-financial information disclosure.



Continued development and implementation of a system of sustainability key performance indicators (KPIs) into the corporate performance evaluation system.



## OUR MISSION AND VIEW

We see our main task as being a responsible producer of affordable energy to meet the needs of people and the economy in Russia and around the world.

We recognize our social responsibility and are committed to making a significant contribution to achieving the goals of the UN 2030 Agenda for Sustainable Development, the Paris Agreement, and the Strategy for the Socio-Economic Development of the Russian Federation with Low Greenhouse Gas Emissions until 2050.

### OUR MISSION:

"To use the energy of natural resources for the benefit of progress and humanity. Our operations are based on corporate values that allow us to conduct our business while adhering to the highest ethical standards".

<sup>1</sup> The Policy was approved by the Board of Directors of PJSC LUKOIL on January 11, 2022.



# SUSTAINABLE DEVELOPMENT MANAGEMENT SYSTEM

The high quality of the Company's corporate governance ensures the consistent inclusion of sustainable development goals, including the climate agenda, into the strategic planning process, which reflects LUKOIL's commitment to creating long-term value for all stakeholders. The Board of Directors, President and Management Committee of PJSC LUKOIL pay due attention to accounting for ESG factors and sustainable development issues.

## POLICIES

Due to the involvement of the Board of Directors, business processes are enhanced annually, changes are made to management systems related to sustainability issues and ESG factors; this work will be expanded in the future,

including taking into account the recommendations of the Central Bank of Russia<sup>1</sup>, published in 2021.

The key event of 2021 was the development of the [LUKOIL Group Sustainability Policy](#). The approval

of this document in January 2022 was the culmination of an important phase of work we have been doing over the past few years to integrate ESG factors and sustainability management goals into business processes and strategic planning.

## RISK MANAGEMENT

The Board of Directors determines the basic principles of and approaches to the arrangement of the Company's risk management, internal control and internal audit system.

PJSC LUKOIL has established a risk management system that regularly identifies, analyzes, describes, evaluates, and monitors risks, and develops measures to prevent their occurrence or to minimize their negative impact should they occur. Sustainability and ESG risks are increasingly being integrated into this system.

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

- ▶ Risks to public health and those associated with the spread of epidemics;
- ▶ Climate change risk;
- ▶ Health, safety and environmental risks;
- ▶ Risk of a shortage of qualified personnel;
- ▶ Reputational risk.

In 2021, work was carried out to specify the methodology and integrate climate risks into the corporate risk management system based on TCFD<sup>2</sup> recommendations.

The description of sustainability risks and measures to manage them is available at the [Sustainability / Sustainable development management / Risk Management](#) section of the website.

Information about climate risks is presented in the 2021 Annual Report, as well as in the [Climate Agenda](#) section hereof.

## REGULATORY ENVIRONMENT

Methodological support for the implementation of the LUKOIL Group strategy and sustainability policy is performed through a system of corporate regulatory documents. The Board of Directors considers and approves high-level decision-making documents (policies, codes) that set out the principles, goals and approaches to management. All documents are prepared in advance by the relevant committees of the Board of Directors. As part of this process, stakeholder consultations are held, in which scientists, experts and specialists in specific areas may participate.

### KEY DOCUMENTS

- LUKOIL Group Sustainability Policy
- The LUKOIL Code of Business Conduct and Ethics
- The Risk Management and Internal Control Policy of PJSC LUKOIL
- The Health, Safety, and Environment (HSE) Policy of LUKOIL Group in the 21st century
- The Information Policy
- The Antimonopoly policy of LUKOIL Group
- The Anti-Corruption Policy of PJSC LUKOIL
- Human Capital Management Policy of PJSC LUKOIL
- Social Code of PJSC LUKOIL

All documents are published on the website in the [Document Center](#).

## FUNCTIONAL AREAS MANAGEMENT

At the operational level, management systems are aligned across functional areas: policies, corporate standards and target programs have been developed, KPIs are assessed annually, and reports on program performance and KPIs are submitted to the Board of Directors and its committees for review. Functional management

systems are certified for compliance with international and Russian standards.

- ▶ The Integrated System of Management of Industrial, Fire, Radiation Safety, Emergency Prevention and Liquidation, the Protection of Civilians, Occupational

Safety and Environmental Protection (hereinafter - IMS) - ISO 14001:2015 and ISO 45001:2018.

- ▶ Energy management system - ISO 50001:2018.
- ▶ The quality management system - ISO 9001:2015.

## EVALUATION SYSTEM AND INCENTIVES

The Board of Directors [monitors the implementation](#) of the strategic development program and functional programs based on the KPI trends and focused reports. Compliance with legal requirements is assessed as a matter of course, and regular reviews of stakeholder expectations and changes in the external environment, including in relation to sustainability goals and the Company's fulfillment of voluntary commitments, are expanded.

To secure the greatest involvement of executive body members and senior management in strategic tasks, a remuneration system is used that considers sustainability and ESG factors. The [motivating KPIs](#) include indicators concerning industrial safety, occupational health and environmental protection (OHS), resource conservation, and energy efficiency. This list will be supplemented by new indicators that will be used to assess

the implementation of the climate strategy and the achievement of the sustainable development goals. Internal and external experts were consulted for this purpose in 2021.

Detailed information about the performance evaluation system is presented on the website in the section [Sustainability Management / Key Performance Indicators](#).

<sup>1</sup> Information letter on recommendations on accounting for ESG-factors and sustainable development issues by the board of directors of a public joint-stock company dated December 16, 2021 No. IN-06-28/96.

<sup>2</sup> TCFD - The Task Force on Climate-related Financial Disclosures.



## DISCLOSURE OF INFORMATION

The Board of Directors oversees the maintenance of adequate information transparency, including proper disclosure of reporting information on sustainable development issues and ESG factors.

## COMPETENCIES

Members of the Board of Directors have sufficient competence in sustainability issues. The President of PJSC LUKOIL has an important role to play in ensuring the continuity of the Company's activities in this area and making balanced decisions at the level of the Board of Directors and executive management bodies.

The independent members of the Board of Directors contribute greatly to deepening the work of the Board of Directors and the Sustainability Task Force. They take an active part in the discussion of climate change and the

incorporation of the UN SDGs into the Company's operations.

In 2021, the Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors of PJSC LUKOIL (SISCAC) was headed by an independent member of the Board of Directors with considerable professional experience in natural and man-made risk analysis, assessment and forecasting; economics of natural resource use and climate change; and environmental economics. The involvement of competent specialists strengthens the activities of the

LUKOIL Board of Directors in the field of sustainable development.

With the assistance of the Corporate Secretary, events are held aimed at developing internal and external communications, raising the awareness of members of the Board of Directors and the Management Board, as well as senior management about the importance of ESG factors and sustainable development objectives for the successful operation of the Company.

## ORGANIZATIONAL STRUCTURE

The organizational structure of sustainability management provides an in-depth understanding of the issues that underlie strategic decision-making. All management bodies are involved; operational interaction between governing bodies and individuals, functional and linear subdivisions of PJSC LUKOIL and LUKOIL Group entities within their competence is envisaged.


At the strategic level, decisions are made by the Board of Directors and their implementation and progress are monitored by the President and Management Committee of PJSC LUKOIL. Executive bodies inform the Board of Directors of significant developments, risks, and opportunities related to sustainability objectives and ESG factors. The President and the Management Board oversee the development, submit them for

approval to the Board of Directors, and then ensure the implementation of long-term strategic programs that integrate sustainability goals.

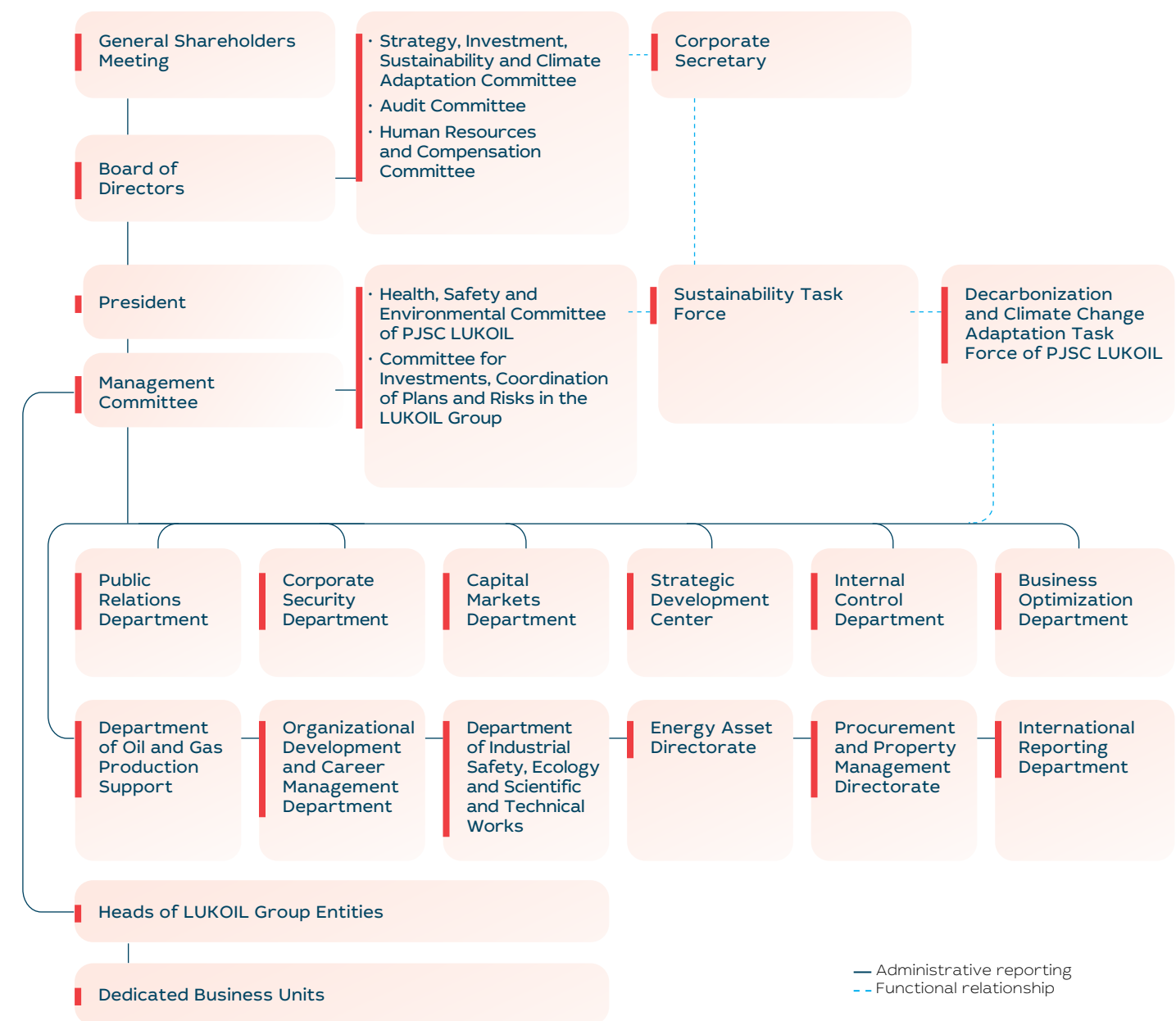
The preparation of strategic decisions and corporate documents, as well as interaction with stakeholders, receive sufficient attention due to the work of the committees of the Board of Directors, Corporate Secretary, and sustainability task forces and that on decarbonization and adaptation to climate change.

The committees and task forces analyze the external environment; industry and global trends, risks, and opportunities; consider issues related to legal requirements and stakeholder requests; and define objectives for the further development of management practices and harmonization of the corporate regulatory framework.

Employees of different functional departments participate in the activities of the task forces, which ensures the issues are discussed to the necessary depth.

 Detailed information on the functions of the management bodies and responsible persons is available on the website in the section [Sustainability Management / Management system](#).

## ORGANIZATIONAL STRUCTURE OF THE SUSTAINABLE DEVELOPMENT MANAGEMENT SYSTEM





## WORK OF THE BOARD OF DIRECTORS AND COMMITTEES IN 2021

The Board of Directors focuses on discussing sustainability-related issues, including by reviewing executive reports, which aids in identifying risks and opportunities in a timely manner. The Board of Directors hears reports on the environment and climate, risk management, the effectiveness of compliance controls, corruption prevention, human rights violations, and other topics.

### KEY SUSTAINABILITY ISSUES ADDRESSED AT THE 2021 BOARD OF DIRECTORS MEETINGS:

- execution of the environmental safety program of the entities in 2019-2020;
- occupational health and safety status and measures to improve the level of work safety;
- enhancement of the risk management and internal control system;
- PJSC LUKOIL's Human Capital Management Policy was implemented;
- preventive and prophylactic measures to prevent violations of the rights and interests of employees;
- Sustainability Report of LUKOIL Group for 2020 and preparation of the report for 2021.

## 19

meetings

the Board of Directors and its committees held in 2021 (20 meetings in 2020)

Preparation of the LUKOIL Group Sustainability Policy, and improving the efficiency of internal control and risk management became priorities for the management bodies. The meetings also included analytical reports on the changes in the energy markets due to the climate agenda.

in the future. The Board of Directors approved an action plan to improve environmental and industrial safety.

In the reporting year, for the first time, an external consultant evaluated the effectiveness of the Board of Directors, concluding that its members are highly professional and have a variety of competencies and skills. The involvement of the Board of Directors in sustainability and climate issues was noted.

The self-assessment questionnaire, which is administered annually by members of the Board of Directors and its committees, has also been updated. The subject of the self-assessment is the performance of the Board of Directors and its committees in order to create effective motivation for the members of the Board of Directors, including with regard to determining the amount of remuneration.

## 63

issues

were considered by the Board of Directors and its committees in 2021 (63 issues in 2020)

Issues related to the impact of the COVID-19 pandemic, employees' health and care in the regions and countries of operation were addressed twice during the year. The Board of Directors approved the measures taken and instructed the Management Board to work together with the heads of the Group entities to ensure that plans in this area are implemented unconditionally.

In connection with the accident in the Komi Republic<sup>1</sup>, the Board of Directors received a report on the causes of the accident and the work to eliminate its consequences, as well as on measures to prevent similar incidents

## including 20

issues,

related to sustainability aspects were considered by the Board of Directors and its committees in 2021 (13 issues in 2020)

All members of the Board of Directors actively participated in meetings of the Board of Directors and its committees in person and in the remote meetings.

## TASK FORCES ACTIVITIES IN 2021

The Sustainability Task Force (STF) held five meetings (seven meetings in 2020), and 21 issues were discussed (20 in 2020). The STF meetings were attended by STF members, consultants, and experts.

One of the main outcomes of the STF's work is the development of the LUKOIL Group Sustainability Policy. The draft documents were forwarded to the SISCAC for review and recommendation for approval by the Board of Directors.

In addition to issues related to reporting information, including identifying substantive topics that are regularly addressed at STF meetings, new issues were added to the 2021 agenda. Plans were discussed to expand the consideration of ESG

factors and sustainability issues due to changes in regulation in Russia and in foreign countries, with requests from the investment community and other stakeholders (e.g., a responsible supply chain in the context of ESG factors).

The Decarbonization and Climate Change Adaptation Task Force held four meetings focused primarily on the development of the system for accounting and management

of greenhouse gas (GHG) emissions. Seventeen issues, including climate risk management, the formation of a decarbonization program, and GHG emissions reporting were considered.

In 2021, the Task Force initiated a workshop meeting for 148 heads of environmental services of LUKOIL Group entities to discuss best practices and problematic GHG emission management issues.

### TO IMPROVE THE QUALITY OF THE REPORTING INFORMATION DISCLOSURE:

- the Regulations on the preparation of the Sustainability Report of LUKOIL Group were developed;
- in cooperation with the Decarbonization and Climate Change Adaptation Task Force of PJSC LUKOIL, the work on integrating TCFD recommendations into climate reporting has begun.

## CORPORATE SECRETARY

As a member of the STF, the Corporate Secretary participates in the development of approaches to the formation of a corporate sustainability management system; interacts with the relevant structural divisions as well as with the members of the SISCAC.

Considerable attention was paid to developing the STF meeting agenda, including organizing presentations

at the meetings by external experts and representatives of various stakeholders, preparing and organizing training sessions and courses for STF members and interested employees of PJSC LUKOIL.

The Corporate Secretary is involved in promoting the Company's best practices to the expert and scientific community and speaks at professional forums dedicated to sustainable

development and the ESG agenda. The Corporate Secretary is the head of the Sustainability / ESG Task Force of the National Association of Corporate Secretaries.

<sup>1</sup> See a case study related to this accident on p. 70 of the Report and additional information in [Appendix 4](#).

<sup>1</sup> The Regulations approved by Decree of the President of PJSC LUKOIL on January 11, 2022.



# STRATEGIC PLANNING

## SUSTAINABILITY POLICY

LUKOIL Group Sustainability Policy sets out the principles, goals and key objectives that define the priorities and areas of action that the Company intends to take in the future.

The document contains eight long-term goals in the areas of corporate governance, economic activity, ethics, climate and environment, industrial safety, and the well-being of employees and residents in the regions where the Group operates.

The policy applies to all entities of the Group and was developed in accordance with the UN SDGs,<sup>1</sup> of which the Company has identified as priorities<sup>2</sup>.

### LUKOIL GROUP SUSTAINABILITY PRINCIPLES

- **Full compliance** with respective national laws and international agreements.
- **Taking into account** the specifics of regions and countries of operation.
- **Unconditional observance** of human rights.
- **Environmental responsibility.**
- **Information openness and transparency.**
- **Upholding the rights** of and respect for stakeholders' interests.



LUKOIL Group's sustainable development goals are listed on the spread as well as on the footers of each section. The Document is available on the website in the [Document Center](#) section.

## STRATEGIC DEVELOPMENT PROGRAM

In 2021, the Board of Directors of PJSC LUKOIL approved the LUKOIL Group Strategic Development Program for 2022-2031, which sets the priorities and business goals that will ensure the balanced development of the Company with a focus on the hydrocarbon business.

The following were defined as strategic priorities: focus on investments in upstream projects in Russia, high investment discipline, conservative financial policy, effective policy of returning capital to shareholders, cost control, increasing operational efficiency,

and commitment to the principles of sustainable development.

The strategy is set to consider the increased requirements for climate responsibility of energy companies. The Group's climate strategy is integrated into the Strategic Development Program.

## ENERGY SCENARIOS AND PORTFOLIO ANALYSIS

In the reporting year, the Company considered various scenarios for the development of energy markets based on forecasts of structural changes in the global energy sector up to 2050. All scenarios considered the commitments already made by states and energy companies to reduce GHG

emissions as a result of the COP-26 climate conference<sup>2</sup>.

In addition to the conventional energy market, the potential for the development of green energy, hydrogen production and biofuels has been investigated. The volume of

necessary investments in new energy technologies was assessed. The potential for reducing GHG emissions in the Russian energy sector through energy efficiency, new technologies, and other promising projects has also been analyzed.

Based on scenario analysis, three possible trajectories for changes in oil demand have been identified, taking into account the expansion of international plans to reduce GHG emissions.



For a detailed analysis see the presentation [Global Energy Perspectives to 2050](#).



- ▶ **Evolution:** low rate of structural and technological changes, a 2.6 °C increase in global surface air temperature by 2100 compared to the pre-industrial era.
- ▶ **Equilibrium:** the balance between the achievement of climate goals and economic development, it is possible to solve the problem of stopping air temperature from rising by more than 2 °C.
- ▶ **Transformation:** abandonment of hydrocarbons and the rapid development of renewable energy and electric transport; air temperature increases by no more than 1.5 °C.

All these scenarios assume a significant increase in the share of renewable energy sources (RES), recycled plastic, and the accelerated electrification of vehicles. At the same time, the Company estimates that the share of fossil fuels in primary energy consumption will remain significant up to 2050.

During the portfolio analysis, alternative strategies for the Company's development were formed; an assessment of the long-term sustainability of the asset portfolio

based on the prices of major energy carriers used in the International Energy Agency (IEA) carbon neutrality scenario was carried out; an optimal target asset portfolio based on the risk/return ratio was determined. The analysis showed that most of the Group's existing assets and prospective projects achieve the required profitability indicators in the IEA scenario.

Objectives and plans to achieve strategic goals are based on the Company's advantages: low breakeven price of production assets, low carbon intensity and the potential for further improvement of these indicators.

The climate strategy contains three objectives and tools for their implementation and will be updated as external factors, technology, and the regulatory environment change.

## MISSION: RESPONSIBLE HYDROCARBON PRODUCER

### Task 1

#### Continue development of core business

- Focus on efficiency
- Use conservative oil price and domestic carbon price scenarios in investment decisions

### Task 2

#### Reduce controlled GHG emissions (Scope 1 + Scope 2)

- Improve energy efficiency
- Enhance RES energy consumption
- Develop opportunities to reduce methane leaks
- Carbon capture and storage projects
- Optimize the asset portfolio

### Task 3

#### Participate in climate initiatives and develop climate opportunities

- Climate-related R&D
- Commercial power generation from RES
- Study low-carbon energy resources (biofuel and hydrogen)
- Take advantage of the retail network
- Reforestation projects

<sup>1</sup> Taking into account the tasks that the Company has chosen within each of the priority SDGs.  
<sup>2</sup> COP26 is the 26th United Nations Climate Change Conference (October 31-November 12, 2021).



# TECHNOLOGIES

In a changing technological paradigm, the introduction of digital technological and managerial innovations transforms business models, expands the scope of markets, changes the economics of business, and increases the competitiveness of

companies in the oil and gas industry, which ultimately creates additional shareholder value.

The use of information technology enhances business functionality (e.g., enables analysis of big data), technical

capabilities (e.g., increases elasticity and flexibility of production), and allows the timely identification and prevention of a wide range of risks, including loss of continuity of technological and production processes.

## INFORMATION AND TECHNOLOGICAL SUPPORT DEVELOPMENT PROGRAM

In 2018, the LUKOIL Group's Functional Development Program for Information Technology Support (ITS) was launched to further improve operational and economic efficiency and the quality of data management.

In 2021, the ITO Coordinating council agreed on an updated Functional Program for ITO, the basis of which were projects united by common goals and results. The ITO functional

program is part of the strategic development program.

Pilot projects implemented in 2018-2020 allowed us to replicate the most successful areas and create a sustainable basis for further progressive development.

Implementation of innovative development projects creates positive direct and indirect environmental and

climate effects, including by improving energy efficiency, reducing accident rates, reducing the volume of water extracted from the subsurface associated with oil, reducing oil reservoir pollution during drilling and other factors. Wearable devices, robotization of routine operations, and automation of health and safety controls help create safer and more optimal working conditions.

### MAIN EFFECTS OF DEVELOPMENT PROJECTS

#### Exploration and Production business segment

- Raising the efficiency of field development
- Better quality of data

#### Refining and Distribution business segment

- Improving the efficiency and reliability of equipment
- Improving customer service
- Increasing the level of control over the environmental impact
- Supply chain control
- Upgrade of power generation mode control and energy accounting systems

#### Corporate Center and Other Activities business segment

- Increasing the speed and efficiency of management decision-making
- Increase in labor productivity
- Maintaining the continuity of work processes in a pandemic
- Reducing the risks of cyberattacks

## CYBER RESILIENCE

The widespread use of information technology is a dominant trend in today's world, which creates not only opportunities for improvement, but also new risks, making information and cybersecurity<sup>1</sup> issues increasingly important.

Cybersecurity management in the Company is part of the Ensuring Security business process. Issues requiring strategic decisions in this area are put on the agendas of the Board meetings, the SISCAC, and the ITS Coordinating Council headed by the President of PJSC LUKOIL.

The Company has implemented procedures for security analysis and vulnerability management of information systems to ensure their safe operation. Fault tolerance and penetration testing is performed before systems are commissioned, as well as periodically (at least quarterly) as part of internal procedures. If necessary, external specialists become involved.

The Company was the first in Russia and the CIS countries to pass the certification of information security (IS) management system for compliance with international standard ISO 27001:2013 and has been regularly confirming it for 15 years<sup>2</sup>. LLC LUKOIL-Technologies has established an IS department staffed

with qualified specialists and obtained licenses from authorized services of the Russian Federation. The IS Threat Monitoring and Response Center operates to continuously work on the early detection of vulnerabilities and take measures to mitigate risks. Critical infrastructure facilities were categorized, and means of protecting them were developed. The Company has created and applies local normative acts (regulations, provisions, instructions) regulating the actions of employees and counterparties to prevent the realization of IS risks.

According to the Requirements on information security support using computer and office equipment by employees of LUKOIL Group entities, users must report suspected IS incidents to the Technical Support Service or the person responsible for managing information security incidents in their organization.

Requirements to comply with IS rules are included in contracts with counterparties and in job descriptions of employees. Each incident is investigated. Violations of corporate requirements by contractors are grounds for issuing penalties.

Contingency plans were developed for information systems support and recovery and cybersecurity

employees. They also take part in industry-specific exercises on how to deal with cyberattacks on critical information infrastructure facilities.

All LUKOIL Group entities have implemented a mandatory procedure for handling IS incidents and introduced respective work roles. Public disclosure of information about leaks of personal data and notification of incidents to federal supervisory authorities and subjects of personal data is carried out in accordance with the requirements of the legislation of the countries of operation. Requirements to comply with IS rules are included in job descriptions of employees; failure to comply with these rules is a serious violation of workplace discipline and job duties.

Informing employees of LUKOIL Group entities on cybersecurity issues is aimed at increasing their awareness and responsibility, including by developing their ability to recognize and resist cyber-attacks. This process includes employees being made aware, against their signature, of policies and regulations when they are issued and updated, taking internal courses in the Distance Learning System (DLS), and prompt notification in the format of electronic newsletters. Employees' knowledge of IS regulations and best practices is periodically updated (through a DLS).

<sup>1</sup> Cybersecurity is an activity aimed at protecting systems, networks, and programs from digital attacks. Information security is the activity to preserve and protect information and its elements, including computer systems and equipment for the use, preservation and transmission of this information.

<sup>2</sup> LLC LUKOIL-Technologies is an ISO 27001 certificate holder.

# CLIMATE AND PLANET



The LUKOIL Group has set the following sustainability goals:



**Decarbonization and adapting to climate change**



**Prioritizing environmental safety**



**High occupational health and safety standards**

- 30 Climate Agenda
- 46 Environment
- 64 Industrial Safety



## CLIMATE AND PLANET: STRATEGIC CONTEXT

A significant event in 2021, in terms of the climate agenda, was the 26<sup>th</sup> UN Climate Change Conference in Glasgow (COP26), where the results achieved five years after the signing of the Paris Agreement and the challenges and actions for adaptation and mitigation of climate change were discussed. To reduce the observed **gap**<sup>1</sup> between GHG emission trends and the goals of the Paris Agreement, many countries have identified climate neutrality as a new national goal<sup>2</sup>.

Regulations for the implementation of Article 6 of the Paris Agreement were adopted at the conference and the prerequisites for voluntary cooperation in the global market of hydrocarbon quotas were created. This development creates opportunities to reduce the costs associated with the energy transition but will require the development of climate regulation in all countries, the establishment of clear rules, market mechanisms and methodologies for assessing real reductions in GHG emissions.

Regardless of the extent to which the announced plans will help make GHG emissions manageable, it is estimated<sup>3</sup> that national commitments will impact several industries and company strategies in the form of new market rules and legislative regulation.

However, given the new geopolitical realities, collective action to implement the Paris Agreement is projected to slow down; plans for achieving the UN SDGs by 2030 may also be adjusted.


In Russia, many regulatory and strategic documents related to the climate agenda were adopted in 2021. The Strategy of socio-economic development of the Russian Federation with low greenhouse gas emissions up to 2050 contains goals for the management of GHG emissions while considering the objectives of socio-economic development of the country. The National System for Financing Green Projects and Sustainable Development Initiatives was approved.

Against the background of **the international scientific community's findings**<sup>4</sup>, warning of the irreversibility of negative natural processes after a temperature increase of more than 1.5°C, there is increasing attention to other goals of sustainable development besides climate. The UN has proclaimed 2021-2030 as the **Decade of Ecosystem Restoration** and the Decade of Ocean Science for Sustainable Development. As the boundary beyond which the depletion of natural capital begins to have a negative impact on all areas of human life is approaching, these efforts are designed to intensify measures to harmonize human interests and preserve the environment.


## CONTRIBUTION TO SDGs




The APG utilization rate steadily exceeds 97% amidst the development of production projects




Both the LUKOIL's power facilities installed capacity from RES and low-carbon energy consumption for production purposes within LUKOIL Group entities are increasing




Agreements between LUKOIL Group and a number of companies on cooperation in projects to expand the use of RES and production of low-carbon energy products were signed





Adverse impacts on water bodies are restrained by the Zero Discharge principle used in offshore projects, and the high share of reused water



Discharges of pollutants into surface water bodies by LLC LUKOIL-Komi have been significantly reduced over the past three years



Despite increased production the growth in adverse impacts on land resources are being restrained through the disposal of all waste generated on an ongoing basis



Projects to preserve endangered and rare animal species are supported



<sup>1</sup> Sources: World Energy Outlook. – IEA, 2021; Emissions Gap Report. – UNEP, 2021; Climate Action Tracker data <https://climateactiontracker.org/global/temperatures/>  
<sup>2</sup> Climate neutrality means that GHG emissions into the atmosphere must be reduced to zero or offset by their absorption, use, capture and disposal.  
<sup>3</sup> Source: Industries in 2022. – The Economist Group, Economist Intelligence Unit, 2021.  
<sup>4</sup> Source: The Physical Science Basis. – Intergovernmental Panel on Climate Change, 2021.





# CLIMATE AGENDA



## LONG-TERM TARGETS TO REDUCE GREENHOUSE GAS (GHG) EMISSIONS BY 2030 UNDER COMPARABLE CONDITIONS<sup>1</sup>

To reduce<sup>1</sup> controlled GHG emissions (Scope 1 + Scope 2) by 20% compared to the 2017 level

**20%**

To eliminate routine flaring<sup>2</sup> of APG<sup>3</sup>



## KEY DEVELOPMENTS AND RESULTS IN THE REPORTING YEAR

The position in the CDP scoring improved to B-

**B-**



A new Decarbonization and Climate Change Adaptation business process was established



The Framework for Financial Assessment of Climate-Related Risks and the Decarbonization Program of LUKOIL Group for 2022–2024 were developed



LUKOIL Group's Technical Policy on Energy Efficiency and Reduction of GHG Emissions in Russia was approved by the Management Committee of PJSC LUKOIL



The TCFD initiative for voluntary disclosure of information on the management of climate-related risks and opportunities and climate-related financial information was supported by the Company



The installed capacity of solar power plants (SPPs) increased to 41 MW; energy consumption for production purposes from SPPs increased to 15 million kWh



## PLANS FOR 2022 AND THE MEDIUM-TERM

Implementation of LUKOIL Group's Decarbonization Program for 2022–2024



Development of a plan to improve the efficiency of interaction with suppliers in terms of GHG emissions management



Further work to integrate climate-related risks into the corporate risk management system and the formalization of their financial assessment



Integration of the TCFD recommendations into the GHG emissions management and reporting system



Commissioning of the SPP at the Krasnodar CHPP and implementation of projects to install SPPs at LUKOIL Group's filling stations



Further work to imbed GHG emission KPIs in the corporate performance assessment system



<sup>1</sup> 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 (Scope 1 + Scope 2) by 2030 and if the relative stability of technological processes, production volumes, and external factors affecting the Company's operations is maintained.  
<sup>2</sup> 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).  
<sup>3</sup> 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).  
<sup>4</sup> Commitment as part of the Company's participation in the World Bank's Zero Routine Flaring by 2030 initiative.



GHG EMISSIONS MANAGEMENT SYSTEM

Management

- A member of the Board of Directors of PJSC LUKOIL responsible for the Company's climate change activities was designated
- The Company established an engagement framework on the climate agenda

Strategy

- The target to reduce GHG emissions by 2030 was set based on scenario analysis
- The Decarbonization and Climate Change Adaptation business process was established

Risks

- Risks and opportunities for the Company's development in the context of climate change were identified
- Climate-related risks were included in the corporate risk management system

Reporting

- A decarbonization program, and Regulations on accounting for indicators and reporting on LUKOIL Group's greenhouse gas emissions were developed, and the methodology for calculating GHG emissions were clarified
- Data on GHG emissions are published in the CDP, the Sustainability Report, and the Annual Report

ORGANIZATIONAL FRAMEWORK FOR INTERACTION ON GHG EMISSIONS MANAGEMENT

Management level	Roles and responsible persons
Board of Directors of PJSC LUKOIL	Responsible Director for LUKOIL Group's activities on decarbonization and adaptation to climate change
Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors of PJSC LUKOIL	Prepares recommendations for the Board of Directors to determine the strategic goals of the Company's activities in the area of climate change and climate adaptation, as well as to manage climate-related risks. The Committee is headed by an independent member of the Board of Directors
President and Management Committee of PJSC LUKOIL	Consider and approve decarbonization and climate change adaptation measures
Sustainability Task Force	Creates a unified corporate position and prepares recommendations to the management bodies of PJSC LUKOIL on various sustainability aspects, including decarbonization and climate adaptation issues, as well as in areas for improvement non-financial reporting preparation process. Determines the criteria for LUKOIL Group's sustainability information disclosure, including decarbonization and climate adaptation issues. The management of the group is entrusted to the responsible Vice President for Sustainability
Decarbonization and Climate Change Adaptation Task Force of PJSC LUKOIL	Considers and prepares proposals related to operational and methodological issues of improving the GHG emissions management system. The Task Force is managed by the First Executive Vice President of PJSC LUKOIL. The Task Force includes Vice Presidents of PJSC LUKOIL in charge of all areas of the Company's operations: finance, strategy, economics and planning, sustainability, as well as heads of key specialized departments
HSE, research and engineering department of PJSC LUKOIL	The Department has deployed an Environmental Safety and Decarbonization Division that is the center of excellence and coordinates the implementation of the decarbonization and GHG emissions monitoring program

CORPORATE GOVERNANCE

We recognize the importance of active measures to mitigate and adapt to climate change, and support international cooperation on the climate agenda. Having set our strategic target of reducing GHG emissions across the LUKOIL Group by 2030, we pursue the LUKOIL Group Sustainability Policy and SDG 13, address global challenges and analyze business opportunities.

The Board of Directors plays the leading role in determining and monitoring the implementation of the Group's climate strategy developed by the SISCAC. The Board of Directors considers and approves LUKOIL Group's strategic development program that includes strategic goals for decarbonization and climate adaptation.

The President and Management Committee of PJSC LUKOIL considers and approves budgets and investment programs, including the Decarbonization Program and the ISP that includes, among other things, climate change adaptation measures; exercises control over the implementation of the programs and assesses their results (including GHG emissions reduction) and the effectiveness of the GHG emissions management system.

The Decarbonization and Climate Change Adaptation Task Force functions to develop solutions to LUKOIL Group's GHG emissions management system.

The Company has created and continues to improve its GHG emissions management system, and has established an end-to-end Decarbonization and Climate Change Adaptation business process that combines processes such as planning and goal setting, management of risks and opportunities for the Company's development in the context of climate change, assessment of measures to reduce GHG emissions and climate

In 2021, LUKOIL supported the TCFD initiative, committing to follow the recommendations regarding the voluntary disclosure of information on the management of climate-related risks and opportunities for the Company's development in the context of climate change, as well as a financial assessment of their business impact.

adaptation, and accounting for relevant indicators in public and corporate reporting.

The Environmental Safety and Decarbonization Division is responsible for operational management of the Decarbonization and Climate Change Adaptation process.

To increase awareness of and develop competencies in climate-related topics, information and training events are held for employees, specialists, and managers of the Group's entities. Relevant training courses have been developed for the corporate Distance Learning System.

RISK MANAGEMENT

The Company's climate-related risks and opportunities for development in the context of climate change were identified on the basis of research conducted in 2020. The study, among other things, has provided for assessment of physical risks for 2030–2050 in Russian regions where Group entities operate. The expert financial assessment of risks is presented in the CDP questionnaire.

In 2021, to adopt a uniform approach to identifying and assessing climate-related risks and opportunities of the development in the context of climate change, the Company developed the Framework for Financial Assessment of Climate-Related Risks in accordance with the TCFD recommendations and made considerable efforts to classify risks and integrate them into the risk management corporate information system (CIS RCA).

THE COMPANY IDENTIFIED THE FOLLOWING CLIMATE-RELATED RISKS<sup>1</sup>:

- **Physical risks** (risks associated with changes in weather and climate conditions and other environmental parameters);
- **Transition risks** (risks associated with the transition to a lower-carbon economy), including:
  - Reputational risks;
  - Technology risks;
  - Market risks (risks related to changes in demand and consumer preferences);

Detailed information on climate-related risk management is included in section C2 Risks and opportunities of the CDP Questionnaire and in the 2021 Annual Report.

<sup>1</sup> For reporting purposes, the risk categories are given in accordance with the TCFD classification.



## CLIMATE CHANGE ADAPTATION

Since climate change is already taking place and its globally recognized<sup>1</sup> impact of weather and climate processes, including natural hazards, on human activities, and the functioning of production facilities is becoming more substantial, the Company is taking measures to adapt to changes in environmental conditions in order to prevent disruptions to the operation of its production and infrastructure facilities, as well as negative impacts on the safety and health of its employees.

The ISP includes organizational and technical measures that help reduce the impact of dangerous and harmful climate-related factors on employees and increase the stability of production processes and the readiness of employees for abnormal conditions.

### ACTION PLANS

The Company pays significant attention to analyzing weather and climate conditions and assessing the impact of the risk of adverse events on its production and economic parameters and social aspects in the regions of operation. LUKOIL Group entities have developed emergency response plans to prevent and eliminate emergency situations, both natural and man-made. Annual measures ensure that the Company is prepared for possible extreme (abnormal) weather events (heat or cold waves, strong winds and hurricanes, heavy precipitation and floods, etc.). These issues are considered at meetings of emergency committees of the Group's entities, and employees receive appropriate training.

Operations control centers of the Group's Russian entities receive notifications from the EMERCOM of Russia and the Federal Service for Hydrometeorology and Environmental Monitoring about the onset of unfavorable weather conditions; no high-risk work is undertaken during these periods.

#### ADVERSE WEATHER AND CLIMATE CONDITIONS FACED BY LUKOIL GROUP ENTITIES:

- heat/cold waves (all regions and business segments)
- flooding, including groundwater flooding (Europe, southern Russia)
- strong winds (Russia).

The possibility of permafrost thawing in the Arctic Zone and northern Russia is considered in planning the operations of oil and gas production entities in Russia.

### HEAT OR COLD WAVES

Heat and cold waves, when air temperature remains at very high or low levels for 5-7 days or more, are one of the most frequently observed phenomena of weather instability. The Group's entities in Russia and abroad are taking measures to prevent and mitigate the negative impact of these waves on people's health and its production facilities.

The most common method of adaptation, including that applied within investment projects and technical re-equipment measures, is the installation of devices to ensure the functionality of equipment and to protect the health of employees (ventilation systems, air conditioners, heating systems, etc.). In addition, related to employees:

- ▶ The maximum permissible air temperature for some types of work has been set, and work is scheduled subject to current and forecast atmospheric processes.
- ▶ The time spent by employees in outdoor areas when performing their work has been reduced (shift personnel are used).
- ▶ Personal protective equipment (PPE) is used.

Operational management measures include the seasonal adjustment of energy consumption rates with a shift for one month to balance peaks in operating costs and production capacity utilization.

When selecting equipment (at the project design and implementation stage), the category of its placement and its climatic version, as well as the level of its protection from weather anomalies, are taken into consideration. To protect rotating equipment (pumps, compressors) from direct sunlight, equipment shelters are built, and wind tents are installed. In addition, the partial technical modification of facilities is being carried out, making it possible to work at higher average temperatures; maintenance schedules are revised or production sites are watched by the staff on duty. As a result, the temperature conditions necessary for the safe operation of equipment are met.

### UNFAVORABLE WEATHER CONDITIONS

Overseas exploration and production projects at all stages of their implementation consider the climatic, geotechnical and hydrometeorological specifics of the respective regions. In Uzbekistan (the Kandym-Khauzak-Shady operator project), protective structures against mudflows and sand storms have been built (the facility is located in a mountainous and desert area).

In Mexico (Amatitlan operator project), heavy rainfall during the hurricane season is typical (the block is 60 km away from the coast of the Gulf of Mexico). For this reason, production well clusters are located on raised areas and are equipped with storm sewers. The ground access roads and wells are reconstructed in case of a washaway.

For the Oil Refinery in Bulgaria, the energy consumption rate has been adjusted in view of the identified permanent changes in seasonal temperature distribution; measures to protect against groundwater flooding include the creation of protective structures and barriers.

### PERMAFROST THAWING

The Company pays special attention to ensuring the safe operation of oil and gas production facilities that are designed and operated in the Arctic Zone of the Russian Federation. Permafrost thawing processes are considered at all stages of the design, construction and operation of production facilities and infrastructure.

At the design stage, the effects of factors such as cold, ice accumulation and thawing rates, and the corrosion of steel foundations are considered. When calculating the pile load capacity, a temperature coefficient is used that takes into account the decrease in the indicator during thawing permafrost. To prevent additional soil thawing, all facilities are raised to at least 1.2 m above the ground.

Thermal stabilization systems are used to ensure the stability of soils under the foundations of buildings and structures. Oil tank sites are equipped with thermometric wells. Tanks and structures located on and under the ground are protected by additional heat insulation.

Pipelines are mainly constructed above ground on high piled foundations. To prevent the pipeline from detaching from the footings due to the seasonal movement of permafrost, the piled foundation is leveled up.

Organizational arrangements are in place to adjust the maintenance schedule for technological equipment that can be accessed depending on weather conditions.

### USE OF POLYMER PIPES

The Company views the use of reinforced polymer pipes as a promising solution. Their main advantages include: extended service life; corrosion resistance in respect to handled media; suitability for soils with low load-bearing capacity; adaptation to soil displacements in autumn and winter and during spring floods and as a result of permafrost changes; low coefficient of thermal conduction (lower heat losses), etc.



For more information, see the section [Reliability of the Russian pipeline system](#).



A detailed description of the actions being taken is given on the [website](#).



<sup>1</sup> According to the World Economic Forum's Global Risk Report 2021 and 2022, extreme weather ranks second among the "most severe risks" over the next ten years and first over a 2-year horizon.



## DECARBONIZATION PROGRAM

As part of further development of the GHG accounting system and achievement of the voluntary climate goal declared by the Company, in 2021 LUKOIL Group's Decarbonization Program for 2022–2024 was developed on the basis of the recommendations made in the assessment reports of the Intergovernmental Panel on Climate Change (IPCC) and the World Meteorological Organization (WMO)<sup>1</sup>. When preparing the Program, a wide range of tools that can be used by the Group's entities was analyzed.

In the medium-term, the main efforts will be aimed at implementing projects to increase energy efficiency and expand the use of RES for our own energy needs. To keep methane emissions into the atmosphere at a




low level, the following measures will continue to be taken regularly: the injection of APG into the formation to maintain formation pressure, and the reduction of gas leaks during transportation and **equipment repairs and maintenance**.

LUKOIL also participates in climate-related initiatives and looks at opportunities for the Company's development in the context of climate change, including:

- ▶ production and sale of low-carbon energy products (biofuel, hydrogen);
- ▶ forest restoration;
- ▶ climate-related R&D;
- ▶ use of the retail network, including for the development of infrastructure for electric vehicles;
- ▶ development of commercial power generation from RES.

**Our goal is to reduce controlled GHG emissions (Scope 1 + Scope 2) by 20% compared to the 2017 level. LUKOIL also shares the ambition to achieve net zero controlled emissions by 2050 and is considering opportunities to achieve this.**

### PRIORITY MEASURES UNDER LUKOIL GROUP'S DECARBONIZATION PROGRAM FOR 2022–2024

Business activities	 OIL AND GAS PRODUCTION	 OIL REFINING PETROCHEMICALS	 POWER GENERATION
<b>Objectives</b>	Energy efficiency improvement	Energy efficiency improvement	Energy efficiency improvement Expansion of the use of renewable energy sources
<b>Key measures</b>	Efficient APG use Drilling optimization FER <sup>2</sup> savings (Energy Conservation Program)	Equipment upgrades and optimization of technological processes FER savings (Energy Conservation Program)	Construction of renewable power facilities FER savings (Energy Conservation Program)
<b>Expected results</b>	Reduction of direct GHG emissions from stationary fuel combustion for own needs and from flaring (Scope 1) Prevention of GHG emissions as a result of reduced consumption of purchased electricity (Scope 2)	Reduction of direct CO <sub>2</sub> emissions (Scope 1) No liquid fuel consumption Prevention of GHG emissions as a result of reduced consumption of purchased electricity (Scope 2)	Prevention of CO <sub>2</sub> emissions thanks to renewable power (supporting power generation) and reduced consumption of purchased electricity (Scope 2)

## ENERGY EFFICIENCY

We consider improving energy efficiency and the optimal use of energy resources among the main measures to reduce controlled GHG emissions. A noticeable contribution to the achievement of this objective is made by the Energy Conservation Program and target measures taken by oil and gas production, oil refining, petrochemicals and power generation entities, including the Energoproryv Project<sup>1</sup>, as well as projects to optimize production processes under the information and technology support program.

### Energy management system

The achievement of the above objective by LUKOIL Group entities is supported by a well-developed energy management system based on ISO 50001:2018 requirements. Key management tools include energy inspections, internal audits and scheduled activities.

In 2021, LUKOIL Group's Technical Policy on Energy Efficiency and Reduction of GHG Emissions in Russia was developed and approved by the Management Committee of PJSC LUKOIL<sup>2</sup>. The document specifies common requirements for all entities of the Group when selecting and using energy-efficient technologies and equipment, and prohibits using outdated technologies. The document also sets the objective of optimizing energy purchase arrangements, including through the mechanism of price-dependent reduction in consumption.

Target energy conservation programs are planned for the medium and short-term, the results of their implementation through the year are being assessed, and

target indicators for the next period are being adjusted. Now, the set of KPIs includes the Implementation of the Energy Conservation Program indicator and, as of the end of 2021, all Russian entities participating in the Energy Conservation Program met this indicator.

As part of the continuous improvement system, there are plans to harmonize the Energy Conservation Program and the Decarbonization Program, create an integrated energy management system, and implement a carbon calculator.

### Energy Conservation Program

The Energy Conservation Program of LUKOIL Group's Russian entities is aimed at increasing the sustainable use of energy resources and reducing production losses through scheduled annual measures. In 2021, the following measures were successfully implemented under the Program.

- ▶ **By production entities:** introduction of energy-efficient equipment (replacement of asynchronous submersible motors with permanent magnet motors, the complete replacement of equipment is expected by 2025); optimization of the use of equipment and energy supply; application of energy-saving methods for enhanced oil recovery.
- ▶ **By refining entities:** technical upgrade, optimization of production processes and distribution of energy flows and heat exchange between technological facilities.
- ▶ **By power generation entities:** replacement and upgrade of technological equipment, retrofitting.
- ▶ **By oil product supply and transportation entities:** optimization of energy consumption for lighting and heating of premises.

## The Energoproryv Project

Since 2020, LUKOIL Group refineries have been implementing the Energoproryv Project. The Project was developed as part of the continuous improvement system and is aimed at further improving the energy efficiency of production facilities.

### THE MAIN GOALS OF THE MEASURES BEING TAKEN ARE:

- reduction of CO<sub>2</sub> emissions (Scope 1 + Scope 2) by all refineries included in the Energoproryv Project;
- technological improvement of oil and gas processing facilities.

Measures have been developed for 2020-2030 aimed at optimizing the operation of equipment and, as a result, at reducing fuel, heat, and electricity consumption. These measures include:

- ▶ upgrade/optimization of the operation of furnaces;
- ▶ integrated waste-heat recovery;
- ▶ improved efficiency of electricity consumption.

Energy managers have been appointed at all refineries to ensure the high-quality management of the project. Under their supervision, 54 measures were taken in 2021 to optimize the operating conditions and consumption of liquid fuel, steam and electricity.

### Indicators

The recovery of economic activity in 2021 was accompanied by an increase in the volume of production and processing of raw materials at the Group's entities, which led to higher energy consumption in the main business sectors compared to 2020.

<sup>1</sup> The IPCC Guidelines contribute to the implementation of the United Nations Framework Convention on Climate Change (UNFCCC) and the Paris Agreement, to which the Russian Federation is a party.

<sup>2</sup> FER – fuel and energy resources.

<sup>1</sup> Energoproryv (Breakthrough in Energy) is a special project involving independent experts to find additional opportunities to increase energy efficiency in oil refining and petrochemicals.

<sup>2</sup> Before 2021 LUKOIL Group's Technical Policy on Energy Efficiency approved in 2012 by the Management Committee of PJSC LUKOIL was effective.



At the same time, energy efficiency improvement measures helped reduce fuel and purchased energy consumption in 2021 compared to 2019, with over 3.5 million GJ of energy saved.

**THE EFFECTS OF IMPLEMENTING THE ENERGY CONSERVATION PROGRAM ALSO INCLUDE:**

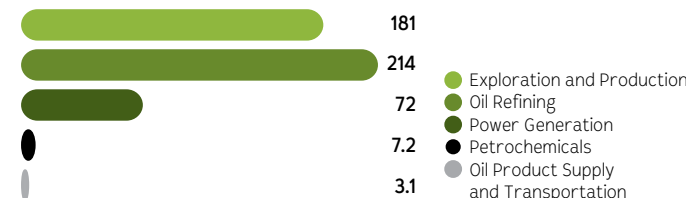
- a slowdown in energy consumption growth against the backdrop of increased production and higher complexity of refining facilities;
- reduction of GHG emissions as a result of more sustainable consumption of fuel;
- prevention of GHG emissions as a result of introducing energy-saving equipment and technologies.

**ENERGY CONSUMPTION FOR PRODUCTION PURPOSES WITHIN LUKOIL GROUP ENTITIES**

Indicators	Unit of measurement	2019	2020	2021
<b>Energy consumption for production purposes (1.1 + 1.2 + 1.3 – 1.4)</b>	<b>million GJ</b>	<b>502</b>	<b>465</b>	<b>477</b>
1.1. Energy purchased for consumption for production purposes	million GJ	74	69	<b>66</b>
1.2. Non-renewable fuel consumed by stationary production facilities (supporting power generation)	million GJ	545	515	<b>518</b>
1.3. Renewable electric energy consumed (supporting power generation)	million GJ	0.037	0.049	<b>0.054</b>
1.4. Sold energy	million GJ	117	119	<b>107</b>

**Notes.** Full details of energy consumption for production purposes are provided in the [ESG data reference book \(see Appendix 9\)](#).

**Energy consumption for production purposes by business activity of LUKOIL Group entities in 2021, million GJ**



**Notes.** The Oil Refining segment includes data on all LUKOIL Group refineries and on LLC LUKOIL-KGPZ (since November 1, 2021, the organization has been included in LLC LUKOIL-Volgogradneftepererabotka) and LLC LUK-International.

**ENERGY INTENSITY**

Indicators	Unit of measurement	2019	2020	2021
Exploration and Production	GJ/boe	0.227	0.247	<b>0.247</b>
Oil Refining	GJ/tonne of manufactured products	3.7	4.0	<b>3.6</b>
Petrochemicals	GJ/tonne of processed basic raw material	4.2	4.1	<b>4.1</b>

**Notes.** In 2021, the method for calculating the energy intensity in the Exploration and Production business segment was revised and brought into line with the calculation of the Specific GHG emissions indicator in this business segment. The formula for calculating the indicator is as follows: energy consumption for production purposes by organizations in 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 Lokosovsky Gas Processing Plant (due to the specifics of the technological process of hydrocarbon production at LLC LUKOIL-West Siberia). The data has been recalculated retrospectively. The increase in the specific energy consumption of oil refining entities in 2020 was caused by a reduced workload of refineries during the pandemic.

**RENEWABLE ENERGY SOURCES**

We consider the expansion of the use of renewable energy to be an important direction of LUKOIL Group's climate strategy. Low-carbon energy is supplied to consumers and is also used for the internal production needs of the Group's entities. The Company is increasing the consumption of electricity produced by its own generation facilities from RES.

**Solar power**

Starting from September 1, 2021, the electricity produced by the first phase of the Volgograd Solar Power Plant (SPP) with an installed capacity of 10 MW<sup>1</sup> is supplied<sup>2</sup> to the LLC Stavrolen petrochemical complex, which will help reduce the carbon footprint of products and energy indirect GHG emissions. On January 1, 2022, the second phase of the Volgograd SPP with an installed capacity of 20 MW started to supply green energy to the Nizhny Novgorod Refinery.

Another SPP with an installed capacity of 2.35 MW is being built on the

territory of the Krasnodar CHPP. The project is participating in the government RES support program for the retail electricity market. The construction of the SPP is expected to be completed in 2022.

**Hydropower**

Supplies of electric energy generated by LLC LUKOIL-Ekoenergo's hydrogeneration facilities to LLC LUKOIL-Yugnefteprodukt gas stations located in the Krasnodar Territory started in 2021, under direct contracts in the retail electricity market.

The Krasnodar Territory has been included in the pilot list<sup>3</sup> of locations and federal highways where the electric vehicle charging infrastructure will be installed in accordance with government plans<sup>4</sup>, including through the co-financing mechanism of the Ministry of Energy of the Russian Federation. This creates the prerequisite for expanding the use of electric charging devices at the Group's filling stations in the region.

Work to upgrade a small HPP on the Beshenka river in Krasnodar Territory, Russia, continued in 2021 as well. The project aims to restore the operation of the hydroelectric unit and to establish the remote operation of generating facilities and water withdrawals. In 2021, a test run and monitoring in remote mode of a small HPP from Tsimlyanskaya HPP was carried out, and for structural and plant monitoring purposes, with the use of unmanned aerial vehicles (UAVs). The project is expected to be completed in 2022. A small 1.5 MW HPP forms part of the Krasnopolyanskaya HPP hydropower complex and is classified as a small hydropower facility.

**Indicators**

Owing to the active development of solar generation at LUKOIL Group, in five years the installed capacity of SPPs has grown from 10 to 41 MW, and the consumption by Group entities of SPP-generated energy rose from 1.5 to 15 million kWh.

**LUKOIL'S RENEWABLE ENERGY**

Energy sources	Installed capacity of generating facilities, MW	Supplies of generated electric energy
<b>LUKOIL Group</b>	<b>416</b>	
<b>Hydro power (4 HPPs)</b>	291	To LUKOIL Group entities and external consumers (Russia)
<b>Solar power (7 SPPs)</b>	41	To LUKOIL Group entities and external consumers (Russia, Bulgaria, Romania, Austria)
<b>Wind power (1 WPP)</b>	84	To external consumers (Romania)

<sup>1</sup> The SPP is located on the production sites of the Volgograd oil refinery.

<sup>2</sup> Based on the mechanism of non-regulated energy sale and purchase contracts. According to Order No. 330 of the Ministry of Natural Resources and Environment of the Russian Federation dated June 29, 2017, regarding the market method for quantifying energy indirect emissions to be used when an organization consumes electricity received under sale and purchase contracts concluded in accordance with the ground rules of retail electricity markets.

<sup>3</sup> In accordance with Order No. 3835-r of the Government of the Russian Federation dated December 24, 2021.

<sup>4</sup> Russian Federation Concept for the Development of Production and Use of Electric Vehicles Until 2030.



**TOTAL AMOUNT AND PERCENTAGE OF RENEWABLE ELECTRIC ENERGY GENERATED BY LUKOIL GROUP ENTITIES**

	Unit of measurement	2019	2020	2021
Total amount of renewable energy generated	million kWh	1,110	836	<b>1,021</b>
Commercial renewable electric energy from (supplies to external consumers)	million kWh	1,100	822	<b>1,008</b>
Percentage of renewable electric energy generated in total electric energy produced by all commercial generating facilities	%	6.0	4.8	<b>6.4</b>
Supporting power generation (for own use), solar power	million kWh	10	14	<b>13</b>

**Notes.** The dynamic of energy generation from renewable sources may be explained by natural factors (water levels in rivers, number of windy/sunny days) and the pace of implementing HPP plant upgrade/reconstruction projects. The supporting power generation dynamic is explained by SPP commissioning. Specifically, in 2021 a 1 MW SPP was commissioned at LUKOIL Lubricants Europe GmbH (Austria), small capacity SPPs were installed at gas stations. In addition, in 2021 the first line of the solar power plant at the Volgograd oil refinery (with a capacity of 10 MW) started electric energy supplies for LLC Stavrolen's own needs. More details are provided in the [ESG data reference book \(see Appendix 9\)](#).

**ECONOMIC INDICATORS OF RES ADVANCEMENT PROJECTS**

	Unit of measurement	2019	2020	2021
Investments in RES advancement	RUB million	526	1,865	<b>2,023</b>
Percentage of investments in RES projects in the Power Generation business sector CAPEX	%	12	37	<b>18</b>
Percentage of income from sales of renewable electric energy	%	11.7	13.9	<b>13.8</b>

**Notes.** The "Percentage of investments in RES projects in the Power Generation business sector CAPEX" indicator is calculated as the ratio of total capital expenditures in RES projects to total capital expenditures in the Power Generation business sector. 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 electricity generated by commercial generating facilities of LUKOIL Group. 'Income' means revenue from sales of electric energy.

**ASSOCIATED PETROLEUM GAS**

Since 2017, LUKOIL has been party to the World Bank's Zero Routine Flaring by 2030 initiative and is committed to end routine flaring of APG no later than 2030.

This goal will be met through the reconstruction of existing production facilities (mainly pipelines and compressor stations) and the construction of new APG utilization facilities in the development of commissioned fields. The utilization of APG has a positive effect on reducing gas flaring, dispersal and leakage,

including reducing methane emissions, which is a major component of APG, and also generates energy.

**Projects implemented as part of the World Bank's initiative**

As part of the World Bank's initiative, two investment projects were developed and approved for implementation in the Perm Territory and the Khanty-Mansi Autonomous Area- Yugra (KhMAA - Yugra) in Russia.

Under the Reconstruction of the Povkhovskaya Compressor Station project, in 2021 works performed

as part of the first stage of the reconstruction of production facilities were continued in the KhMAA - Yugra. Outdated gas collection facilities were dismantled, new gas separators and pipelines at the compressor station inlet were constructed and assembled, and preparatory work was done on the construction of the new compressor facilities (the construction is planned to be performed in 2 stages). The project is expected to be completed in 2023.

During 2020, the project to construct a system for collecting and transporting APG in the Perm Territory was fully completed and the following results were obtained:

**5.3** ↓  
million cubic meters

The volume of APG flaring decreased by more than three times (from 17.8 million to 5.3 million cubic meters).

**97.1** ↑  
%

The APG utilization rate increased from 87.8 to 97.1%.

**18.5** ↓  
thousand tonnes of CO<sub>2</sub>e

The volume of GHG emissions decreased by 44 thousand tonnes of CO<sub>2</sub>e per year (from 62.5 thousand to 18.5 thousand tonnes of CO<sub>2</sub>e).

**Efficient APG use**

Russian entities have been implementing an investment program for the efficient use of APG<sup>1</sup> since 2003; the program covers the activities on the construction of new facilities and the reconstruction of existing ones for the preparation, transportation, and processing of APG. In 2021, a total of five facilities were put into operation - two facilities in the Perm Territory, and one each in the Komi Republic, the Volgograd and the Kaliningrad Regions.

**Indicators**

LUKOIL Group maintains a high APG utilization rate (well over 97% over the last four years). However, the volume of APG flaring increased at LLC LUKOIL-West Siberia due to an unscheduled shutdown of the compressor station for repairs in Kogalym and at LLC LUKOIL-Komi due to growing hydrocarbon production at the Yareiyu field and the limited infrastructure for efficient use of all APG produced. During the year, a technical and economic assessment of options for the rational use of APG was carried out.

**Total volume of APG flaring, million cubic meters**



**Notes.** Data have been calculated within the reporting boundaries for GHG emissions.

<sup>1</sup> The program covers a 3-year period and is revised and approved by the management of PJSC LUKOIL on an annual basis. The program for 2020-2022 was approved in 2019. During the previous reporting period, the program for 2019-2021 was in effect.



### REDUCING METHANE EMISSIONS

We share the same position as the global community in respect of the urgent need for measures to reduce methane emissions, as reducing the methane concentration in the atmosphere can curb the rise in global surface temperatures in the short-term and offer an opportunity to buy time to take wider measures to stabilize the climate.

LUKOIL Group manages to maintain low methane emissions (less than 4% of gross GHG emissions within Scope 1 over the last five years<sup>1</sup>). At the same time, in 2021 the volume of methane emissions rose against 2019 and amounted to 1.193 million tonnes of CO<sub>2</sub>e but fell by 14.6% compared to 2017. Increased methane emissions are attributable to the growing hydrocarbon production driven by an increased quota as part of the OPEC+ agreement and improvements to the methane emissions accounting system at LUKOIL Group entities.

The Company carries out regular monitoring and technical measures designed to maintain gas facilities, gas pipelines, and process facilities in a technically safe condition and seeks additional opportunities to reduce gas leaks.

### Technical measures

To detect depressurization in the trunk and interfield gas pipelines, technicians carry out safety walkarounds to measure the air-and-gas mixture and carry out equipment maintenance. At stationary units (compressor and booster pump stations, gas distribution plants), the parameters of the gas-air mixture are measured at least twice a day.

Interfield pipelines are periodically cleaned of accumulated condensate to prevent a reduction in their throughput capacity.

Independent certified organizations carry out timely diagnostic inspections and expert assessments of industrial safety, as well as the technical certification of gas facilities and gas pipelines. Based on the results of diagnostic inspections and expert assessments, a report on the continued operation of facilities or a recommendation on the repair and reconstruction is issued.

### MEASURES TO REDUCE METHANE LEAKS

To reduce methane leaks, a comprehensive approach is used that includes the following key measures:

- Gathering of gas from liquid hydrocarbon storage tanks and from oil loading and transportation systems, and the removal of reservoir water.
- Reduction of APG losses at oilfields through its maximum technologically feasible collection and utilization.
- Reduction of downtime. Elimination of gas leaks at units and facilities in the course of technical servicing.
- Installation of dry seals at centrifugal compressors (resulting in low-pressure gas being directed for flaring or to the receiving device).
- Sending of glycol regeneration gases at gas dehydration units, at which glycol dehydrators are used, for flaring.
- Installation of cement bridges at abandoned or mothballed wells.

## GHG EMISSIONS ACCOUNTING – GOALS AND INDICATORS

LUKOIL Group developed a voluntary goal to reduce GHG emissions based on the projections of the Intergovernmental Panel on Climate Change, as well as the goal specified in Article 2 of the Paris Agreement to curtail the increase in the global average surface air temperature to well below 2°C.

In 2021, GHG emissions released by LUKOIL Group entities reduced to 41.491 million tonnes of CO<sub>2</sub>e (5% lower than in 2020) while production was steadily growing. The reduction of GHG emissions against the 2017 base year amounted to 9.4 million tonnes of CO<sub>2</sub>e, or 18.5%. The reduction is due to specific measures designed and taken to improve energy efficiency and optimize equipment operating modes.

New regional emission factors for grid-connected electricity and heat energy were used in calculating energy indirect GHG emissions (Scope 2)<sup>2</sup>.

The dynamics of specific GHG emissions in all business sectors are determined by the same fact.

### GHG EMISSIONS ACROSS LUKOIL GROUP

Indicators	Unit of measurement	2017	2019	2020	2021
<b>LUKOIL Group (Scope 1 + Scope 2)</b>	<b>million tonnes of CO<sub>2</sub>e</b>	<b>50.897</b>	<b>48.433</b>	<b>43.651</b>	<b>41.491</b>
Scope 1	million tonnes of CO <sub>2</sub> e	40.448	39.796	36.705	<b>36.388</b>
Scope 2	million tonnes of CO <sub>2</sub> e	10.450	8.636	6.947	<b>5.103</b>
Energy consumption for production purposes (net of mobile sources)	million GJ	468	502	465	<b>477</b>
APG utilization rate <sup>1</sup>	%	95.6	97.6	97.7	<b>97.5</b>
<b>GHG emissions (Scope 1), by business activity</b>					
Exploration and production	million tonnes of CO <sub>2</sub> e	10.267	10.425	10.216	<b>10.836</b>
Oil refining and petrochemicals, LLC LLK-International	million tonnes of CO <sub>2</sub> e	17.635	17.802	16.397	<b>16.110</b>
Power generation	million tonnes of CO <sub>2</sub> e	12.468	11.479	9.980	<b>9.239</b>
Transportation	million tonnes of CO <sub>2</sub> e	0.078	0.091	0.111	<b>0.203</b>

**Notes.** In 2021, just as in previous periods, data on the Oil Refining and Petrochemicals business activity included information on oil refining and petrochemical entities, LLC LLK-International and LLC LUKOIL-KGPZ, with the latter recognized in LLC LUKOIL-Volgogradneftepererabotka, as on November 1, 2021 the entity was reorganized through amalgamation with LLC LUKOIL-Volgogradneftepererabotka. For more information on the boundaries of accounting for GHG emissions and indicators broken down by various criteria see the [ESG data reference book \(Appendix 9\)](#). 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.

### GHG EMISSIONS INTENSITY BY BUSINESS ACTIVITY (SCOPE 1 + SCOPE 2)

Business sector	Unit of measurement	2019	2020	2021
Exploration and production	kg of CO <sub>2</sub> e / boe	21.0	21.6	<b>19.3</b>
	kg of CO <sub>2</sub> e / MJ	3.6	3.7	<b>3.3</b>
Oil refining and petrochemicals	tonnes of CO <sub>2</sub> e / tonne of processed raw materials	0.29	0.31	<b>0.28</b>
Power generation	tonnes of CO <sub>2</sub> e / MWh of generated electrical and heat energy	0.33	0.35	<b>0.34</b>

**Notes.** Specific GHG emissions produced by oil refining and petrochemical entities have been calculated by reference to the volume of GHG emissions by refineries and petrochemical facilities (in total), net of LLC LLK-International (business activity – production of oils and lubricants). Specific GHG emissions produced by electricity generation entities have been calculated net of LLC LUKOIL-Energoseti (business activity – electric energy transmission). Increased specific GHG emissions in all business sectors in 2020 are due to the following factors: cut-back in production as a result of the COVID-19 pandemic and the need to maintain production facilities and processes in good operating condition; sophistication of production processes and advancement of refinery yields at oil refining and petrochemical entities.

<sup>1</sup> For more information see the [ESG Databook \(Appendix 9\)](#).

<sup>2</sup> In 2021, the ratio of the GHG emissions for grid-connected electricity (based on the data obtained from JSC Administrator of the Trade System of the Wholesale Power Market) was applied to Russian organizations. During 2017-2020, projected regional emission factors of the European Bank for Reconstruction and Development were used (expired in 2020).

<sup>1</sup> Data are provided within the reporting boundaries for GHG emissions.



## INTERACTION ON THE CLIMATE AGENDA

The Company monitors climate change regulation on an ongoing basis and participates in debates over standard-setting initiatives both in Russia and abroad. We place a special focus on stakeholder engagement in the context of establishing national climate change legislation and strive to harmonize Russian and international approaches.

In 2021, the Company, through public discussion of regulatory acts, was involved in shaping Russian legislation in connection with the adoption of the Federal Law No. 296-FZ dated July 2, 2021 "On Limiting Greenhouse Gas Emissions" In furtherance of

this law, by-laws are now being elaborated to specify institutional mandates, the procedure for implementing climate projects and circulation of carbon units, the content of climate reporting, and other aspects.

In dialog with governmental authorities, the Company focuses on the issues which, if successfully solved, will help improve the efficiency of climate policy to serve the interests of Russia's economy, specifically the provision of cohesive criteria, techniques and procedures, climate data digitalization and consolidation, formalization of the legal status of carbon units, and the

determination of new obligations of regulated organizations.

In 2021, work was carried out to extend cooperation on climate-related projects. An agreement for cooperation in certain areas, including the implementation of joint projects on the utilization of renewable energy, was concluded with the State Atomic Energy Corporation Rosatom. More specifically, an agreement was reached in 2021 as to the joint implementation of wind power projects with NovaWind<sup>1</sup>, one of the leading manufacturers of wind turbines and the construction of wind power plants in Russia.



<sup>1</sup> Rosatom's subsidiary.



## LUKOIL Group's best practices. Eco-friendly production close to wildlife



### LUKOIL LUBRICANTS EUROPE GMBH

In 2014, a small lubricant blending plant in Austria became part of the LUKOIL Group. It is located nearby the beautiful Lobau natural reserve in Vienna, inspiring the management and staff to make their company's business environmentally friendly. In just seven years, they managed to turn the plant into a production facility that is closer to nature.

### 'CLOSER TO NATURE' CONCEPT

The 'Closer to nature' concept is a simple one and dictates that all production issues should be solved with a view to minimizing the impact on wildlife. Integrating nature conservation and business development into the planning process gradually builds a sustainable practice, and becomes an integral part of management systems.

The production site is surrounded by a fruit orchard where one hundred local trees have been planted – they reduce carbon dioxide in the atmosphere, improve air quality and keep the plant buildings cool. On the fringe of forest areas, beehives were installed for honey-bee colonies. Bees represent an important element of the ecosystem, they restore and maintain a natural cycle of reproduction of flora species diversity. In collaboration with a landscape designer, the factory's vacant areas were transformed into green spaces to maintain natural vegetation and over 30 bird nesting boxes were installed. In addition, five sheep were given a paddock organized on small meadow plots; their main job is to keep the meadows well-trimmed. These four-legged grass mowers are streamed live on TV ([www.lukthesheep.tv](http://www.lukthesheep.tv)).

### REDUCTION OF GHG EMISSIONS

Thanks to the changes made to the system of heat and electric energy supply to the facility, a significant reduction in GHG emissions was achieved. The key change was the installation of a major photovoltaic energy system. As a result, in summer 2021 approximately 60% of energy consumption for production purposes was covered by solar power. The entity set a goal of shifting to 100% renewable energy and removing GHG emissions and radioactive

waste materials from its supply chain. On top of that, all production premises were equipped with LED fixtures. The heating system was switched from furnace oil to gas (with the gas pipeline hooked up for this purpose). To reduce GHG emissions from trucking operations, a terminal was built in the Danube harbor for product handling and shipping.



### SOLUTIONS FOR CREATING SUSTAINABLE PRODUCTS

Another line of action was seeking eco-friendly product solutions. A new way of packaging was developed in 2019 – the Bag-in-Box system. A sturdy plastic envelope (with a lubricating fluid poured in) is placed into a box made of strong corrugated cardboard. The advantages of this packaging are that it is 100% recyclable, contains 90% less plastic against other types of packaging, and produces 90% less waste. Its compact form helps improve storage efficiency, which has its advantages for small-size workshops.







# ENVIRONMENT











## KEY DEVELOPMENTS AND RESULTS IN THE REPORTING YEAR

Given that 2020 was not a model year due to a sharp decline in economic activity a result of the COVID-19 pandemic, indicator dynamics in this section of the Report are analyzed against 2019.

<p>Reduced water withdrawal across LUKOIL Group – by 1.9%, including 8.5% from surface sources.</p> <p><b>8.5%</b></p>	<p>Reduced freshwater intake across the Group –</p> <p>by <b>3.3%</b></p>	<p>A high share of clean standard-quality wastewater and wastewater treated to standard quality (98%) in total discharges by LUKOIL Group entities to surface water bodies and into the sea.</p> 
<p>The area of remediated land exceeded that of land contaminated in 2019-2021 from environmental incidents and accidents in the period.</p> 	<p>Compensatory reforestation works have been carried out on an area of</p> <p>over <b>2,000</b> hectares</p>	<p>All generated wastes have been fully disposed of.</p> 
<p>At LLC LUKOIL-Komi, the weight of pollutants contained in wastewater discharged into surface water bodies has decreased over the last three years from 701 tonnes to 0.02 tonnes; polluted (insufficiently treated) wastewater discharges have decreased from 416 to 0.03 thousand cubic meters.</p> 		

## PLANS FOR 2022 AND THE MEDIUM-TERM

<p>Implementation of LUKOIL Group's Environmental Safety Program for 2022-2024.</p> 	<p>Optimization of water consumption at LUKOIL Group entities' facilities.</p> 	<p>Reduction of polluted (insufficiently treated) wastewater discharges into water bodies.</p> 
<p>Remediation of bottom sediments containing residual contamination in the Kolva river (Republic of Komi).</p> 	<p>Continuing construction of treatment facilities at the Ukhta oil refinery.</p> 	<p>Continuing upgrade of power generation plants at the Krasnodar CHPP.</p> 
<p>Maintain specific air pollutant emissions at the 2021 level on the back of growing hydrocarbon production.</p> 	<p>Achievement of KPIs on the disposal of generated wastes, continuing disposal of wastes accumulated during the pre-privatization period.</p> 	



INTEGRATED HEALTH, SAFETY, AND ENVIRONMENTAL PROTECTION MANAGEMENT SYSTEM

Elements of the management system	Contents	Corporate documents
<b>Goals</b>	The Corporate policy establishes LUKOIL Group's goals, principles, and obligations	LUKOIL Group Policy for Health, Safety, and Environmental Protection in the 21st Century; approved by decision of the Management Committee of PJSC LUKOIL dated May 25, 2020 (Minutes No. 13) <sup>1</sup> ; Insurance Coverage Program for LUKOIL Group entities in 2022; approved by decision of the Management Committee of PJSC LUKOIL dated November 22, 2021 (Minutes No. 25)
<b>Standards</b>	Corporate standards are applicable to all LUKOIL Group entities. Safety culture improvement tools are introduced	16 corporate standards of STO 1.6 "HSE Management System" series; approved by Orders of PJSC LUKOIL
<b>Risk management</b>	The Material HSE Risks Register and the Material Environmental Issues Register of LUKOIL Group are updated on an annual basis. These are analyzed by the HSE Committee of PJSC LUKOIL and approved by the First Executive Vice President of PJSC LUKOIL	STO LUKOIL 1.6.6-2019 "HSE Management System. Management of Risks and Environmental Issues". (Order No. 133 of PJSC LUKOIL dated July 24, 2019)
<b>Key performance indicators</b>	Ensuring the Required HSE Levels at LUKOIL Group Entities annual composite indicator, comprising those related to occupational injuries and accident rates, and also the key environmental impacts (pollutant emissions and discharges, waste management), is established	Regulations on Evaluating the Key Performance Indicator "Ensuring the Required HSE Levels at LUKOIL Group Entities," as approved by Order of PJSC LUKOIL No. 196 dated December 7, 2017, as amended by Order of PJSC LUKOIL No. 83 dated April 22, 2020
<b>Certification of the management system</b>	The Integrated HSE Management System has been certified for compliance with the international standards ISO 14001:2015 and ISO 45001:2018	As at December 31, 2021, certificates issued to 44 LUKOIL Group entities were in effect (covering 81% of total LUKOIL Group headcount)
<b>Targeted programs, projects and initiatives</b>	The Program of Industrial Safety, Improvement of Labor Conditions and Occupational Safety, and Emergency Prevention and Liquidation of LUKOIL Group for 2021–2023 The Environmental Safety Program of LUKOIL Group for 2021–2023 <sup>2</sup> Research and engineering projects are undertaken as part of the R&D program.	The Programs were approved by Order of PJSC LUKOIL No. 38 dated February 20, 2021

<sup>1</sup> HSE Policy.  
<sup>2</sup> During the previous reporting period, the targeted programs for 2020–2022 were in effect.

INTEGRATED HSE MANAGEMENT SYSTEM

The Integrated System of Management of Industrial, Fire, Radiation Safety, Emergency Protection (the **Integrated HSE Management System**) has been implemented and been in effect for over 20 years now. The Integrated HSE Management System was introduced at the Company's own initiative; it is compliant with Russian legislation and best international practices and covers all LUKOIL Group entities. The following ongoing processes guarantee the robust performance of the system:

- ▶ updates to the corporate standards policy and system (once in 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 mid-term 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, report to the Management Board and the Board of Directors of PJSC LUKOIL.

**More information on the [Integrated HSE management system](#) is available on our website in the [Sustainable Development / Safety](#) section, including on the following issues: **organizational structure, liability insurance, risk management, targeted programs, efficiency, and KPI assessment.****

The Company works to continuously raise HSE awareness and competence of the Group's specialists and executives. For this purpose, annual competitions across the Group's

entities and at the corporate level of PJSC LUKOIL are held, and awards are given for the best projects. The Safety Days program, as a matter of course, covers the best environmental protection practices and also deals with other challenging issues.

Annual HSE trainings help maintain the proper level of skills and competences among employees and executives and ensure compliance with legal requirements and corporate standards. In 2021, the following training sessions were held: Environmental Safety, Environmental Legislation Updates, and Environmental Safety in Hazardous Waste Management. In total, 202 training sessions were organized for the Group's executives and 1,250<sup>1</sup> for specialists. Five executives and 54 specialists familiarized with requirements of ISO 45001 and ISO 14001.

FINANCING OF HSE TARGETED AND INVESTMENT PROGRAMS

	Unit of measurement	2019	2020	2021
<b>LUKOIL Group</b>	RUB million	<b>47,968</b>	<b>53,630</b>	<b>54,041</b>
<b>Environmental Safety Program (ESP)</b>	RUB million	<b>35,903</b>	<b>22,440</b>	<b>21,384</b>
Capital expenditures	RUB million	30,046	17,857	<b>14,337</b>
<b>Program of Industrial Safety, Improvement of Labor Conditions and Occupational Safety, and Emergency Prevention and Liquidation (ISP)</b>	RUB million	<b>12,008</b>	<b>31,161</b>	<b>32,620</b>
Cost to improve labor conditions and protect health, reduce occupational injury and occupational disease rates	RUB million	5,281	6,532	<b>7,406</b>
Cost to reduce accident, incident, fire, and emergency risks	RUB million	6,727	24,629	<b>25,214</b>
<b>R&amp;D, experimental engineering, and scientific-technical works in Russia</b>	RUB million	57	29	<b>37</b>
Environmental protection	RUB million	34	19	<b>34</b>
Industrial safety	RUB million	23	10	<b>3</b>

<sup>1</sup> One participant could receive training in several topics.



## ENVIRONMENTAL SAFETY PROGRAM

Our approach is to consistently reduce the technogenic load on the environment by introducing the best available technologies and increasing the level of automation of technological process control. To achieve this, each year environmental protection measures are acted upon within the framework of the Environmental Safety Program (ESP). 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 oil production and oil products supply facilities, and other requirements.

The LUKOIL Group Environmental Safety Program for 2021–2023<sup>1</sup> consists of nine subprograms and

includes more than 900 events; 45 Russian and foreign entities of the LUKOIL Group participate in the program.

### IN 2021, A NUMBER OF ENVIRONMENTAL MEASURES WERE IMPLEMENTED WITHIN THE ESP, INCLUDING:

- construction of an elemental sulfur production unit at the Ukhta Oil Refinery;
- upgrade of power units at the Krasnodar CHPP;
- reconstruction of treatment facilities as part of the construction of a petroleum residue recycling complex at LLC LUKOIL-Nizhegorodnefteorgsintez;
- construction of a 4-corridor aeration tank at LLC Saratovorgsintez.

## ENVIRONMENTAL IMPACT ASSESSMENT

Following statutory requirements and voluntary initiatives, based on the precautionary principle, LUKOIL assesses<sup>2</sup> and monitors the environmental impact of its production operations at all stages, from design to completion. The assessment results form an integral part of the project documentation and are later used in environmental monitoring.



The EIA procedure and the industrial environmental control (IEC) system, as well as the results of the EIA for the major projects, are described [on the website](#).



## Indicators

In 2021, the performance of environmental indicators was largely driven by the recovery of economic activities after the first waves of the COVID-19 pandemic and, as a result, the growth of oil and gas production, as well as the production of oil products and electricity. At the same

time, the volume of hydrocarbon production and refining of crude oil at the Group entities did not reach the 2019 level; therefore – and also as a result of ESP measures – absolute (gross) indicators show a moderate reduction in the volumes of withdrawal and discharge of water and emissions of pollutants

into the environment. The share of excess payments<sup>1</sup> in the total amount of compensation for adverse environmental impact in 2021 was 16.7% (2020: 13.6%). The increase in the indicator was mainly due to increased air emissions caused by the commissioning of new fields and an increase in APG flaring.

### LUKOIL GROUP'S ENVIRONMENTAL SAFETY PROGRAM INDICATORS

Indicator	Reporting boundaries	2020	Expected results	2021
APG utilization rate (%)	LUKOIL Group is within the reporting boundaries for GHG emissions	97.7	Maintaining the 95% APG utilization rate and further increasing it	97.5
Total pollutant emissions, thousand tonnes	LUKOIL Group	395	Maintaining air pollutant emissions no higher than the 2019 level (429 thousand tonnes)	425
Wastewater discharged into surface water bodies and the sea, million cubic meters	Russian entities	8.8	A further reduction in the indicator's value	8.7
Water consumption for own needs, million cubic meters	Russian entities	329	A reduction in the indicator's value <sup>2</sup>	369
Disposal of waste accumulated during the pre-privatization period, thousand tonnes	LUKOIL Group	52	To reduce the waste by 50 thousand tonnes across the entire Group in 2021-2023	25
Rehabilitation of contaminated land, hectares	Russian entities	44	About 10 hectares per year	45
Minimizing the impacts of operations of the LUKOIL Group entities on the biodiversity of vulnerable territories, including the Russian Arctic Zone	LUKOIL Group	Providing in-production environmental controls and monitoring of environmental components Identifying indicative animal species for the Biodiversity Conservation Program	Confirmation based on in-production environmental controls and monitoring of environmental components to check that the Company's activities have no significant technogenic impact on biodiversity; improvement of management mechanisms	Providing in-production environmental controls and monitoring of environmental components

more than  
**900**  
events

are included in the LUKOIL Group Environmental Safety Program

**45**

Russian and foreign entities

of the LUKOIL Group participate in the Environmental Safety Program

<sup>1</sup> During the previous reporting period, the target program for 2020-2022 was in effect.

<sup>2</sup> I.e. The Environmental Impact Assessment (EIA) procedure.

<sup>1</sup> Excess payments, inter alia, may arise due to delays in obtaining approvals and permits.

<sup>2</sup> The increase in water consumption for own needs in 2021 was caused by an increase in the condensing power generation at the Krasnodar CHPP due to an increase in demand and power production (water is used primarily for cooling of generating equipment).



## WATER RESOURCES

Water is necessary for the operations of all Group entities – from exploration and production of hydrocarbons to delivery of finished products to consumers. Oil and gas production uses water 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 entities need water to produce steam and cool the equipment of thermal power plants.


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 recycled 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.

Of the LUKOIL Group's total water use<sup>1</sup>, 85% comes from circulating and recycled water supply systems, while for the Russian Group entities this figure is 90%.

The Company analyzes issues surrounding its water use, including

in arid regions, 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 LUKOIL builds, renovates, and re-equips water treatment and wastewater treatment systems.

 The management approach to handling seawater and formation water extracted in the process of hydrocarbon production is described [on the website](#).

### OUR ACTIONS

We are focused on optimizing water consumption, first of all in arid (dry) regions, and reducing the pollution of water bodies with wastewater.

### Indicators

Water withdrawal decreased by 1.9% compared to 2019 due to optimization of production processes.

#### WATER WITHDRAWAL BY THE LUKOIL GROUP ENTITIES

	Unit of measurement	2019	2020	2021
<b>1. Water withdrawal and retrieval (1 = 1.1 + 1.2 + 1.3)</b>	million cubic meters	<b>694</b>	<b>611</b>	<b>681</b>
Sea water	million cubic meters	62	58	45
Fresh water	million cubic meters	343	291	332
Other water (mineralized, waste water, centralized water supply, etc.)	million cubic meters	290	263	305
<b>Water withdrawn by sources</b>				
1.1. from surface sources	million cubic meters	341	286	312
1.2. from underground sources	million cubic meters	105	114	123
1.3. from other sources	million cubic meters	249	212	247

**Notes.** Hereinafter, in the Environment section, the reporting boundaries for foreign organizations include the oil refineries LUKOIL Neftohim Burgas AD, PETROTEL-LUKOIL S.A., ISAB S.r.l., the oil and gas production company LUKOIL Uzbekistan Operating Company, oil product supply entities IOOO LUKOIL Belorussia and LUKOIL-BULGARIA EOOD. Data on total water withdrawal exclude water produced as a by-product with hydrocarbons and subsequently used for formation pressure maintenance (FPM) purposes. Water withdrawal from underground sources includes water produced as a by-product with hydrocarbons and subsequently directed into subsurface lost circulation horizons. Water withdrawal from other sources includes water from centralized water supply sources, and also wastewater received and used by the Group's entities. More details are provided in the [ESG Databook \(see Appendix 9\)](#).

<sup>1</sup> Total water use means water consumption for own needs and storage/use of water in circulating and recycled water supply systems.



#### WATER USE FOR OWN NEEDS BY THE LUKOIL GROUP BY BUSINESS ACTIVITY

	Unit of measurement	2020	2021
Exploration and Production	million cubic meters	105	102
Oil Refining and Petrochemicals, LLC LLK-International	million cubic meters	249	253
Power Generation	million cubic meters	188	232
Oil Product Supply Entities and Transportation, LLC LUKOIL-AERO	million cubic meters	1.2	1.3

**Notes.** More details are provided in the [ESG Databook \(see Appendix 9\)](#). In 2021, the dynamics of changes in the indicators in the Power Generation business sector were caused by the increase in water consumption by LLC LUKOIL-Kubanenergo, primarily for equipment cooling; in 2019 it was attributable to a decrease in production due to the warm winter and several technological maintenance activities conducted by LLC LUKOIL-Kubanenergo and LLC LUKOIL-Astrakhanenergo.

Water produced as by-product with hydrocarbons and subsequently used for formation pressure maintenance by the LUKOIL Group entities, million cubic meters





**ARID REGIONS**

Most of our Russian entities operate in regions with ample freshwater resources, with the exception of regions with a high-density population and a concentration of economic activity to the south of the country. These territories have medium to low values of the Baseline Water Stress Indicator<sup>1</sup>. However, we consider five regions to be arid in the national context, based on Russian sources<sup>2</sup>. The Baseline Water Stress Indicator in three countries outside of Russia has high and very high levels, and the availability of freshwater supply in those territories may worsen due to climate change.

**SIGNIFICANT REGIONS<sup>3</sup> 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 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 regions.

The share of freshwater taken by the Russian Group entities in arid regions in Russia in accordance with the permits of the authorized state agencies is 45% of total water withdrawal in Russia. Abroad, the same indicator is 2.6%.

As part of its charitable activity, the Company organizes improvement projects in the infrastructure of public utilities, and supplies drinking water to residents of arid countries (in the areas of LUKOIL's production activities).

**IMPROVED DRINKING WATER SUPPLY IN MEXICO**

A project to improve water supply and drinking water quality was completed in the municipality of Paraiso, Tabasco. The project included geophysical studies at five wells in the city of Paraiso and the modernization of wastewater treatment facilities. As a result, local residents enjoy cleaner drinking water.

**FRESH WATER**

In 2021, freshwater accounted for 49% of the total water withdrawal by LUKOIL entities.

The Russian Group entities accounted for 68% (2020: 69%). The Group supplies almost all of the water from its own water intake from the surface and underground reservoirs. Water is mainly withdrawn from the Ob, Pechora, Volga, Don, and Kuban river basins on the basis of permits and within established quotas. The main focus of environmental activities on the rational use of water is the reduction of production losses.

The share of freshwater withdrawals by the foreign Group entities was 9% (2020: also 9%) of the total water withdrawal; the water comes mainly from natural surface sources.

**WATER PROTECTION ZONES**

LUKOIL complies with the legal requirements regarding production activities conducted close to water protection zones<sup>4</sup>. The Group entities do not place or store chemical, explosive, toxic or other active substances or production waste in these areas. It is not permissible to move or park vehicles outside of designated places with the appropriate equipment.

Pipelines crossing water bodies are built above ground or laid under the bottom of a water body using directional drilling. Water areas and the shorelines of water bodies are not disturbed when laying utilities. Wells are also drilled in the area of water bodies using the directional method, and the site and sludge pits are located outside the water protection zone.

Reinforced earth berms are constructed around the facilities located in the floodplain flood zones above the maximum water elevation to protect them from waterlogging during spring floods.

Systematic visual control and monitoring are performed at all sites, and anti-flooding measures are taken.

<sup>1</sup> 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 on 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 live-stock 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.

<sup>2</sup> National Report on the Condition and Use of Water Resources in the Russian Federation, 2018, p. 12.

<sup>3</sup> 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. In 2021, the methodology for determining significant arid regions was revised: the list of the regions was adjusted to take into account the reporting boundaries of environmental indicators.

<sup>4</sup> Water protection zones are territories in respect of which a special regime for the implementation of business and other activities is established to prevent pollution of a water body or reduction of its water level and to preserve aquatic ecosystems.



**Best practices of the LUKOIL Group.  
Clean water of Lake Mandra (Oil Refinery in Bulgaria)**

In 2021, the Oil Refinery in Bulgaria developed the LIFE WATEROIL environmental project, which will improve the ecological situation in the Burgas region and reduce the use of freshwater from Lake Mandra. The project was approved by the European Agency CINEA<sup>1</sup> and part-financed under the LIFE program of the European Union. The project started in 2022 and will be completed in 2024.

Lake Mandra, which became freshwater after the construction of the dam in 1963, is part of Bulgaria's largest wetland system, consisting of four lakes. More than 200 species of birds live and/or nest there; the VIA PONTICA, an Eastern European route for migrating birds, goes over the lake. All four lakes are part of the protected area.

The idea of the project is based on the implementation of a more efficient wastewater treatment method at the oil refinery, which will increase the share of reused

water. According to preliminary estimates, the project will reduce freshwater consumption from Lake Mandra by more than 400 thousand cubic meters per year.

Bio-activators are planned to be used to treat effluents, which decompose and neutralize chemical substances (hydrogen sulfide, dissolved hydrocarbons). There are plans for a new closed pipeline to be built to transport sulfide-containing wastewater. This solution will make it possible to reduce the content of hydrogen sulfide in wastewater supplied to the Central Treatment Facilities by more than 90%.

The partners of the oil refinery in the implementation of the project are the Italian research and development company in the field of applied biotechnology EUROVIX SPA, Prof. Dr. Assen Zlatarov University – Burgas and the Municipality of Burgas.



<sup>1</sup> CINEA - The European Climate, Infrastructure and Environment Executive Agency.



### WASTEWATER REMOVAL AND WASTEWATER QUALITY

The Company constantly monitors 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 in-production environmental controls.

Wastewater generated from 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.

#### Handling of effluents in oil refining and petrochemicals

Effluents from oil refineries and petrochemical facilities undergo several stages of treatment. At the stage of mechanical treatment, large admixtures and suspensions, as well as some oil products, are separated. Physical and chemical methods are the most effective for the treatment of wastewater from liquid admixtures. In the process of biological treatment, biological oxidation and sedimentation of activated sludge occurs. After the completion of all stages, wastewater is placed in biological ponds under

conditions close to the natural cleaning processes in natural water bodies. UV disinfection of wastewater is the final stage of effluent treatment before its discharge into a natural source. This stage involves the destruction of pathogenic microflora to acceptable levels.

#### Indicators

In 2021, the share of clean and treated water as per the current standards for the total volume of discharges into surface water bodies and the sea remained high at 97.9% (2020: 97.5%). In 2020, the volume of contaminated discharges decreased due to the commissioning of treatment facilities at Yareganefit (LLC LUKOIL-Komi) and the second stage at the Ukhta Oil Refinery.

#### WATER DISCHARGE INTO WATER BODIES BY WASTEWATER QUALITY ACROSS THE LUKOIL GROUP

	Unit of measurement	2019	2020	2021
<b>Water discharge into surface water bodies</b>	<b>million cubic meters</b>	<b>217</b>	<b>162</b>	<b>210</b>
· clean standard-quality wastewater	million cubic meters	185	126	<b>173</b>
· wastewater treated to standard quality	million cubic meters	20	27	<b>29</b>
· polluted wastewater	million cubic meters	11	9	<b>8</b>
<b>Water discharge into the sea</b>	<b>million cubic meters</b>	<b>221</b>	<b>188</b>	<b>203</b>
· clean standard-quality wastewater	million cubic meters	221	188	<b>202</b>
· wastewater treated to standard quality	million cubic meters	0.4	0.2	<b>0.0</b>
· polluted wastewater	million cubic meters	0.2	0.2	<b>0.4</b>

**Notes.** Polluted water is insufficiently treated water and wastewater that is not treated. More details are provided in the [ESG Databook \(see Appendix 9\)](#). The increase in the amount of contaminate water released into the sea in 2021 is due to its formation in the foreign entity of the Group.



### EMISSIONS

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

#### THE KEY INITIATIVES AIMED AT REDUCING POLLUTANT EMISSIONS INCLUDE:

- equipment replacement or upgrade, application of the best available technologies at production sites
- application of emission capture and treatment systems
- upgrade and construction of new generation capacities in energy generating entities with improved automated systems for regulating combustion processes.

#### Indicators

In 2021, emissions from the Group entities decreased slightly compared to 2019 (by 0.9%) due to the measures taken to clean up production gases and the fact that production volumes did not reach the 2019 level in 2021. Oil and gas production companies in Russia account for the majority of emissions (77% in 2021 and 2020) due to APG flaring and emissions from process furnaces of oil treatment facilities. The increase in emissions of sulfur and carbon oxides, solid substances and volatile organic compounds (VOC) is mainly due to an increase in APG flaring.

#### AIR EMISSIONS (NET OF CO<sub>2</sub>) AT LUKOIL GROUP

	Unit of measurement	2019	2020	2021
<b>Total pollutant emissions</b>	<b>thousand tonnes</b>	<b>429</b>	<b>395</b>	<b>425</b>
NO <sub>x</sub> emissions	thousand tonnes	50	45	<b>42</b>
SO <sub>2</sub> emissions	thousand tonnes	41	31	<b>35</b>
Solid particle discharges	thousand tonnes	15	14	<b>18</b>
CO emissions	thousand tonnes	155	143	<b>177</b>
Hydrocarbons emissions	thousand tonnes	61	49	<b>37</b>
Volatile organic compounds (VOC) emissions	thousand tonnes	106	111	<b>116</b>
Emissions of other pollutants	thousand tonnes	2	2	<b>1</b>

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



## WASTE AND LAND RECLAMATION

Our main approach to industrial waste management lies in preventing its build-up at LUKOIL Group facilities. To achieve this, the waste management KPI was introduced in Russian entities (the volume of waste generation has to match the volume of waste disposal<sup>1</sup>). 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):

60% is drilling waste and used drilling mud generated during drilling and well operation. These are mostly recycled<sup>2</sup>. Their volumes depend on the extent of drilling and repair work, and they are mainly disposed

of by contractors. Pitless drilling technology is used in a number of regions, where the drilling waste generated is not stored or landfilled at drilling sites but is sent for disposal.

#### WASTE MANAGEMENT BY BUSINESS ACTIVITIES OF THE LUKOIL GROUP ENTITIES

Production waste category	Waste treatment and use methods
<b>Oil and gas production</b>	The bulk consists of drilling waste, solid oil-contaminated sludge, and oil-contaminated liquids.
Drilling waste	Transferred to licensed organizations with their own disposal technologies. After treatment, an inert material is obtained from the waste, which is used in the construction of roads, well pads, and in land reclamation.
Solid oil-contaminated sludge	Accumulated at specialized landfills for further neutralization, mainly using the thermal method at certified units. Direct steam and biological treatment methods are also used.
Liquid oil-contaminated wastes	They are disposed of at oil treatment facilities, mixing with the flow of production wells.
Other	Transferred to specialized organizations for disposal. Solid household waste is transferred to regional operators.
<b>Oil refining</b>	The majority is construction waste generated during the dismantling or construction/reconstruction of production facilities and equipment.
	100% of waste generated is removed: reused, transferred to specialized organizations with licenses for subsequent disposal, neutralization, placement and/or landfilling, or is disposed of at the entities' own sites.

### HAZARDOUS WASTE MANAGEMENT

The share of hazardous wastes (classes I-III) in the Russian LUKOIL Group entities was 2.7% as at the end of 2021. Classes I and II wastes containing substances dangerous to human life and health and cause

permanent changes in ecosystems are subject to mandatory disposal by specialized organizations. Hazard Class III (moderate) waste includes a portion of oil-containing waste (with an oil product content above 15%), which is also subject to mandatory disposal. We monitor the quality of waste

management operations performed by contractors by examining how they handle waste, the state of the production control system, and the availability of adequate resources to fulfill their contractual obligations.

### Indicators

In 2021, the volume of generated waste decreased compared to 2020 but increased compared to 2019 due to an increase in drilling volumes in accordance with the work schedule. In 2020, the production of oil-contaminated (hazardous) wastes grew at the Bulgarian oil refinery due to the scheduled cleaning of tanks and units and at the Nizhny Novgorod Oil Refinery in connection with reconstruction and construction work. In 2021, all works at the two refineries were completed.

#### WASTE MANAGEMENT AT THE LUKOIL GROUP ENTITIES

	Unit of measurement	2019	2020	2021
Waste generated during the reporting year	thousand tonnes	1,783	2,178	<b>2,065</b>
Waste received from third parties	thousand tonnes	5	4	<b>6</b>
Waste used, neutralized, and transferred to specialized entities, as well as landfill waste	thousand tonnes	1,751	2,217	<b>2,020</b>
Including landfill waste	thousand tonnes			<b>72</b>
Waste at the end of the reporting year	thousand tonnes	947	912	<b>964</b>

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

#### WASTE AT THE END OF THE REPORTING YEAR BY HAZARD CLASS AT THE LUKOIL GROUP ENTITIES

	Unit of measurement	2019	2020	2021
<b>Russian entities</b>	thousand tonnes	920	884	<b>938</b>
Hazard Class I	thousand tonnes	0.002	0.0016	<b>0.001</b>
Hazard Class II	thousand tonnes	0.0043	0.0089	<b>0.004</b>
Percentage of waste of Hazard Classes I and II	%	0.0007	0.0012	<b>0.0005</b>
Hazard Class III (incl. oil-containing)	thousand tonnes	21	21	<b>25</b>
Percentage of waste of Hazard Classes I, II, and III	%	2.3	2.4	<b>2.7</b>
<b>TOTAL Hazardous waste (Classes I, II, and III)</b>	thousand tonnes	<b>21</b>	<b>21</b>	<b>25</b>
Hazard Class IV	thousand tonnes	868	829	<b>878</b>
Hazard Class V	thousand tonnes	31	34	<b>35</b>
<b>TOTAL non-hazardous and low-hazard waste (Classes IV and V)</b>	thousand tonnes	<b>899</b>	<b>863</b>	<b>913</b>
<b>Foreign entities</b>	thousand tonnes		28	<b>26</b>
Hazardous	thousand tonnes		24	<b>25</b>
Non-hazardous	thousand tonnes		3.5	<b>0.9</b>

<sup>1</sup> 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.

<sup>2</sup> Hereinafter, the term "waste disposal" is used to mean "use, neutralization, landfilling, or handing over to a specialized organization for these purposes."



**PRE-PRIVATIZATION WASTE MANAGEMENT**

Before some of the oil producing and refining assets in Russia and Eastern Europe were privatized, significant volumes of oil-containing waste (oil sludge in special sludge collectors) had accumulated at production facilities. The Company refers to this as "pre-privatization waste."

The Company disposes of this waste at its own expense in Russia. As at the end of 2021, this waste was fully processed in LLC LUKOIL-West Siberia, LLC RITEK, and the Volgograd Oil Refinery in Russia. The waste is still accumulated at the Perm and Ukhta refineries.

In Bulgaria, according to national legislation, the state is the owner of this waste, and therefore it is disposed of using government funding. The Oil Refinery in Bulgaria continues to operate on schedule and in compliance with government funding.

**Indicators**

In 2021, the volume of liquidated waste from the pre-privatization period at the Russian entities decreased due to the completion of the full disposal of accumulated waste at the Volgograd Oil Refinery. Starting from 2021, the scope of work is determined by the schedule for the Perm and Ukhta Oil Refineries.

PRE-PRIVATIZATION WASTE				
	Unit of measurement	2019	2020	2021
<b>Waste eliminated in the reporting year</b>				
LUKOIL Group	thousand tonnes	69	52	25
Russian entities	thousand tonnes	51	39	3
Foreign entities	thousand tonnes	18	13	22
<b>Waste at the end of the reporting year</b>				
LUKOIL Group	thousand tonnes	601	549	523
Russian entities	thousand tonnes	223	184	180
Foreign entities	thousand tonnes	378	365	343

**LAND RESOURCES**

The main impact on land resources is caused by oil production, oil refining, and transportation activities. Remediation of oil-contaminated land is carried out by LUKOIL Group entities in full compliance with the legislation of the countries where they operate. In the event of a spill of oil, oil products

or formation water, after performing work to eliminate the cause of the incident and its main consequences, the contaminated land is remediated.

**Land remediation stages**

Specialized organizations carry out the entire scope of activities on reclamation of oil-contaminated

land once remediation projects are approved and duly agreed upon. The work comprises the following stages:

- ▶ technical (collecting as many pollutants as possible and replacing contaminated soil, applying oil-oxidizing biopreparations, loosening the soil for better aeration);
- ▶ biological (sowing seeds or seedlings, fertilizing).

Remediation may involve completely removing the contaminated layer, which is moved to specialized bioremediation sites, while clean soil is brought to the reclaimed area for biological remediation.

If the area of contamination is significant, the microbiological decomposition of oil at the spill site is the most effective method to use: once the content of hydrocarbons in the soil has been reduced to a low level, the restored areas are replanted for phytoremediation<sup>1</sup> of the land. If the

degree of contamination is average, plant cover of the site takes two years, bringing the entire remediation process to two-three years.

After the remediation, the respective state authorities inspect the reclaimed areas for compliance with the established criteria.

**Indicators**

In 2021, remediation work was carried out at LLC LUKOIL-West Siberia and LLC LUKOIL-Komi, including remediation of a forest area at the Usinskoye field (Komi Republic) contaminated with formation water. The area of land reclaimed in 2019-2021 exceeded the area of land contaminated as a result of incidents and accidents during this period.

over **2 thousand hectares of forest** were planted in 2021. The Company carries out compensatory reforestation work in a number of Russian regions.

DYNAMICS OF FORMATION AND REMEDIATION OF CONTAMINATED LAND, HECTARES				
	Unit of measurement	2019	2020	2021
<b>Land contaminated during the reporting year</b>				
LUKOIL Group	hectares	40	58	38
Russian entities	hectares	40	58	38
Foreign entities	hectares	0	0	0
<b>Land remediated during the reporting year</b>				
LUKOIL Group	hectares	57	44	49
Russian entities	hectares	57	44	45
Foreign entities	hectares	0	0	4
<b>Contaminated land area at the end of the reporting year</b>				
LUKOIL Group	hectares	46	60	49
Russian entities	hectares	42	56	49
Foreign entities	hectares	4	4	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 compared to the previously published data due to the fact that the investigation by the forensic commission for the case of a bottom water spill that occurred in 2019 in the Komi Republic was completed in 2021.

<sup>1</sup> Phytoremediation – restoration of land using plants.





## 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. That is why we focus on the principal risks associated with a potential reduction in biodiversity that arise from hydrocarbon exploration and production activities and the operation of transportation systems, especially in offshore projects.

Our approach is to preserve the natural biosystem diversity and to ensure 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.

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 biodiversity management system and the measures taken by the Company is given in the brochure [Biodiversity Conservation](#).



### SAIGA

Since 2020, the HSE Program has included measures 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 reserves of the Republic of Kalmykia and the Astrakhan region and WWF Russia experts.



### CASPIAN SEAL

The Soul of the Caspian project for the study and conservation of the Caspian seal has been ongoing for several years, with LUKOIL its main partner. The Caspian seal is endemic<sup>1</sup> to the Caspian Sea, inhabits its entire water area and can be considered an indicator species of the state of the ecosystem. In 2020, this species was included in the Red Book of the Russian Federation, while many issues remain little studied.

In 2021, a research expedition was held with the participation of scientists of the Academy of Sciences, employees of the Clean Seas Foundation and the Astrakhan Nature Reserve. During aerial observations, the only seal rookery on Maly Zhemchuzhny Island was discovered. Animal studies were conducted throughout the expedition, with five seals tagged with satellite tags and then released into the wild. The results of the expedition were presented at a roundtable discussion.

<sup>1</sup> Endemics are species, genera, families, or other taxa of animals and plants that inhabit a relatively limited range (geographic area).



# INDUSTRIAL SAFETY



## KEY DEVELOPMENTS AND RESULTS IN THE REPORTING YEAR

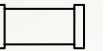
The positive trend of the share of corrosion-resistant pipelines was maintained.



The number of failures on pipelines in service less than five years was reduced due to increased interaction with pipe suppliers.



The possibility of using polymer-reinforced pipes is being studied, testing is being carried out.

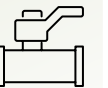


## PLANS FOR 2022 AND THE MEDIUM-TERM

Implementation of the Program of Industrial Safety, Improvement of Labor Conditions and Occupational Safety, and Emergency Prevention and Liquidation of LUKOIL Group entities for 2022-2024 and implementation by Russian entities of the Renovation and Technical Re-equipment of Pipeline Transport Facilities program.



Implementation of measures to liquidate old mothballed sites and replace oilfield pipelines.



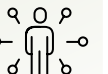
Continued installation of oil leak detection systems in the Komi Republic.



Continued implementation of predictive analytics to monitor the technical condition of critical equipment at refineries.



Implementation of information technologies for personnel health monitoring, including intelligent video analytics.





## THE PROGRAM OF INDUSTRIAL SAFETY AND OCCUPATIONAL SAFETY

Any production activity is not free from risks and can therefore potentially cause damage to territories, residents, and the environment. We cannot prevent every incident, but we recognize our responsibility and apply comprehensive measures to mitigate risks and prevent accidents and emergencies<sup>1</sup> in accordance with law and on the basis of voluntary commitments undertaken by the Company.

### OUR PRIORITIES

- 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.

To achieve corporate goals, the Group entities take all available measures and practicable measures thanks to the stable functioning of the Integrated HSE Management System and the implementation of annual activities of [The Program of Industrial Safety and Occupational Safety \(ISP\)](#)<sup>2</sup>. It is mandatory that we 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 our Russian entities 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. For these purposes, Emergency Response Teams<sup>3</sup> have been set up. The total number of responders exceeds two thousand people, some of whom are stationed directly at production facilities.

In 2021, as part of the ISP, measures were taken to increase the preparedness of employees to prevent and liquidate incidents caused by oil spills and blowouts, which include the following:

- ▶ certification of one professional and 15 outsourced ERT (a total of 800 emergency response workers from 17 LUKOIL Group entities);
- ▶ drills to eliminate possible accidents with the risk of severe consequences;



A description of the system of measures to prevent oil and oil products spills and emergencies is presented on the website in the [Sustainable Development/ 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.



- ▶ cooperation under agreements with the Ministry of the Russian Federation for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters and Rostekhnadzor on the development of information exchange and scientific and technical support.

To maintain the management bodies' preparedness, strength, and ability to respond to possible accidents (emergencies), LUKOIL Group entities conducted drills to practice relevant skills, including the localization and mitigation of the consequences of simulated oil and oil product spills.

## Safety tools

The Company continues to implement automation tools in its daily operations to improve industrial safety. Mobile inspection and control systems for production equipment have started to be used in the energy industry organizations. The systems are designed to automate the main production operations that are repeatedly performed by employees during the inspection of production equipment and technological facilities.

The diagnostic tool is a vibration pen and a smartphone for transmitting data to the server. Special tags are attached to the equipment. An employee scans the tag with a smartphone, and then the diagnostic algorithm and measurement sequence are downloaded to the smartphone. With the help of a vibration pen, the vibration and temperature of the operating equipment are measured. The employee responsible for the state of industrial safety has remote access to the results of inspections and can analyze changes in equipment parameters to timely fix a defect and make decisions on carrying out repairs.



<sup>1</sup> 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).

<sup>2</sup> Transportation safety issues (except for pipeline system) are not significant for LUKOIL's operations as they apply to a small volume of traffic (which includes the personnel transfers and transportation of fuel by motor vehicles for retailing) and are taken into account in the corporate occupational safety system. The bulk of products is supplied to foreign and domestic customers through the transportation systems of Transneft and Russian Railways, as well as by marine and river tankers of third-party carriers. LUKOIL does not possess own rolling stock and tanker fleet.

<sup>3</sup> Establishing in-house emergency response teams and contracting professional response teams is regulated by the legislation of the Russian Federation.



## RELIABILITY PIPELINE SYSTEM 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 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.

### MANAGEMENT

The [Reliability management system for oilfield and mainline pipelines](#) is based on the requirements of the legislation of the Russian Federation, federal regulations and rules, as well as corporate standards and regulations, and is part of the Integrated HSE Management System<sup>1</sup>. The Company focuses on the consistent maintenance and stabilization of the system and reducing pipeline accidents as per the best global practices. All cases of pipeline integrity violations are recorded, the causes are analyzed, and solutions are sought that can reliably deliver a result.

Planning and implementation of measures is being performed as part of the Renovation and Technical Re-equipment of Pipeline Transport Facilities investment program, which is implemented in every Russian oil and gas producer.

These measures are crucial for minimizing the risk of accidents. At the same time, other underlying causes, such as human error during construction, maintenance, and repair activities performed by

service organizations, the integrity of other process equipment, etc., also influence the overall accident results. For this reason, we combine measures to improve the reliability of the pipeline system with steps to ensure the safety of production facilities and contractor responsibility.

The pipeline reliability management system and the applied methods are regularly improved. The principal source of expertise and implemented changes is the activities of LUKOIL's Improvement of the Oilfield Pipe and Tubing Reliability Network Group.

**A description of the pipeline reliability management system is presented on the website in the [Sustainable Development / Safety / Improvement of the reliability of the pipeline system](#) section, including the main management methods and measures.**

### NEW APPROACHES TO IMPROVING THE RELIABILITY OF PIPELINES

#### 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 2021, with the involvement of PJSC LUKOIL specialists, a national standard<sup>2</sup> was developed that

regulates the basic requirements on raw and other materials that can be used to produce such pipes, as well as the methods for their testing. As a next step, it is planned that a national standard on the design, installation and operation of pipelines from flexible polymer pipes will be developed in 2022. Approval of the document will make it possible to use these products in the oil and gas industry after 2023.

In 2021, the prototypes of polymer pipes were successfully launched and tested after six months of controlled operation at fields:

- ▶ GARANT and ANACONDA pipes produced from raw materials of LLC Stavrolen have been tested at the facilities of the Yagerskoe field of LLC LUKOIL-Komi (the temperature regime of the transported medium was 80 °C). The initial results confirmed their potential for use in the conditions of this deposit;
- ▶ GARANT pipes have been tested at the Severo-Romanovskoye field of LLC RITEK, where observations continue.

In accordance with the Company's Environmental Policy, the specialists of PJSC LUKOIL and the Group entities analyzed the full life cycle of polymer pipes, including the decommissioning stage. In 2021, a corporate document titled Main Technical Solutions of the Project to Establish the Production of Polymer-Reinforced Pipes was developed, which defines the technology for their disposal by thermal destruction (decomposition into low molecular weight components without access to oxygen with the formation of hazard class IV ash).

### Oil leak detection systems

After testing in 2018-2019, the implementation of oil leak detection systems started in 2020. When these systems are installed along vulnerable sections of pipelines, they provide early detection of even minor oil leaks and enable a response within two hours.

Four of these systems are already in use in the Komi Republic. In 2021, their number increased: the fifth system was installed on the Yarega Oil Treatment Plant-Ukhta Oil Delivery and Acceptance Point pipeline. 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 to the oil leak detection systems, self-pressure stabilizers that prevent fractures resulting from internal hydraulic shock are installed at potentially hazardous sections.

In 2021, four self-pressure stabilizers were installed on the RITEK inter-field pipeline.

### Indicators

In 2021, the share of pipeline replacement under the reconstruction program was 2.5% of the total fleet, exceeding the planned figures by 121 km, while the replacement of water pipelines also increased and reached 2.95% of the total fleet. The inhibitor protection coverage increased by 1,001 km to 5,780 km.

The positive trend of the "Share of corrosion-resistant pipelines" indicator was maintained (the indicator increased from 32.2% in 2020 to 34.2% of the total fleet in 2021). The Company applies an approach according to which only corrosion-resistant pipes are used when replacing corroded sections of pipelines. In addition, since 2016, the construction and reconstruction of high-pressure water pipelines has been carried out using only corrosion-resistant pipes.

In 2021, a 5% reduction in failures on pipelines in service for up to five years was recorded due to expanded inspection control at pipe manufacturers and increased warranty periods in service contracts for pipeline construction, repair, and reconstruction.

The above measures ensure the maintenance of positive dynamics of the pipeline system reliability indicator. However, there was no improvement in oil spill rates in 2021, mainly due to a major accident at the Oshskoye field. A detailed description of the situation and the actions taken is given in the [Komi Republic case study](#) and in [Appendix 4](#).

### Percentage of corrosion-resistant pipelines, %



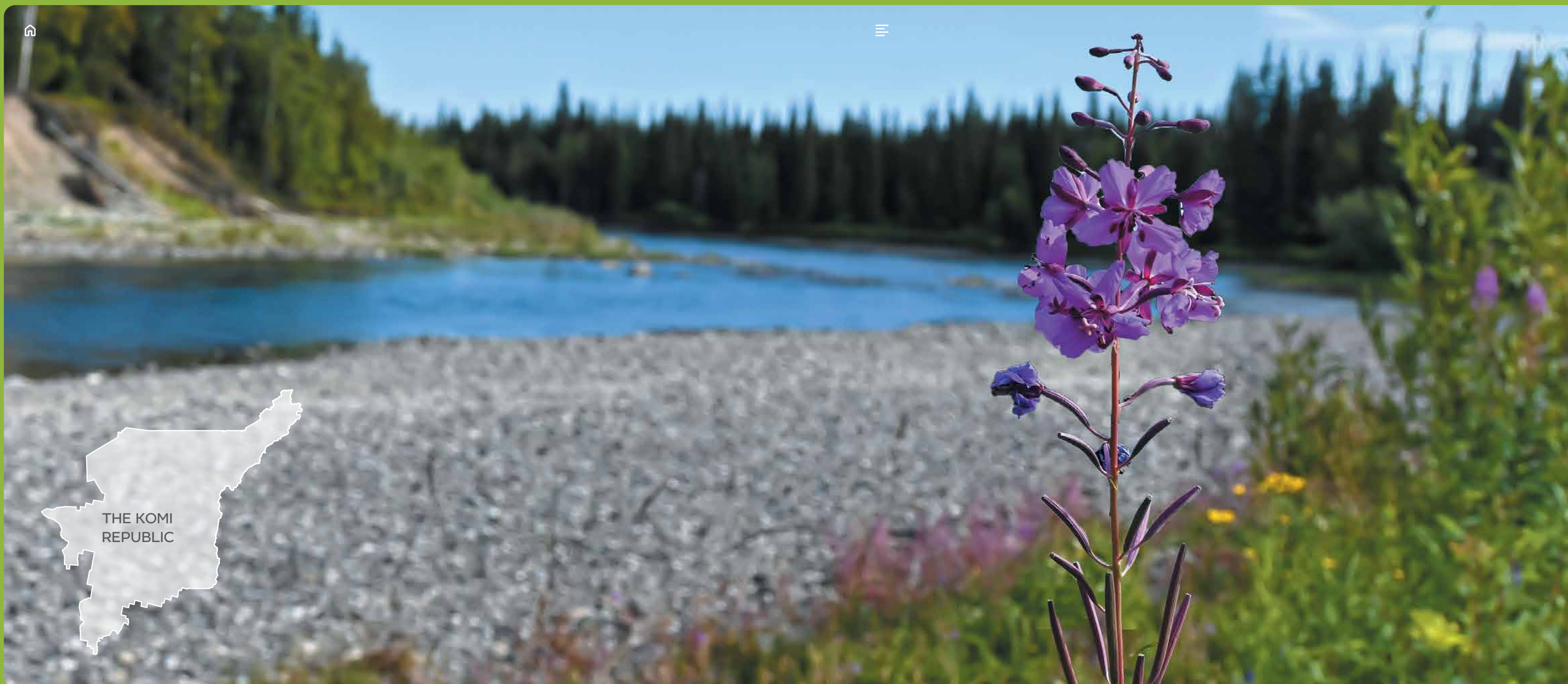
### INDICATORS OF OIL SPILLS IN THE LUKOIL GROUP'S RUSSIAN ENTITIES

	Unit of measurement	2019	2020	2021
Volume of oil spilled in accidents	tonnes	16	43	<b>73</b>
Including resulting from significant spills	tonnes	0	6	<b>71</b>
Number of significant spills	incidents	0	4	<b>4</b>
Specific coefficient of spills	kg of spilled oil per 1,000 tonnes of extracted oil and gas condensate	0.2	0.6	<b>0.97</b>
<b>Spills of other substances</b>				
Combustible-lubricative materials (oil products)	tonnes	0	0.6	<b>0</b>

**Notes.** Significant spills are spills into water bodies of any volume, as well as emergency spills on land of more than 10 tonnes with environmental consequences.

<sup>1</sup> The information in this section pertains only to the Russian entities of LUKOIL Group, unless otherwise stated.

<sup>2</sup> GOST R 59834-2021 "Oilfield pipelines. Flexible polymer-reinforced pipes and fittings to them. General technical specifications".



# 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 (NAA). The entity includes territorial production enterprises (TPE) LUKOIL-Usinskneftegaz, LUKOIL-Ukhtaneftegaz, LUKOIL-Severneftegaz, the Yareganefit oil and mines division, 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 introduces 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.

## GENERAL INFORMATION ON THE ACCIDENT

On May 11, 2021 at the Oshskoe field oil leak on the shoreline was noticed, 300 meters from the Kolva River, on the border of the NAA and the Komi Republic. Pursuant to the Russian Federation legislation, the incident was swiftly reported to the Unified Duty and Dispatch Service of the NAA and the Central Dispatch Department of PJSC LUKOIL (CDD) for relaying to all senior management in accordance with the notification chart. The President of PJSC LUKOIL took the situation under personal control on May 11; the progress of the emergency response was reported to him daily by the CDD. Information on the accident was also reported to the regional bodies of Rostekhnadzor, Rosprirodnnadzor and the Chief Directorate of EMERCOM of Russia for the NAA. The cause of the accident was the depressurization of an oil pipeline used to transport oil from the Oshskoe field wells to the Kharyaga terminal. The inspection of the damaged section of the pipeline

found defects in the internal surface caused by the corrosive effect of the transported liquid and complicated by the presence of aggressive carbon dioxide compounds. Moreover, there were deviations from the parameters recommended by technical standards in the microstructure and chemical composition of the pipe metal and the weld made by the contractor during the pipeline's construction in 2010. The organizational cause was the insufficient scope of work to inspect the pipeline route and identify factors that pose a threat to its safety and reliability. From August to September, the state commissions of the Komi Republic and the NAA conducted six field inspections of the quality of water clean-up works. From October 5 to 8, the Interdepartmental Commission of the Komi Republic conducted an inspection from a helicopter and on the site. The commission concluded that the works on eliminating the spill's consequences had been performed in full, and the results met legislative requirements.

After the Interdepartmental Commission accepted the results of the works, the scientists of the V.V. Dokuchaev Soil Institute continued monitoring the state of territories and water quality in the Kolva River.

### THE FOLLOWING WORKS WERE PLANNED FOR 2022:

- reclamation of the land in the area near the culvert crossing;
- inspection of the entire water area of the Kolva River and its shoreline using UAVs and helicopters;
- additional water surface clean-up and reclamation of shorelines.

For a detailed description of works' progress to eliminate consequences of the spill, see [Appendix 4](#).

## DEVELOPMENTS IN MANAGEMENT SYSTEM

Based on the results of official and internal investigations, the Company made a number of organizational decisions, and the security management systems were modified in all the Russian oil and gas production entities.

- In June 2021, the Action plan on reducing environmental risks during the oil field pipelines of the LUKOIL Group entities operations was approved. Reconstruction of water crossings (pipelines), construction/reconstruction of sludge processing sites and treatment facilities, and other measures were planned.
- Measures for the further operation, sale or liquidation of mothballed vessel equipment (tanks) were approved.
- Taking into account the lessons learned, decisions were made to develop or update a number of corporate local regulations governing industrial safety issues, including design, construction, and operation standards and regulations on mothballing and disposal of infield and mainline pipelines; inspection control at factories producing oil field equipment and other.

- In 2021, an additional safety assessment was held of all existing culvert crossings through water barriers, resulting in sections of pipelines being included in the reconstruction and repair priority measures plan for the period up to 2024.
- At the meeting of the HSE Committee of PJSC LUKOIL, a number of priority measures were identified that were included in the ISP for 2022-2024.

To prevent such incidents in the future, LLC LUKOIL-Komi has developed set of measures.

### Diagnostics and replacement of pipelines.

It was decided to increase of replacement (reconstruction and repair) of pipelines including pipes that transport corrosive liquids. The reconstruction plans include 130 crossings across the Laya, Kolva rivers, and nameless streams.

### Corrosion and other types of monitoring.

Corrosion monitoring of production facilities and inhibitor treatment is performed at LLC LUKOIL-Komi on an ongoing basis to increase the operating life and reliability of steel pipelines. In addition, the Group's research and design entity (LLC LUKOIL-Engineering) selects the most powerful corrosion inhibitors and constantly analyzes their effectiveness. New innovative protective coatings, welded seam protection systems, and new types of pipes are selected and tested.

### Air and ground patrols.

To increase the speed and accuracy of assessing the state of pipeline transport, the scope of inspection of pipelines and industrial infrastructure facilities using UAVs was expanded. In 2021, UAVs flew around 266 thousand km of infield pipelines (2020: 116 thousand km). The monitoring covers 100% of the main pipelines, and flights are performed every week. In order to improve the overall level of industrial and environmental safety, from July 2021 the Yareganeft Oil Mining Enterprise and Ukhta Gas Processing Plant facilities have also been included in the flight plan. In addition, to strengthen control over the condition of equipment and technical devices, the frequency of regular inspections of pipelines and crossings through streams and rivers was increased (once every three days instead of the previous requirement of once every 10 days). From 2022, employees will use the Mobile Inspector system.

## ENVIRONMENTAL PROJECTS IN THE KOMI REPUBLIC

LLC LUKOIL-Komi annually implements measures under the Environmental Safety Program and social projects. The main priority of environmental measures in 2021-2023 is to improve the environmental situation in the republic.

- The Road Map to restore water bodies from historically accumulated pollution is implemented (the Maly Voyvozh stream).
- The disposal of accumulated oil-saturated sandstone from mine workings of oil mines continues.
- Contaminated lands are reclaimed. In 2021, 25 land plots with a total area of 36.9 hectares were fully reclaimed.

The pilot testing of a bottom deposits and water treatment technology and an onshore soil restoration technology was carried out at the Maly Voyvozh stream. The Aeroschup complex was used to collect oil contained in bottom deposits, which helped lift oil/oil products to the water surface and place them in a special container. For loose soil areas, an additional vibrating unit was used to maximize the recovery of oil/oil products from bottom deposits.

Next, the microbiological preparation "Aborigen" was applied to the water surface<sup>1</sup>, which includes Pseudomonas sp. 2H bacteria strain, previously separated from the bottom deposits of the stream itself. With the help of this method, water was additionally cleaned from dissolved oil products and the concentration of pollution in the onshore soils of the stream was reduced. The biopreparation is suitable for use in difficult climatic conditions since it contains microorganisms

functioning at low temperatures (from 4 °C). It is planned to continue searching for new bacteria strains and developing effective schemes for their use. Works continue at the Ukhta Oil Refinery as part of the reconstruction of treatment facilities to halt the discharge of contaminated (poorly treated) wastewater into the Ukhta River. In 2021, the project design of the third stage of the investment project on the reconstruction of treatment facilities was performed.

<sup>1</sup> Biotechnology is used for liquidation of consequences of oil spills after the removal of the main volume of pollution during oil spill response and the technical stage of reclamation. Microorganisms are used that have the ability to decompose oil products to non-toxic substances, using them as a source of food and energy. The difficulties in implementing microbial biotechnology in the Arctic conditions are related to the fact that most of the marketed preparations are not intended for low temperatures (microorganisms work well at temperatures above 25OC). The solution may be to extract indigenous strains of microorganisms that are adapted to the living conditions at constantly low temperatures and to include them in industrial biopreparations. This approach is the core of the pilot project.

ENVIRONMENTAL PERFORMANCE OF LUKOIL-KOMI

	Unit of measurement	2019	2020	2021
Emissions of pollutants	thousand tonnes	64	57	59
Intake of water from surface sources	thousand cbm	340	122	236
Disposal of contaminated (poorly treated) water	thousand cbm	416	43	0.03
Disposal of contaminated (untreated) water	thousand cbm	0	0	0
Total weight of pollutants contained in wastewater discharged to surface water bodies	tonnes	701	42	0.02
Including hazard classes I and II	tonnes	0.5	0.03	0
Waste generation	thousand tonnes	207	421	344
Volume of disposed waste	thousand tonnes	210	421	334
Volume of oil spilled in accidents	tonnes	13.8	33.2	71.2
Area of reclaimed land	ha	50	40	37

INTERACTION WITH COMMUNITIES AND EMPLOYEES

Interaction with communities is carried out regularly, and constructive dialogue and partnership relations have been established. Annual cooperation agreements are made with the administrations of settlements and with a number of public organizations; the Company representatives participate in congresses and conferences of social movements.

Representatives of indigenous peoples and rural communities are also engaged in public discussions prior to the commencement of exploration and production projects. Public hearings on five projects on the construction and reconstruction of wells and oil pipelines, as well as

on the infrastructure development at the Prokhorovskoe field, were organized and held in 2021. The hearings were held in the settlements of Novikbozh (two events), Zakharvan, Schelyabozh (all in Usinsk district) and Ust-Tsilma.

In 2021, residents of settlements located near the Group's production facilities were concerned about the following issues: environmental situation; social support from the Company; targeted charity support; employment issues; issues of bringing residents of remote settlements to and from the district centers. Residents of the settlements also have an opportunity to contact the environmental hotline.



INTERACTION WITH RESIDENTS OF THE VILLAGES OF UST-USA AND NOVIKBOZH (ZAPADNO-USINSKOYE AND PROKHOROVSKOE FIELDS)

A task force was created to interact with the communities, including representatives of the management of LLC LUKOIL-Komi, the administration of the Usinsk urban district, and rural activists. In 2020, at the request of the community, a project to modernize the water supply system was launched in both settlements. A modern water treatment system was put into operation in the village of Ust-Usa in 2021, and a water treatment system in the village of Novikbozh is at its final stage.



INTERACTION WITH COMMUNITIES OF THE SETTLEMENT OF YAREGA AND THE CITY OF UKHTA (YAREGSKOE FIELD, UKHTA URBAN DISTRICT)

The population of Yarega consists mainly of oil mine employees. LLC LUKOIL-Komi implements the Yarega Support Program, under which residential buildings are built, and social infrastructure facilities are maintained and repaired. For example, in 2021 the new Shakhter sports and recreation complex was put into operation.

In 2021, representatives of the Ukhta community approached LLC LUKOIL-Komi (lecturers of the Ukhta State Technical University and members of the Ukhta branch of the Pechora Rescue Committee). At their request, two excursions to the facilities of the Yaregskoe oil field took place. The trips received positive feedback.



INTERACTION WITH EMPLOYEES OF LLC LUKOIL-KOMI

LLC LUKOIL-Komi created a Business Ethics Commission, which includes employees in positions no lower than the head of the department, and also the secretary of the Commission. In 2021, the Commission received three appeals from employees, two of which were related to breaches of business conduct standards: actions were taken against each one. One appeal was beyond the competence of the Commission, and a substantiated response was sent to the employee.

In addition, each structural division of LLC LUKOIL-Komi has labor dispute commissions (LDC), consisting of an equal number of representatives of the employer and employees. The LDC deals with a wide range of issues and disputes related to the employment contract terms, provision of paid leave or additional vacation time for overtime, payment of salary and wages, bonuses, etc. The commissions meet when appeals from employees are received. In 2021, one appeal was received related to an employee's disagreement with an order to impose material measures. The LDC found the order legitimate and justified.

SUPPORT OF SOCIAL FACILITIES IN THE KOMI REPUBLIC AND THE NENETS AUTONOMOUS AREA

In 2021, 137 municipal institutions and public organizations received support from the Company (including through the Social Projects Competition) to implement their projects.

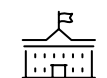
EDUCATION

65 organizations



KINDERGARTENS

23



SCHOOLS, COLLEGES

31

including



HIGHER EDUCATION INSTITUTIONS, TECHNICAL SCHOOLS

3



ADDITIONAL EDUCATION

8

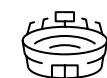
also



CULTURE

23

organizations



SPORTS

9

organizations



NON-GOVERNMENTAL ORGANIZATIONS

40

organizations

# PEOPLE AND RELATIONSHIPS



The LUKOIL Group has set the following sustainability goals:



Embracing ethical business practices



High occupational health and safety standards



Providing decent working conditions

- 80 Corporate Ethics and Behavior
- 86 Supply Chain
- 94 Our Employees
- 114 Society





## PEOPLE AND RELATIONSHIPS: STRATEGIC CONTEXT

The social topics most frequently discussed<sup>1</sup> globally in 2021 remained the economic recession and the COVID-19 pandemic, and their impact on national [economies](#), [the reliability of supply chains](#), [companies and their employees](#), alongside related changes in the well-being of local communities. Global economic growth began to slow even before the pandemic, so the combination of the two negative trends has had, and continues to do so, a significant impact on people and regions, as well as on the social SDGs.

For the second year in a row, the [UN's annual Sustainable Development Goals Report](#) (2021) notes the deterioration of social indicators of health, education, and employment. The reduction of jobs and working hours in a number of industries has resulted in lower incomes for workers and increased youth unemployment, which, in turn, has led to significant

cuts in family spending on education and health care (investment in the future). Employment support issues, including those in supply chains, which are undergoing significant change, have come into focus as the current situation sets the long-term development path at the regional level.

During the COVID-19 pandemic, expectations for changes in company practices regarding social policy and employee health and safety emerged. New, more flexible forms of work organization in many industries, including work from home, changes in the way workers interact, training methods, and hiring patterns are becoming ever more apparent. Aspects such as an employers' willingness to broaden the [diversity](#) of workers and to respect their [labor rights](#) remain relevant to companies and society alike.

The vaccination against coronavirus COVID-19 and the [monitoring](#) of the general epidemic situation regarding its [variants](#) continue to receive considerable global attention. At the same time, the World Health Organization emphasizes the need to continue measures to reduce mortality from non-communicable diseases; progress has already been made in this direction, which will allow [some countries to achieve the SDGs by 2030](#).

There is also growing regional instability: in addition to the pandemic, local communities are experiencing additional difficulties due to increased migration flows, climate change, and the erosion of traditional social norms and behaviors.

Experts and global organizations consider global cohesion and [cooperation](#) a prerequisite for overcoming multiple social challenges.

## CONTRIBUTION TO THE IMPLEMENTATION OF SDGs



Maintaining stable employment and social support for employees



Maintaining a high share of local employees in the Group's foreign entities



Maintaining a high level of coverage of employees by collective bargaining agreements



Maintaining a stable gender balance of employment



Maintaining a low level of occupational disease rate



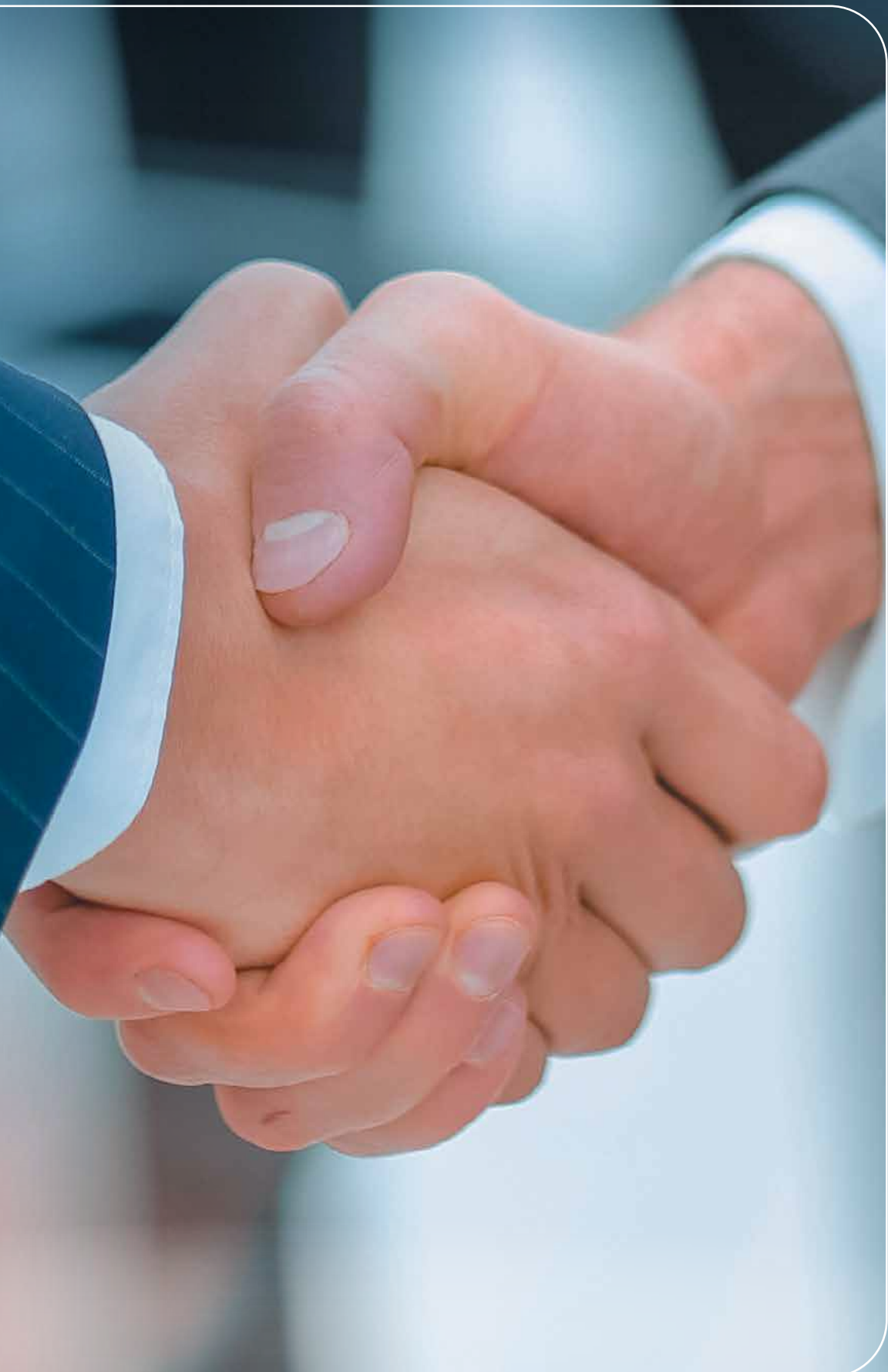
Annual support of charitable and socially important projects in the regions where we operate



<sup>1</sup> Global Risks in 2021: Fractured Future. – WEF, 2020. The Next Normal Arrives: Trends that will Define 2021 and Beyond. – McKinsey & Company, 2021. Global Human Capital Trends Report. – Deloitte, 2021. Advancing Environmental and Social Performance across the Energy Transition: 2021 Annual Review. – IPIECA, 2022. Five Global issues to Watch in 2022. – United Nations Foundation, 2021.



# CORPORATE ETHICS AND BEHAVIOR



## KEY DEVELOPMENTS AND RESULTS IN THE REPORTING YEAR

No incidents of violations of corporate ethics, human rights, applicable anti-corruption laws, or significant deviations/deficiencies related to non-compliance with LRA requirements were identified.



Our corporate values are at the heart of our approach to business. These values enable us to observe high ethical standards, including unconditional statutory compliance, observance of human rights, zero tolerance towards corruption of any kind, and adherence to fair trade rules.

In accordance with the Corporate Governance Code and recommendations of the Central Bank of Russia, the Board of Directors pays constant attention to the above issues and assesses the effectiveness of the ethics control mechanisms.

The Company's internal control and internal audit systems are intended, among other things, to provide LUKOIL's management bodies with reliable and up-to-date information.

Applying ethical principles and standards of corporate conduct assists in the successful resolution of any issues that arise. The Company remains open to stakeholder engagement and uses feedback to improve its operations and prevent potential conflicts.



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



### Hotlines



Any stakeholder may contact the Company's hotlines and communication channels on corporate conduct and ethics in Russian and English 24 hours a day, seven days a week. Full confidentiality of communications is ensured to those who contact us.

The hotline for corruption violations is [anticorruptionline@lukoil.com](mailto:anticorruptionline@lukoil.com). Any stakeholder can report suspected or known violations of anti-corruption laws and/or the corporate policy and can also agree to assist in such investigations.

The hotline for business ethics compliance is [ethics@lukoil.com](mailto:ethics@lukoil.com).

Hotlines for comments and suggestions regarding the quality of products and services:

- ▶ for FFS operations: [hotline@lukoil.com](mailto:hotline@lukoil.com); tel: +78001000911 (contact telephone number), <https://auto.lukoil.ru/ru/Support>;
- ▶ for lubricants: [masla-support@lukoil.com](mailto:masla-support@lukoil.com); <https://lukoil-masla.ru/ru/consumers/TechnicalSupport>.

These hotlines can be used to communicate human rights abuses, and reports can also be addressed to Human Resources or trade unions.

PJSC LUKOIL can be contacted in writing, by phone or via social media (contact information is available on the website: <https://lukoil.com/Company/contacts>). Similar contact information is available on the websites of LUKOIL Group entities.



## BUSINESS ETHICS

The ethical principles set forth in the Code of Business Conduct and Ethics<sup>1</sup> are an integral part of our corporate culture and cover all aspects of doing business. Ethical behavior applies to relationships with business partners, suppliers and contractors. We inform them of our policies, and require them to be familiar with the Code of Business Conduct and Ethics.


LUKOIL Group entities are advised to ensure that all personnel are made familiar with the Code as well as the main LRAs. This recommendation is communicated to the entities' directors, as well as to HR managers during annual meetings. All new hires at LUKOIL Group entities are required to sign a policy affirming that they are familiar with the Code of Business Conduct and Ethics and key LRAs.


A Business Ethics Commission reviews all reports received on possible violations of corporate ethical standards. In 2021, five inquiries were submitted to the Business Ethics Commission (nine – in 2020). The inquiries related to the interaction of individual services in the implementation of control procedures; familiarization with the Code of Business Conduct and Ethics in a foreign language; the nature of the employee's relationship with the immediate supervisor; as well as compliance with sanitary and epidemiological rules. Each inquiry was investigated, fact-checked, and feedback was provided, satisfying all requests.

The effective methods of monitoring compliance with LRA requirements and corporate ethics standards are internal audits and consultations. Audits conducted in 2021 uncovered 101 significant<sup>2</sup> deviations/deficiencies related to non-compliance with LRA requirements (88 in 2020). The deficiencies identified are mainly associated with the poor execution of some corporate procedures. At the same time, no violations of

the Code of Business Conduct and Ethics of PJSC LUKOIL and LRAs were recorded that would have a significant effect on the Company's achievement of its strategic goals.

Details (including significant deviations/deficiencies) and recommendations based on the results of audits were reported to the heads of LUKOIL Group entities and the functional and line managers of PJSC LUKOIL. Measures aimed at strengthening control over compliance with the requirements of the LRA and standards of corporate ethics are taken subject to the recommendations of the internal audit.

 Detailed information is available at [Sustainability / Sustainable development management Ethics and Statutory Compliance](#) section of our website.

 Detailed information on Tax policy is available at [Sustainability / Tax Policy](#) section of our website.

## TAX POLICY

We strictly abide by the applicable tax laws of the Russian Federation, international treaties, the legislation of foreign jurisdictions where Group entities operate, and the provisions of international statutes and directives. Group companies do not enter into transactions intended to reduce tax

remittances and do not engage in aggressive tax planning practices. In 2021, a total of RUB 1,715 billion was remitted to governments according to IFRS<sup>3</sup>.

## ANTI-CORRUPTION POLICY

We adopt a zero-tolerance approach towards corruption of any kind or manifestation, regardless of jurisdiction and local laws, even if the local laws permit some types of corruption (for example, facilitation payments).

We do not engage in or in any way encourage corrupt practices, including by our business partners, and we do our utmost to prevent them. The Company does not tolerate any payments or other forms of incentives provided to representatives of state authorities.


LUKOIL's stance on the above issues is outlined in the [LUKOIL Anti-corruption Policy](#). The Policy sets common principles, goals, and objectives for

combating corruption, and defines key activities that reduce the chance of corruption risks. New employees are required to sign the Policy upon joining the Company.

A 24-hour hotline to report corruption violations is available at the Company. By writing to [anticorruption@lukoil.com](mailto:anticorruption@lukoil.com), an employee, counterparty or any other stakeholder may address the Company not only in Russian and English, but also in the state language of the country in which the LUKOIL Group entity operates.

In 2021, six inquiries were made via the hotline. All inquiries were investigated

and no evidence of the violation of applicable anti-corruption laws and/or the provisions of LUKOIL's Anti-corruption Policy was identified. The inquiries received were mainly associated with contractors expressing disagreement with the procurement procedures.

 Detailed information on anti-corruption behavior standards is available at [Sustainability / Sustainable development management / Ethics and Statutory Compliance](#) section of our website.

## STATUTORY COMPLIANCE

LUKOIL respects the laws of the countries in which its facilities operate, constantly strives to prevent legal violations, and upholds the principles of fair business conduct.

There were no penalties imposed on the Company in 2021 by state authorities:

- ▶ in cases<sup>1</sup> related to breaches of anti-corruption regulations;
- ▶ in cases related to labor relations, on penalties exceeding RUB 1 million.

There were no cases of non-compliance of product quality with regulatory requirements, which

affected the health and safety of consumers and led to fines or penalties, in the reporting period.

Four significant fines (damages) for a total amount of RUB 571 million were paid in connection with violations of environmental law, including RUB 504 million in connection with the accident at the Oshskoe field in the Komi Republic (in 2020, five significant fines were paid for a total amount of RUB 105 million).

One significant fine in the amount of RUB 363 million was paid in connection with the violation of antimonopoly law

following a case against LLC Varandey Terminal in connection with a finding of maintaining a monopolistically high price for oil transshipment in the Varandey seaport during the period from January 1, 2015 to March 27, 2019.

LUKOIL Group does not tolerate any manifestations of bad faith, or abuse of a dominant or monopolistic position.

<sup>1</sup> Full name: Code of Business Conduct and Ethics of PJSC LUKOIL.  
<sup>2</sup> See Appendix 8 for the definition of a significant deviation/deficiency related to non-compliance with LRA requirements.  
<sup>3</sup> Data include income tax (current and deferred), other taxes, excise and export duties.

<sup>1</sup> See Appendix 8 for the definitions of the terms Law Violation Claim, Material claim relating to a breach of environmental law, and Material claim relating to a breach of antitrust law, given hereinafter. Information about the amount of the significant fine (damage) in connection with a violation of environmental law is included in the description of this term.



## HUMAN RIGHTS

We recognize, respect, and uphold human rights, including freedom of speech, and operate under the fundamental principles outlined in the UN Universal Declaration of Human Rights. Our commitments apply to all the Company's regions of operation and business activities. Human rights risk assessment is included in the overall risk management system.

LUKOIL Group prohibits all forms of violence and abasement of human dignity, aggression of any kind, and the use of child, forced, or slave labor.

In terms of labor rights, the Group's entities comply with established norms related to working hours, create a favorable environment for professional training and career development, and ensure equal pay for employees in the same job positions. The meetings discuss human rights issues, such as the right to fair and favorable working conditions and social security rights, arranging sessions with trade union representatives.

Once a year, Professional Training Days for managers of Group entities are organized, where the most pressing issues are discussed. For example, in 2021 there was a training on "Ensuring Sustainable Organizational Development

under Conditions of Instability and Uncertainty." There was also a video lecture for heads of departments on overcoming resistance to changes in the Company and unlocking its potential.

The operation and possible actions of security services, including in critical situations, are strictly regulated by internal standards and regulations. Regular briefings on the procedure for duty, interaction with visitors to corporate facilities, and the rules of safe handling of protective equipment are held. Service members may only make lawful demands of visitors and address them in a respectful and constructive manner.

The Company continuously monitors the observance of human rights. In 2021, there were no reports of human rights violations (including child, forced, or slave labor, and involuntary resettlement of indigenous people)

by the Group's entities. HR audits<sup>1</sup> were conducted in 15 Group entities: no material<sup>2</sup> violations of human and labor rights were identified.

If a violation of human rights is committed as a result of the activities of the Company or its representatives, LUKOIL takes the necessary measures to eliminate the consequences of such violations.



Detailed information is available at the [Sustainability / Human Rights](#) section of our website, including: human rights monitoring tools, social partnerships and approaches to labor rights, human resource audits, observing the rights of indigenous minorities of the North and interaction with them.



In 2021, there were no reports of human rights violations (including child, forced, or slave labor, and involuntary resettlement of indigenous people) by the Group's entities.

<sup>1</sup> HR audits are performed to check the compliance of processes related to the registration of employment relations and the payment of wages, with the labor legislation of the host country and corporate regulatory acts, as well as other labor law requirements.

<sup>2</sup> See Appendix 8 for the definition of a Material violation of human rights.

## 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 understand that the perception and importance of social, environmental and economic issues to the Company's stakeholders may be influenced by a variety of factors, some of which are unrelated to our operations.

Given the scope of LUKOIL Group's operations and the dynamic heterogeneity of positions that representatives of each group may occupy, we recognize the importance of interaction with all stakeholders and seek to build long-term constructive relations based on the principles of partnership, Company participation in solving long-term development tasks, transparency and informational disclosure.

These principles are set forth in the [Sustainability policy of LUKOIL Group](#) and the [Code of Business Conduct and Ethics of PJSC LUKOIL](#). The corporate website, Annual

Report, and Sustainability Report are the main channels used to update our stakeholders on our activities.

### WE DISTINGUISH THE FOLLOWING GROUPS OF STAKEHOLDERS:

- Clients
- Employees and trade unions
- National and local legislative and executive authorities
- Shareholders and investors
- Suppliers and contractors
- Society



Information about formats, 2021 events, and results of stakeholder engagement is provided in [Appendix 10](#).



### Stakeholder Engagement in Legislative Processes

In 2021, the Company actively participated in the discussion of a wide range of issues related to sustainable development as part of the legislative processes in Russia.

The Company has done significant work to develop Russian climate legislation, the main component of which is the Federal Law of July 2, 2021 No. 296-FZ "On Limiting GHG Emissions" (for more details, see the [Climate and Planet](#) section). The Company's position on the bylaws developed to promote this federal law has been formed and sent to the federal executive authorities and business associations.

The Company participated on an expert basis in a discussion of legislative amendments aimed at preventing oil and oil product spills<sup>1</sup>. In 2021, consultations were held to develop and approve oil and oil product spill prevention and response plans in accordance with the new procedure; in particular, a schedule for preparing new documents was drawn up for all Group entities that have hazardous production facilities. Also in 2021, the Company took part in drafting a federal law, which was developed

jointly with the Ministry of Natural Resources and Environment of the Russian Federation. The law binds owners of hazardous production facilities of hazard classes I and II to establish funds for their liquidation at a set stage of their lifecycle.

Another area of stakeholder engagement was the discussion of a draft federal law on extended responsibility of manufacturers for the disposal of goods that have lost their marketability and the preparation of the Company's position on Federal Law No. 303-FZ of July 2, 2021 "On Amending the Forest Code of the Russian Federation and Certain Legislative Acts of the Russian Federation" during its development stage. In accordance with this law, in particular, the deadline for subsoil users to fulfill their obligation of "compensatory" reforestation was increased from one year to three years, and a new requirement for agronomic care within three years after planting forest plantations was established.

The Company is also involved in work to establish national regulation of non-financial reporting by public companies; the Company's position on the draft federal law has been sent to business associations.

<sup>1</sup> Federal Law No. 207-FZ of July, 13 2020 "On Amendments to Article 46 of the Federal Law 'On Environmental Protection' and Certain Legislative Acts of the Russian Federation", aimed at preventing oil and oil product spills.



# SUPPLY CHAIN



## KEY DEVELOPMENTS AND RESULTS IN THE REPORTING YEAR

Procurement regulations on the general requirements for suppliers and contractors were updated, taking into account ESG-principles.



Category-based procurement management was introduced.



A "Sustainability assessment of suppliers" subprocess has been set up.



## PLANS FOR 2022 AND THE MEDIUM-TERM<sup>1</sup>

Implementation of a sustainability assessment for all suppliers.



Introduction of a procedure for prequalification of suppliers of critical and strategic goods, work and services.



Development of a functional program for the further development of the "Procurement of goods, work and services" business process.



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. At the same time, LUKOIL supplies products to a wide range of wholesale and retail consumers worldwide. The Company's approach to managing business relationships in the supply chain is based on global best practices, subject to economic trends and the reasonable expectations of partners, counterparties and customers.

<sup>1</sup> These plans relate to LUKOIL Group's Russian entities.



## PROCUREMENT

We are focused on productive business relationships with suppliers and contractors that help identify, avoid and manage supply chain risks; and facilitate the going concern of the Group entities' business processes.

Given the increased focus on managing ESG risks and factors in the supply chain, in 2021 the Company began an in-depth re-engineering of its procurement processes, which addresses, among other things, the development of the responsible supply chain concept and the deeper implementation of ESG principles.

### PROCUREMENT MANAGEMENT

The Company has already established and operates a [system for selecting and interacting](#) with contractors performing various types of work and services and suppliers of material and technical resources.

An organizational structure for procurement management was established, procedures were implemented to identify environmental and social risks in the procurement system, and requirements were formed at each stage of the business relationship – from the participation of contractors in tenders and other procedures to full compliance with contractual obligations. Technical audits of key contractors and suppliers are conducted, and methods have been developed to assess the qualifications of contractor employees who perform critical work.

Interaction with potential contractors is carried out via the automated tender procedures system (IMS Supply) and regular informing of stakeholders about procurements planned by LUKOIL Group. To preserve a trustworthy business environment,

counterparties are provided with opportunities to:

- ▶ contact the Company, including with complaints, regarding the results of tender procedures;
- ▶ use the ethics and anti-corruption hotlines;
- ▶ submit questions via the IMS Supply Platform;
- ▶ join special events.

The review of inquiries related to the tender procedures is carried out by the Internal Audit service. Contracts for work and services shall include provisions on compliance with applicable anti-corruption laws and the Anti-Corruption Policy of PJSC LUKOIL.

Detailed information is available at [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.

### CORPORATE PRINCIPLES

The Company promotes good business practices among its partners and bidders, prioritizing safety, environmental and climate protection, employee health, observance of human rights, and prevention of corruption. This position is reflected in LUKOIL's Sustainability policy with regard to the task of building a responsible supply chain.

### THE COMPANY INTENDS TO BUILD BUSINESS RELATIONSHIPS WITH SUPPLIERS AND CONTRACTORS ON THE FOLLOWING ESG PRINCIPLES:

- ensuring safe work performance and occupational safety.
- reducing negative impacts on the environment and climate.
- implementing technological, managerial and scientific innovations in business processes.
- finding solutions and technological processes that contribute to achieving energy- and resource-conservation targets.
- using energy generated from renewable sources.
- producing environmentally friendly products.

### REGULATORY ENVIRONMENT

In 2021, LRAs on procurement and inventory management were updated that regulate the basic principles of goods, work and services procurement management, the establishment of collegial procurement bodies, procurement regulations for Russian entities and methods of checking suppliers. The documents are based on ESG principles, including provisions on the protection of competition, the priority of employee health and safety rules, as well as measures to prevent corruption and conflicts of interest, and others.

Procedures for checking suppliers for compliance with corporate requirements were updated. The update was carried out in accordance with changes in Russian legislation and taking into account the introduction of an integrated system

of counterparty due diligence, which allows to identify and continuously monitor changes in the level of risk of interaction with counterparties at all stages of procurement activities.

Another change was the allocation of a separate subprocess in the "Supplier Performance Management" organizational process – the "Sustainability assessment of suppliers."

### SCREENING AND SELECTION TOOLS

The Company uses the following tools for supplier screening and selection:

**The Counterparty's Personal Account** is used by suppliers to upload documents confirming compliance with the corporate requirements of

the customer, and by the Company to track the results of inspections of the information provided.

**The IMS CDDMS<sup>1</sup>** is an internal tool used to check counterparties for compliance with LUKOIL's requirements, both on the basis of documents uploaded to the personal account and using external data (Federal Antimonopoly Service, Federal Tax Service, information from the Arbitration Court, etc.). Direct suppliers of LUKOIL Group entities as well as subcontractors are assessed as part of the CDDMS.

**IMS Tender** is an automated system designed to conduct tenders. The system provides an exchange of information with bidders for the evaluation of tender bids. The information stored in the system

makes it possible to be sure that the tender was conducted without violations and in compliance with all procedures, guaranteeing fair competition and the unbiased selection of the winner of the tender.

The re-engineering of procurement processes involves expanding the functionality to analyze the results of cooperation in the supply chain. Once this process is implemented, there are plans to develop additional criteria for those suppliers/contractors that comply with the requirements set by the Company, meet the sustainability criteria and have a positive experience of interaction with LUKOIL Group entities.

Stages of interaction with counterparties	Main procedures	Criteria				
		Statutory compliance	HSE management	Position on climate and sustainability	Occupational safety	Position on Human Rights Social Aspects
Search and informing	Publications on the websites of PJSC LUKOIL and Group entities Events in regions	●	●	●	●	●
Selection of bidders	Preliminary qualification Tender selection	●	●	●	●	●
Contractual performance	Concluding a contract Monitoring the fulfillment of contractual obligations Control procedures/ checks Technical audits	●	●	●	●	●
Counterparty performance assessment	Accounting for accident and injury rates in KPI Storing the history of business relationships	●	●	●	●	●

Legend: ● - tools implemented; ● - tools being developed/implemented.

<sup>1</sup> IMS CDDMS is an Integrated Management System "Counterparty Due Diligence monitoring system".



### SUPPLIER CATEGORIZATION

PJSC LUKOIL implemented category management in 2021. The range of all purchased goods, work and services is categorized according to the volume/total value of purchases and their significance to the Company. Four lists have been created, each of which defines the conditions for working with suppliers. All suppliers, regardless of the goods, work and services they supply, are checked for compliance with the general requirements.

The selection of suppliers in the "Strategic List" and "Priority and Major Projects List" categories is the most specific due to the critical importance of the goods, work and services

they supply. The Company develops specific procurement strategies for each of the relevant categories of goods, work and services included in these two lists. When developing procurement strategies, a range of potential suppliers is identified and negotiations are conducted.

Higher requirements may be imposed on suppliers at the selection stage, such as mandatory technical audits, pilot and laboratory tests at the qualification stage or in the course of working on joint projects. From 2022, it is planned to pre-qualify such suppliers for compliance with the Company's requirements.

Also, within the framework of category procurement management, two more categories of procurement have been identified, for which the procedures of interaction with suppliers have been largely developed and applied in practice: "Centralized List" and "List under the Management of LUKOIL Group Entities."

#### Indicators

In 2021, 91% of tender participants in Russia and 100% abroad<sup>1</sup> 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 the same in terms of quantity (in 2021, as in 2020, it stood at 93%) and in financial terms (94%).

#### INFORMATION ON POTENTIAL TENDER PARTICIPANTS THAT SUBMITTED TENDER BIDS FOR THE PROCUREMENT OF GOODS, WORK, AND SERVICES FOR THE BENEFIT OF LUKOIL GROUP ENTITIES

Reporting period / Consolidation perimeter	Total number of potential tender participants	Including for tenders requiring an HSE assessment		Number of potential tender participants admitted to tenders based on the assessment results	
		Number	Percentage of the total number of potential tender participants submitting bids	Number	Percentage of the total number of potential tender participants checked
<b>Russian entities</b>					
2019	3,330	1,465	44	1,352	92
2020	3,181	1,588	50	1,492	94
<b>2021</b>	<b>3,413</b>	<b>2,132</b>	<b>62</b>	<b>1,944</b>	<b>91</b>
<b>Foreign entities of the Exploration and Production business segment</b>					
2019	305	94	31	94	100
2020	41	16	39	16	100
<b>2021</b>	<b>110</b>	<b>41</b>	<b>37</b>	<b>41</b>	<b>100</b>

<sup>1</sup> Information relates to the Oil and Gas Production Abroad business sector.



### PRODUCTS

LUKOIL Group entities produce a wide range of <https://www.lukoil.com/> Products for various industries.

Our priority is focused on continuously seeking opportunities to stay ahead of the requirements of the markets where our products are supplied.

We consider interaction with consumers of products to be an important activity, particularly in view of the changes in the transport sector that are beginning to occur

as a result of the intensification of the climate agenda (one of the Just Transition<sup>1</sup> aspects).

#### QUALITY MANAGEMENT SYSTEM

The oil refining and oil products marketing entities and LLC LLK-International have implemented a quality management system certified for compliance with ISO 9001 international standards and Russian analogs, as well as industry standards. Compliance of finished products with regulatory requirements is confirmed by quality passports for each product based

on the results of laboratory and other tests. Opportunities have been created within the quality management system to increase the level of service, maintain trusting relationships with customers and increase customer satisfaction.

The description of the quality management system is available at the [Sustainability / Supply Chain](#) section of our website.

#### PERCENTAGE OF PRODUCTS WITH ENHANCED PROPERTIES, %

	Unit of measurement	2019	2020	2021
Percentage of ECTO branded fuels (motor gasoline and diesel) in total retail sales of petroleum products in Russia and abroad	%	64	61	<b>63</b>
Percentage of environmentally safe marine fuel in sales of LLC LUKOIL-MarinBunker	%	23	16	<b>23</b>
Percentage of energy-efficient lubricants in total sales of lubricants (PVL + CVL)	%	8	12	<b>11</b>

**Notes.** The method for calculating the "Percentage of energy-efficient lubricants in total sales of lubricants" indicator has been revised: the calculation of the total volume of lubricants has been made taking into account Russian and foreign LUKOIL Group entities. The data for the 2019 and 2020 indicators have been recalculated. 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.

### FUEL PRODUCTS

Since traditional fuel products will be in demand for a long time to come, we are continuing our efforts to improve their safety while expanding our product offerings and solutions to meet future demand.

The composition of our motor fuels was 100% compliant with Euro 5 (European emission standard 5) as early as in 2012. The combustion products of these new types of fuel contain less sulfur. The Company also produces innovative products for marine shipping, aviation, and industrial companies.

LUKOIL is one of the largest suppliers of bunker fuel in Russia, as well as in the ports of Bulgaria and Romania. Ecologically safe marine fuel with 0.1% sulfur meets MARPOL<sup>2</sup> requirements related to the content of air pollutants in the exhaust gas in SECAs<sup>3</sup> and aquatic areas of the European Union. This product has been sold in the Baltic Sea aquatic area since 2014.

<sup>1</sup> Just Transition is the concept of building an environmentally friendly economy based on the principles of fairness and inclusiveness for all stakeholders, creating opportunities for decent employment, leaving no one behind.

<sup>2</sup> The 1973 International Convention for the Prevention of Pollution from Ships, as modified in 1978, MARPOL 73/78.

<sup>3</sup> Sulfur emission control areas (SECA) are aquatic areas in the North and Baltic Seas and part of the US coast.



Foreign refineries produce motor fuels with the addition of biocomponents. Retail sales of liquefied petroleum gas continue to develop in the South of Russia<sup>1</sup>, with 94 filling stations providing LPG fuel in 2021, up 3% from 2019.

LUKOIL's filling stations are equipped with electric charging stations for electric vehicles. In 2021, there were 21 charging stations operating in Russia. That being said, the pace of development in this area is largely dependent on the growth dynamics of the electric vehicle fleet and government support.

**Detailed information about the Company's products is published on the website (<https://www.lukoil.com/Business/Downstream>).**

### SALES OF FUEL PRODUCTS AND LUBRICANTS

Type of product	Unit of measurement	2019	2020	2021
ECTO brand fuel (retail)	thousand tonnes	9,022	8,300	<b>8,723</b>
Bunker fuel	thousand tonnes	4,269	2,733	<b>2,109</b>
Aviation bunker fuel	thousand tonnes	3,357	2,539	<b>3,110</b>
Branded oils (premium group)	thousand tonnes	574	611	<b>593</b>
Biofuel blends	million liters	7,093	6,733	<b>8,085</b>

**Notes.** The sales volume of LLC LUK-International's branded oils in 2021 is lower than in 2020, due to a decrease in the export sales of loading oils due to deteriorating market conditions.

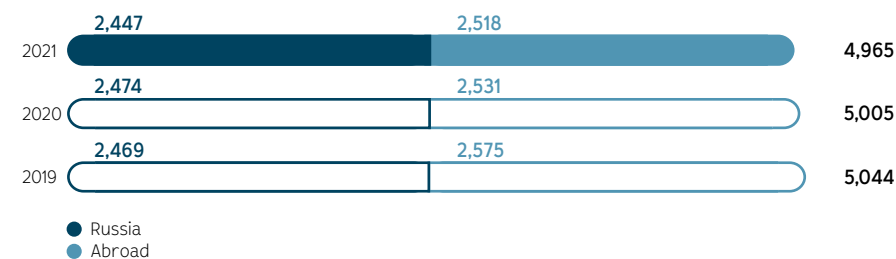
### Relations with filling station customers

We strengthen ongoing contact with customers and analyze feedback from them to improve the quality of services as well as satisfaction level with our products and services. The main methods of interacting with customers are surveys and analyses of client requests and proposals received via the Unified Hotline directly at filling stations, via our mobile application, and through social networks.

Big Data analytical tools facilitate the Company to obtain more accurate data, which is used to develop the loyalty program, expand the range of non-fuel products and services, and improve the work of regional managers at filling stations. Every month, performance is benchmarked against criteria that take into account the customers complaints and requests.

In 2021, as part of the Year of Service, training programs for filling station heads, managers, and station employees were held to improve the quality of interaction with customers, and electronic courses for filling

### Distribution of LUKOIL Group filling stations as of December 31 each year



**Notes.** Data includes LUKOIL Group's owned, leased, and franchised filling stations, as well as suspended and leased filling stations (as of December 31, 2021). The Group continued to optimize its filling station network by cutting down the number of unprofitable leased and franchised stations.

station personnel were conducted. The training and motivational programs cover all filling station employees. Based on "Service Level" indicator an internal rating is prepared among filling stations, territorial managers, regional managers, and Group entities. As a result of the implemented improvements, the number of complaints to the hotline decreased by 42%, the share of negative feedback in the LUKOIL GAS STATIONS mobile app halved (to 1.3%), and the average score at the end of 2021 was 4.95 out of a maximum of five points.

The mobile app's functionality is expanding, and the number of users is steadily increasing. In 2021, a mobile application for business was launched, and the geography of remote customer service was expanded. At the end of the year, areas for further improvement in customer relations were identified, including the introduction of the Central Bank of Russia System of Quick Payments, further development of the CRM platform, and new IT services for business and individuals.



The business segments' plans for 2022 include, among other elements, the following customer and partner development goals:

- ▶ continuation of systematic work to improve customer service at filling station;
- ▶ establishment of a new KPI system;
- ▶ development of the franchising system in Russia.

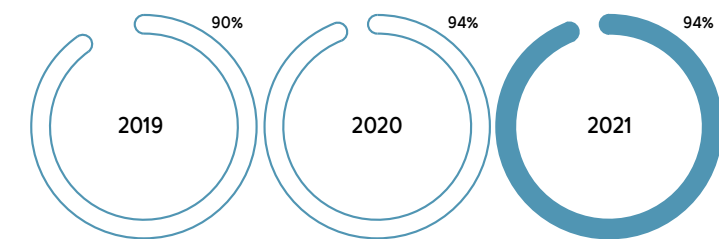
### OILS AND TECHNICAL LIQUIDS

The Company's priorities in development of oils and lubricants production are to create innovative products for promising new types of equipment and machinery as well as effective specialized products for various industry sectors considering trend for the transition to "green" economy.

- ▶ Given the prospects of the electric vehicle market expanding, new lubricants, coolants, and gear oils are being created for these types of vehicles.
- ▶ To solve the problem of improving the fuel efficiency of conventional vehicles with internal combustion engines and hybrid vehicles, low-viscosity base oils and additives are being developed, which reduce energy losses from friction in engine and transmission components.
- ▶ Biodegradable oils are less harmful to the environment as they completely decompose in a short period of time. The products are supplied to the European market under the BIO brand.

**Detailed information about the types of products and their properties is available on the website of [LLC LUK-International](https://www.lukoil.com/Business/Downstream).**

### Average satisfaction level of consumers



**Notes.** The survey is conducted among retail and wholesale customers – oil and lubricant consumers. Percentage of responses attributed to clients satisfied with cooperation with LLC LUK-International is indicated. Corporate customer satisfaction in 2021 reached 100%.

### INTERACTION WITH CUSTOMERS

LLC LUK-International has created and constantly develops its system of customer interaction, the main elements of which are:

- ▶ Researching and recording customer requests and complaints to avoid quality issues and to 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 provides an in-depth analysis of complaint statistics;
- ▶ Regular customer surveys;
- ▶ Steering Committees with OEM customers<sup>1</sup>.

Customer satisfaction with the Company's products has remained at a high level for a long time.

### POLYMER MATERIALS

The Company produces a wide range of polymer materials, organic synthesis products, and other

petrochemical products. Polymer products are used in all industries, including manufacturing, consumer goods and food production, and medicine among others.

Given the growing global focus on the negative impact of plastic on the environment, LUKOIL is analyzing possible approaches and a target business model for cooperation in the area of recycling. There is constant monitoring of new technology and the legislative framework, pilot projects are being implemented, and in-house R&D is underway.

LLC Stavrolen has developed a concept for mechanical recycling of its own polymer waste, and also for other LUKOIL Group enterprises, to reduce the volume of polymer waste by recycling it back into the economy. The project will make it possible to recycle about 1 thousand tons of polymer waste per year.

To expand cooperation with consumers of polymer products, LLC Stavrolen plans to create a competence center for polymers. Among other pursuits, the Center will conduct research on the technical characteristics of polymer grades, support existing grades to improve their quality, and the development and production of new grades in accordance with market and consumer requirements.

<sup>1</sup> The South of Russia refers to FFS belonging to LLC LUKOIL-Yugnefteprodukt.

<sup>1</sup> OEM customers are automotive manufacturers and Original Equipment Manufacturers.





# OUR EMPLOYEES



## KEY DEVELOPMENTS AND RESULTS IN THE REPORTING YEAR

No fatalities in LUKOIL Group entities



Indicators related to occupational injuries have improved: the number of accidents and values of specific indicators have decreased



Measures to protect employees from the COVID-19 pandemic continue to be implemented



Average salary in significant regions of operation exceeded the average salary in the respective regions



## PLANS FOR 2022 AND THE MEDIUM-TERM

Achievement of the required HSE levels as approved by LUKOIL's Management Committee



Implementation of targeted functional programs that include priority measures to reduce significant HSE risks



Improving the quality of identification of significant HSE risks



Maintaining high quality control at all levels of management, compliance with HSE requirements in the context of restrictive measures in connection with the COVID-19 pandemic



Conducting new training programs as part of the Impulse project





MANAGEMENT SYSTEM IN EMPLOYMENT RELATIONS<sup>1</sup>

Elements of the management system	Description	Corporate documents
Goals, principles	The main task is to create a management system that will ensure the Company's stable status as an "employer of choice" in the labor market.	Human Capital Management Policy, approved by the Board of Directors of PJSC LUKOIL, Minutes No.19 dated December 15, 2020
	The Company's unconditional priority is to ensure safe working conditions, to preserve the life and health of its employees	LUKOIL Group's HSE Policy in the 21st Century approved by the resolution of PJSC LUKOIL Management Committee dated May 25, 2020 (Minutes No. 13)
Priorities / corporate standards	The main principles in the area of employment relations are: <ul style="list-style-type: none"> <li>Compliance with statutory requirements</li> <li>Respect for human rights</li> <li>Equal rights and opportunities for employees</li> <li>Respect for the culture and customs of countries where we operate</li> </ul> Contractors' requirements in terms of occupational safety are defined in the corporate standard.	The Code of Business Conduct and Ethics <sup>2</sup> , approved by the Board of Directors of PJSC LUKOIL dated December 11, 2018 (Minutes No. 17), The Corporate Culture Rules of LUKOIL Group Entities, approved by the Management Committee of PJSC LUKOIL dated December 27, 2010 (Minutes No. 31), The Social Code of PJSC LUKOIL, approved by the Board of Directors of PJSC LUKOIL dated October 24, 2017 (Minutes No. 16) STO LUKOIL 16.5-2019 HSE Management System. Contractors Requirements (order of PJSC LUKOIL No. 133 dated July 24, 2019)
Communication	A system of social partnership with the International Association of Trade Unions of PJSC LUKOIL was established	Agreement between the Employer and Trade Union of PJSC LUKOIL for 2021-2023
Key performance indicators	Labor productivity	The new version of the KPI Regulations, approved by the Management Committee of PJSC LUKOIL on December 20, 2021 (Minutes No. 29)
Target programs, projects, and initiatives	The main areas of social policy: <ul style="list-style-type: none"> <li>The remuneration and incentive system</li> <li>Social support</li> <li>Training</li> <li>Working with young professionals and employees</li> </ul>	Programs in all areas are approved annually

OUR ACTIONS

LUKOIL's Human Capital Management Policy is based on our robust corporate culture and a solid system of corporate values. The Company's success is determined by many factors, but the key role is played by employees at all levels, united into a close-knit team of professionals.

Our employment relations are guided by the laws of the countries where we operate, the conventions of the International Labor Organization, the principles of the UN Global Compact and the Universal Declaration of Human Rights, as well as the experience of international cooperation under the IndustriALL Global Union.

The Human Capital Management Policy of PJSC LUKOIL is the fundamental document mandatory for all LUKOIL Group entities. It defines the HR strategy and guidelines to ensure the Company's consistent leading position as an "employer of choice" on the international labor market.

The Policy is based on transparent principles aimed at creating a stimulating work environment; involvement of all personnel in achieving the Company's strategic goals; fair assessment of each employee's contribution to overall success; fair compensation for performance and internal continuity by attracting, nurturing, and retaining talent.

The Policy sets out ground rules, mandates respect for human rights, equal rights and opportunities for all employees, including gender equality issues, zero tolerance for the violation

of human dignity, and discrimination in any form or on any grounds.

The main document that sets forth the Company's obligations in the field of labor relations, occupational safety and social support is the Agreement between the Employer and the Trade Union Association of PJSC LUKOIL for 2021-2023.

To ensure the Company's economic and financial stability, a large-scale project to improve LUKOIL Group's management system and structure in the new economic environment was launched in 2020. The Impulse project covers the entire management vertical and all business segments and business processes.

Its main task is to increase the speed and quality of management decision-making by developing a service-based management model, implementing a system of continuous improvement and a new incentive system. Transformations within the project should form a new corporate philosophy of managerial, project, operational and digital leadership.

The work on reengineering and digitalization of business processes was organized subject to the existing system of process-functional management and best international

industry practices, including the transition to the unified SAP HANA platform. This will increase the speed of end-to-end business processes and move to data-driven management and modern business analytics.

A service management model was introduced in 2020 – the Multifunctional Business Support Center was established, which combines all functional services (economics, finance, taxes, accounting, personnel administration, and others). As regards production services, it is planned to continue the centralization of expertise and existing competencies based on already functioning service centers.

The personnel performance management system was developed in 2021. As part of the Information and Technology Support program, the manager's My Team workstation was created, which allows monitoring the work of a subordinate unit according to basic parameters; new employee self-service services are being created, and solutions for creating an electronic workflow of personnel documents are being implemented.

<sup>1</sup> Occupational safety and health issues are regulated under the IMS (Climate and Planet section).  
<sup>2</sup> The information is given in accordance with the Code of Business Conduct and Ethics of PJSC LUKOIL.



**PERSONNEL CHARACTERISTICS**

In 2021, the LUKOIL Group entities employed more than 100,000 people, most of whom worked under permanent employment contracts (93%) and full-time contracts (99.7%)<sup>1</sup>. The personnel structure has remained stable for the last four years in terms of employee categories and age. The ratio of men to women, both those employed by LUKOIL Group entities and those newly hired, also remains stable.

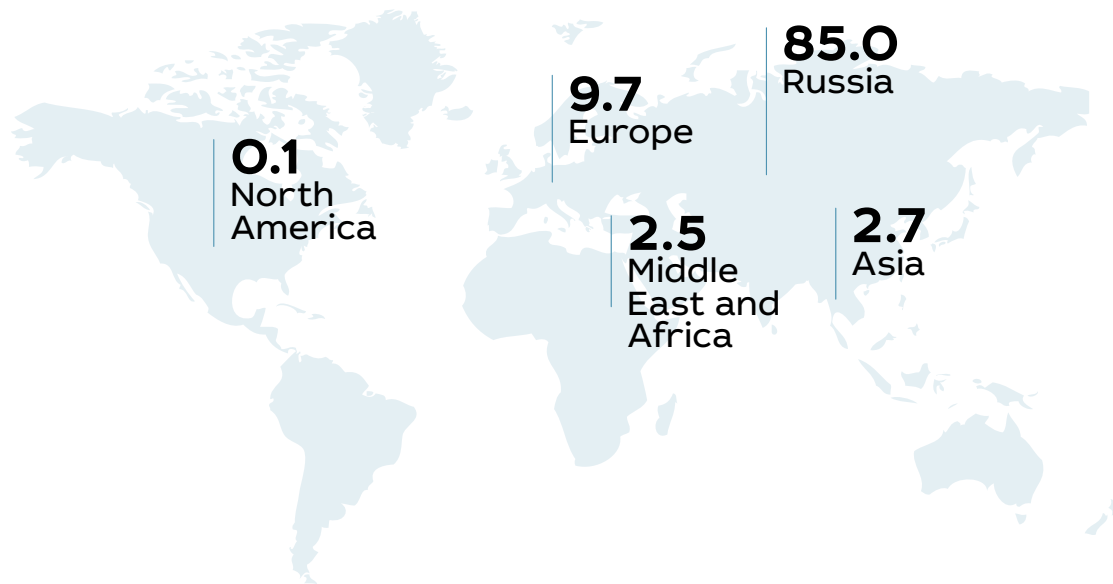
The headcount has changed insignificantly over the past three years (within 3%). More than half of the employees work in the Refining and Distribution business segment, more than a third in Exploration and Production entities, and about 14% are employed on a rotational basis. After dropping to 6.7 in 2020, the employee turnover rate increased to 9.1 in 2021, or by 1.6 percentage points relative to 2019, due to measures being taken as part of the Company's management system transformation and efficiency improvement project.

Details on personnel breakdown by different criteria (type of employment, type of contract, category) and other characteristics according to GRI Standards are given in [ESG Databook \(Appendix 9\)](#).

Headcount	Unit of measurement	2019	2020	2021
Headcount of LUKOIL Group	people	105,624	104,264	<b>106,835</b>
Average headcount of LUKOIL Group	people	101,374	100,768	<b>102,424</b>

**Notes.** The increase in the headcount in 2021 is due to the reassignment of duties with simultaneous headcount optimization measures, the commissioning of new production facilities, and the inclusion of LLC LUKOIL EPU Service (headcount is 2,834) in the reporting boundary.

**Breakdown of employees by region, %**



**Notes.** See the [ESG Databook \(Appendix 9\)](#) for more information.

<sup>1</sup> Hereinafter in the section the estimates are based on the employee headcount as of December 31 of the reporting year (unless otherwise stated).

**OCCUPATIONAL HEALTH AND SAFETY (OHS)**

The Company's unconditional priorities are to ensure safe working conditions and preserve the life and health of its employees and employees of contractor organizations working at LUKOIL facilities. The Company is committed to ensuring that all employees comply with established safety rules, training and continuously improving the qualifications of employees, and incentivizing safe working behaviors.

**OUR ACTIONS**

To prevent injuries, The Company regularly identifies risks (including critical risks) in accordance with the corporate standard and takes action to mitigate them. The Group's entities implement measures to ensure occupational safety and develop a [safety culture](#), improve working conditions, and regularly inform employees and contractors about the causes of injuries. Procedures for notifying employees of possible hazards and dangerous situations related to the labor process are governed by the LRAs of the LUKOIL Group entities.

In the event of accidents, all LUKOIL Group entities carry out investigations and the results are communicated to the heads of LUKOIL entities and structural subdivisions of PJSC LUKOIL, considered at the meetings of the HSE Committee of PJSC LUKOIL and included in the annual report to the PJSC LUKOIL Management Committee and on the agenda of the Board of Directors' meetings. The results of accident investigations are used to plan and implement measures to prevent accidents and/or minimize potential damage from similar accidents.

In 2021, information on all accidents was reviewed at a meeting of the Strategy, Investment, Sustainability and Climate Adaptation Committee on November 30, 2021, and a meeting of the Board of Directors on December 15, 2021.

Pursuant to 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.

As part of the [ISP](#), measures are taken annually to ensure safe working conditions and preserve the employees' health and life. The timeframe for implementation is one

year, while some of them are of an ongoing nature.

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.

There is constant interaction with contractors on the issues of the safe performance of work, with regular checks of contractors in terms of compliance with corporate requirements throughout the contract term.

**THE MAIN AREAS FOR THE REDUCTION OF INJURIES AND OCCUPATIONAL DISEASES INCLUDE THE FOLLOWING MEASURES:**

- LUKOIL employees and contractor personnel are monitored for compliance with the Key Safety Rules
- Best practices in the work of LUKOIL entities and contractors are disseminated and replicated
- Safety culture tools, digital solutions and equipment are introduced
- The Institute of Technical Labor Inspectors<sup>1</sup> is introduced in key contracting organizations with the participation of the International Association of Trade Union Organizations of PJSC LUKOIL (IATUO)

<sup>1</sup> The Institute of Technical Labor Inspectors exercises public control (on behalf of trade union organizations) over compliance with labor laws and other regulations in the field of labor protection.



**COOPERATION WITH TRADE UNIONS AND EMPLOYEES**

Employees can contribute to improvements in the HSE management system, express opinions and ask questions through their authorized HSE representatives, through union and joint HSE committees, and during visits by HSE technical inspectors. The rights of employees to participate in improving the HSE management system are stipulated in Section 6 of the Agreement between the Employer and Trade Union of PJSC LUKOIL for 2021-2023.

In 2021, there were 129 joint OHS Committees at the Group's Russian entities and four at foreign entities (at two refineries in Romania and Bulgaria and at oil product supply entities in Azerbaijan and Romania).

Within the principles of a social partnership, IATUO, together with the Company's management, is constantly working to protect employees' legitimate interests and rights to health protection and safe working conditions. Trade unions regularly interact with specialized services of enterprises and pay special attention to the quality of training employees in

safe work techniques and methods, the prevention of occupational injuries and occupational diseases, the provision of personal and collective protective equipment, and other aspects of safety culture.

The availability of OHS information is ensured by the LUKOIL Group entities. Corporate standards (STO LUKOIL series 1.6) are available on the internal corporate portal.

Projects are underway to introduce leadership tools and to involve personnel at all levels in conscious and active efforts to improve safety and develop strong beliefs and behavioral patterns in employees. In our daily operations, we use electronic work permits and on-the-job training for more than twenty occupations, digital video surveillance and intelligent video analysis systems, instructional videos on the safe operation of certain types of activities, the Mobile Inspector application, and other safety tools. Every year, we hold competitions<sup>1</sup>, with participants developing the best projects receiving an award; and the success of safety culture measures is taken into account when drawing up the results.

Information on [cooperation with contractors on occupational health and safety issues](#) is available on the website at [Sustainability / Supply Chain section](#).

**MEASURES TO IMPROVE OCCUPATIONAL SAFETY**

Every year, measures are taken to prevent workplace injuries among full-time employees and our contractors' personnel. According to internal analysis, LUKOIL's injury rates remain lower than those of companies with comparable production volumes and headcount.

Work continued in 2021 to further improve the HSE management system, including the development of leadership mechanisms and a safety culture, as well as the spread of best practices (including new digital tools) in this sphere. Occupational safety officers and technical inspectors of trade unions took a leading role in these developments. The preventive measures included:

- ▶ training webinars on changes in Russian legislation for directors of the Russian entities and HSE services;

- ▶ training in the Leadership and Safety Culture program for occupational safety officers (205 employees);
- ▶ Security Days at PJSC LUKOIL and the Group entities;
- ▶ security leadership visits to production facilities;
- ▶ identification and promotion of the best practices of ensuring safe works as part of the "Occupational Safety" review Contest;

- ▶ implementation of the best practices of ensuring safe works directly at the facilities of oil and gas production, oil refining, petrochemicals, gas refining and electric energy;
- ▶ HSE audits conducted together with the International Association of Trade-Union Organizations of PJSC LUKOIL (IATUO).

In 2021, the Company achieved an improvement in occupational injury rates: no fatalities or group injuries, the number of accidents decreased and estimates improved. The main types of recurring incidents involving injuries to Group employees include people falling to a flat surface and from a height or to a depth. The Group entities maintain work on mitigating the risks caused by these factors.

**INDICATORS RELATED TO OCCUPATIONAL INJURIES AT LUKOIL GROUP**

	2019	2020	2021
Lost time accident frequency rate (LTAFR)	0.19	0.28	<b>0.17</b>
Lost time injury frequency rate (LTIFR)	0.13	0.15	<b>0.10</b>
Rate of fatalities	0.01	0.01	<b>0</b>
Rate of high-consequence injuries (net of fatalities)	0.05	0.04	<b>0.03</b>
Total Recordable Injury Frequency Rate (TRIFR)	0.18	0.19	<b>0.11</b>

**Notes.** The lower the indicator, the better. The formulae used to calculate the indicators are provided in [Appendix 8](#). See the [ESG Databook \(Appendix 9\)](#) for more information on injuries.

**NUMBER OF OCCUPATIONAL ACCIDENTS AND EMPLOYEES INJURED IN WORKPLACE ACCIDENTS AT THE LUKOIL GROUP ENTITIES**

	2019	2020	2021
<b>Total number of occupational accidents</b>	<b>19</b>	<b>28</b>	<b>17</b>
Fatal	2	2	<b>0</b>
High-consequence work-related injuries	8	7	<b>5</b>
<b>Number of employees injured in workplace accidents</b>	<b>25</b>	<b>28</b>	<b>17</b>

**Notes.** If, during the reporting period an employee suffered more than one injury, each case is counted as a separate injury.

**INJURY RATES IN CONTRACTOR ORGANIZATIONS**

The Company takes steps to reduce injuries in contractor organizations, including expanding cooperation in occupational safety. Pre-tender

assessments of contractors for compliance with the corporate HSE requirements are held regularly, and compliance is checked in the course of fulfillment of contractual obligations. Representatives of key contractor

organizations are invited to attend Safety Days and quarterly meetings held by Group entities to analyze injuries and discuss measures to prevent accidents in the future.

<sup>1</sup> The competition is held in the Group's entities including PJSC LUKOIL.



At the same time, despite all efforts, in 2021 there were three fatalities involving employees of contracting organizations at the facilities of the LUKOIL Group entities, and investigations into all the cases have been completed. Two cases occurred during well repair works, and one took place during electrical equipment repairs.

An employee of a contracting organization working on the site of LLC LUKOIL-West Siberia suffered fatal injuries as a result of a fire during well repairs. The investigation revealed the following causes of the incident: poor response of the personnel to showings of oil, gas, and water, unsatisfactory control over the safe performance of works by the contractor's supervisor.

**In order to prevent similar cases, the following measures were taken:**

- the contractor's personnel learned the circumstances and causes of the accident and confirmed that by signature;
- drills were held where well repair crews rehearsed a coordinated response in the case of showings of oil, gas, and water;
- an unscheduled knowledge check of the contractor's officers responsible for occupational safety was held.

During the works on the well repair equipment, an employee of a contracting organization working at the facility of LLC RITEK was hit by a hydraulic rotor. This was caused by unsatisfactory organization of the preparation and performance of the well overhaul works by the contractor and poor control over employee compliance with safety requirements.

**To prevent similar cases, the following measures were taken:**

- the results of the investigation were communicated to employees;
- unscheduled training for personnel performing well overhaul and routine repairs was held;
- unscheduled certification of the contractor's employees who committed violations was organized by the Regional Certification Commission of Rostekhnadzor, and a knowledge check was performed in the scope of the production instructions and occupational safety instructions;
- video recording was provided at the production site where well repairs are performed.

An employee of the contracting organization LLC LUKOIL-Astrakhanenergo fell from a height when repairing equipment. The main cause of the incident was the failure of the injured to use protective equipment when working at a height (unauthorized removal of safety harness).

**The following measures were taken based on the investigation:**

- unscheduled practical training and testing of the skills of using safety harness systems by employees admitted to work at a height were held;
- a regulated procedure for access to work with special conditions was introduced to the occupational safety management system and communicated to the contractor's personnel;
- identification of hazards and risk assessment was held, and measures to manage risks at the contractor's workplace and similar workplaces were developed. The contractor's employees were notified of the results.

The number of serious injuries in contracting organizations increased in 2021. The main types of recurring

incidents that caused injuries to contractors' personnel include: falls from a height and to a depth,

injuries caused by machinery and mechanisms, and exposure to high temperatures.

**INDICATORS RELATED TO OCCUPATIONAL ACCIDENTS AND EMPLOYEES WITH WORK-RELATED INJURIES AT CONTRACTOR ORGANIZATIONS IN RUSSIA AND ABROAD**

	2019	2020	2021
<b>Total number of occupational accidents</b>	<b>13</b>	<b>10</b>	<b>16</b>
fatal	6	3	<b>3</b>
high-consequence work-related injuries	1	1	<b>6</b>
<b>Number of employees with work-related injuries</b>	<b>16</b>	<b>11</b>	<b>17</b>

**Notes.** For details see 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 LUKOIL Group entity level are assessed as significant, measures are developed to control and reduce their impact.

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 been enhanced and, as a result, the detection of abnormalities in the state of health has been improved.

In 2021, no new cases of vibration sickness and sensorinerval hearing loss were identified in Yareganeft.

- ▶ special medical program for the prevention of diseases at the specialized Shakhter sanatorium;
- ▶ dynamic observation of employees from the risk group.

**Occupational health and safety (OHS) measures at the workplace of employees of the LUKOIL Group entities are described on the website in the section [Sustainability / Safety / Occupational Health and Safety](#).**



Occupational diseases of the LUKOIL Group employees are extremely rare. LLC LUKOIL-Komi (Yareganeft oil and mines division) is the only entity where difficult conditions remain (mining production method).

LLC LUKOIL-Komi constantly improves working conditions in oil mines. For example, new ventilation systems

LLC LUKOIL-Komi is expanding its preventive work for the early detection of occupational diseases, as well as a set of measures to reduce the harmful effects of occupational factors. In 2021, these measures included:

- ▶ constant monitoring of the work and rest schedule for each work place of the shaftmen, timberers, and operators of rock removing machines;
- ▶ organization of health resort treatment for employees engaged in work with harmful and/or dangerous production factors;
- ▶ monitoring of the state of the vibration generating tool used, daily recording of failures identified when working with it;
- ▶ monitoring of the market of new PPE models to purchase advanced models;

An occupational disease (chronic manganese poisoning) of an arc welder of LLC LUKOIL-West Siberia identified in 2021 was investigated. According to the occupational disease investigation report approved by the Chief State Sanitary Doctor of the Yamal-Nenets Autonomous Area (YaNAA), neither the employee nor the employer was guilty in this case. The employee's welding station is located in the open air, and the employee was provided with the necessary PPE. The disease is presumably related to the cumulative deferred effect of chemical substances, including from previous workplaces.



In order to prevent the development of such occupational diseases in LLC LUKOIL-West Siberia, the following measures were taken:

- ▶ increased control over the employees' periodic medical examinations, including the

possibility to have them early, if necessary;

- ▶ production monitoring and a special assessment of working conditions at the workplaces by an accredited organization, including measurement of parameters of

harmful factors of the production environment at the workplaces;

- ▶ increased control over the provision and use of PPE, including those for respiratory protection.

**OCCUPATIONAL ILLNESS DYNAMICS AT THE RUSSIAN ENTITIES OF LUKOIL GROUP**

	2019	2020	2021
<b>Occupational disease rate (ODR)</b>			
· per 1,000 workers	0.13	0.083	<b>0.092</b>
· per 1 mln man-hours	0.077	0.050	<b>0.057</b>
Number of workers with newly diagnosed occupational diseases, people	11	7	<b>8</b>

**Notes.** The 2020 data for the indicator "Number of workers with newly diagnosed occupational diseases" have been adjusted from the previously published data due to the fact that the investigation of one case was completed in 2021.

In honor of the Company's 30th anniversary, LUKOIL Sports Club launched the annual Online-Challenge Running Marathon "30 Years in Motion" for its employees. In 2021, more than 200 of the most active employees of PJSC LUKOIL participated in the project, while the Challenge Marathon expanded to 12 regions of the Group's presence, including the near and far abroad.

**PROTECTING EMPLOYEES DURING THE CORONAVIRUS PANDEMIC**

In 2021, in the context of the ongoing COVID-19 pandemic, changes in the organization of work and measures aimed at protecting the health of employees remained important.

**Organization of work**

When the epidemiological situation deteriorated, all office employees were transferred to remote work. To regulate labor relations and emerging issues, the "Procedure for Organizing the Work of Remote Employees of the LUKOIL Group Entities for the Period of Temporary Transfer to Remote Work" was approved. Pursuant to the

document, the number of employees who can be transferred to remote work is set by the directors of the Group entities. Pursuant to the requirements of the Labor Code of the Russian Federation, effective from January 1, 2021, employees working remotely and using their own or leased equipment are paid compensation or reimbursed for expenses incurred.

To ensure the continuity of production that cannot be suspended for technological reasons (mainly at remote fields), the duration of the shift was increased (to over a month).

After the introduction of the QR code system in Russia, a service for loading and automatically checking employees' existing QR codes was implemented and integrated with the system of control and management of access to the Company's administrative buildings and premises, which ensured full control over this process.

The Corporate DLS, which is accessible both from offices and from home devices, including using the AR LUKOIL mobile application, is actively used. Employees are able to undergo mandatory and additional training, participate in webinars, and receive topical digests and other material.

**Health protection**

The Company took all available measures to prevent the spread of the infection, taking into account the recommendations of the medical services and the directives of the regional and federal authorities.

Office and production personnel were tested on a regular basis, social distancing was introduced in all premises, and meetings were held via videoconference. Employees were provided with protective masks and sanitizers. The health of each employee with a confirmed diagnosis was monitored until his/her full recovery. If infected individuals were identified, their workplaces and the premises where they worked were sanitized.

A lot of educational work was conducted with the labor collectives. For example, a webinar with a representative of the N.F. Gamaleya National Center for Epidemiology and Microbiology (the developer of the Sputnik V vaccination) was arranged.

For the convenience of employees, field vaccination and revaccination was organized at the corporate medical centers, where employees could also get vaccinated against influenza and consult with specialists.

In 2020-2021, expenses on measures related to the COVID-19 pandemic approximated RUB 4 billion<sup>1</sup>. Key employee protection measures included vaccination and revaccination, medical care, testing and provision of personal protective equipment and sanitizers. The main types of assistance to the regions of presence included the purchase of medical equipment and medicines, and the free refueling of ambulances.

**EMPLOYMENT RELATIONS**

LUKOIL is a large employer in Russia and abroad. We endeavor to apply uniform principles and approaches to working with our employees in all countries and regions where we operate, taking into account local specifics and features. The principles and standards set forth in the Human Capital Management Policy of PJSC LUKOIL and other LRAs are mandatory for all Group entities.

Human Capital Management Policy of PJSC LUKOIL dictates that we conduct our business activities under

the principle of equal rights and opportunities and consider any form of violation of human dignity and discrimination on any grounds unacceptable.

The Company does not tolerate any discrimination based on gender, race, age, or other grounds. The hiring process is based on equal opportunities to local applicants from overseas, men and women, applicants with disabilities<sup>2</sup>, members of the indigenous minorities of the North, and other social groups.

**The Company's position and activities to ensure gender equality and equal opportunities for all employees are described on the website in [the Labour Relations](#) section.**

<sup>1</sup> This indicator includes costs related to protection and support of employees in connection with the COVID-19 pandemic, as well as costs on supporting the population of the LUKOIL Group's regions of presence.  
<sup>2</sup> For applicants from special groups, jobs are provided based on statutory regulations and job openings that meet labor requirements. For example, the quota for hiring people with disabilities in the Company is 2-3% of the average number of full-time employees and is set separately for each region of LUKOIL's operations.



### RECRUITMENT IN FOREIGN COUNTRIES

Our basic [approach to recruitment](#) in every country where we operate is to comply with legal requirements and employ the best professionals. In accordance with the laws of the countries in which we operate, we primarily hire employees from local people<sup>1</sup>. Programs are implemented to train specialists locally. Employees from other regions are hired only if there are no candidates with the required qualifications on the local labor market.

In 2021, in Bulgaria, Italy, Romania, and Belarus the share of local employees was 99% or more, in Uzbekistan it was 93% of the total headcount in the respective organizations of LUKOIL Group, and in Iraq the figure was 62%<sup>2</sup>.

Employees with appropriate qualifications are hired for management positions in our foreign entities. If personnel with the necessary qualifications and capabilities are not available on local markets, Russian employees are appointed to managerial positions in order to promote the same corporate culture throughout LUKOIL Group and to expand their capabilities by gaining professional experience in

international projects. For this purpose, the Company has a pool of employees who can be rotated. The risk of a loss in efficiency is therefore mitigated and the need for highly qualified and senior management is quickly met, regardless of the situation in local labor markets. At the same time, the opportunity to work in different business and cultural environments is a motivation for employees who value diversity.

#### Percentage of local senior managers, %



**Notes.** 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 citizens of foreign countries.

### YOUNG PROFESSIONALS AND EMPLOYEES

[Working with young employees](#) and young professionals<sup>3</sup> is an important component of Human Capital Management Policy of PJSC LUKOIL and represents a system of measures aimed at attracting this category of employees and creating

conditions and opportunities for their successful and effective self-realization.

Its elements include internships for students at LUKOIL Group entities and mentorships and initiatives that facilitate the continuity of professional experience, best production traditions, and the corporate culture. The Group's organizations have created career opportunities for young people. For example, LLC LUKOIL-Engineering operates the "Deputy" project, which gives promising young employees an opportunity to try their hand as heads of subdivisions, developing managerial competencies and teamwork skills.

The share of young employees of the headcount of LUKOIL Group was 34 % in 2021.

The Company holds a competition to award the title Best Young Professional of the Year in various categories. 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 LUKOIL Group organizations.

The participants of the contest are pre-selected based on their work achievements and initiatives; readiness for innovation; aspiration for self-improvement and obtaining additional knowledge along with other criteria. Experts from LUKOIL's structural subdivision employees evaluate the applications received.

Scientific and technical competitions and conferences, educational events (trainings and seminars), and corporate, cultural and sporting events are held annually for all young employees. Councils of young professionals have been established

In 2021, the results of the XVI Contest for the Best Young Professional of the Year title were announced. Ninety applicants from 28 organizations of the Group took part in it, and 47 people were announced winners.

to help young people adapt to working conditions and maximize their professional talents.

Group entities receive feedback on the results of activities in various forms – via e-mail questionnaires, the Young Professionals Council section on the internal corporate portal, in closed social network groups, through a young professional mentor and primary trade union organizations. Representatives of the Young Professionals Councils regularly meet with the heads of the Group's entities, including PJSC LUKOIL, to discuss relevant issues.

Young employees and specialists of LUKOIL take part in various thematic competitions, presenting their projects on topical industry issues. For example, in 2021 the Nizhny Novgorod Refinery team successfully participated in the CASE-IN International Engineering Championship, where they presented the case "Innovative Potential for Sustainable Development: Responsible Investment for the Future," based on an analysis of LUKOIL Group's sustainability activities. Young people's interest in this issue has opened up avenues for the creation of a sustainability team within the Group.

#### INDICATORS RELATED TO WORKING WITH YOUNG EMPLOYEES AND PROFESSIONALS

	Unit of measurement	2019	2020	2021
Number of young employees	people	39,179	36,955	<b>36,515</b>
· Including young professionals	people	1,423	1,317	<b>1,351</b>
Young employees recruited	people	9,427	7,603	<b>10,625</b>
· Including young professionals	people	631	523	<b>661</b>

**Notes.** The decline in the total number of young employees aged under 35 and in the share of young employees in total headcount is due to employees exceeding the age threshold for the young employee category, as well as an increase in the retirement age in Russia. The definition of young employees and young professionals is given in [Appendix 8](#).

<sup>1</sup> So, in the Republic of Iraq, foreign companies must hire at least 50% of the average headcount, in the Republic of Uzbekistan – at least 80% (this requirement applies to both full-time employees and the staff of contractors).  
<sup>2</sup> Given our broad geographic presence, some indicators such as the share of local hires and the average salary are disclosed for each significant region. See Appendix 8 for the definition of a significant region. In 2020, six of the regions mentioned in this paragraph of the Report of the foreign countries are considered significant. Local employees are all employees of the Group's organizations, excluding seconded employees (defined in Appendix 8).  
<sup>3</sup> The definitions are given in [Appendix 8](#).



## SOCIAL POLICY

We strive to maintain an effective employee remuneration system to facilitate social stability and enhance the quality of life of our employees and their families. Company obligations that supplement those of the laws of the Russian Federation

and international standards are set out in the Social Code of PJSC LUKOIL and the Agreement between the Employer and Trade Union of PJSC LUKOIL for 2021-2023. Services under employee social programs are provided in 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

	Unit of measurement	2019	2020	2021
LUKOIL Group	RUB mln	147,284	151,528	<b>169,235</b>
Payroll	RUB mln	138,180	142,809	<b>159,842</b>
Social benefits and payments, social support for employees	RUB mln	8,125	7,977	<b>8,539</b>
Training	RUB mln	979	742	<b>854</b>

**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. For more details see the [ESG Databook \(Appendix 9\)](#).

### COOPERATION WITH TRADE UNIONS AND EMPLOYEES

LUKOIL enters into voluntary collective agreements and agreements between the administration and trade unions in Russia and abroad mainly governing additional norms to the requirements of labor legislation, such as employment, observance of working and rest hours, occupational safety and health measures, the level of wages and the provision of agreed social benefits and guarantees.

The Company does not hinder the activities of trade union organizations and maintains an ongoing constructive dialogue with trade union representatives.

Each new agreement on the level of commitments is the next step to improving the social benefits package, and the level of social protection for employees increases compared to mandatory legislation.

The Agreements form the basis for concluding collective bargaining agreements in the Group's organizations. All rights and guarantees set forth in the collective bargaining agreements shall apply equally to all employees of LUKOIL Group entities, regardless of their trade union membership.

### PERCENTAGE OF EMPLOYEES COVERED BY COLLECTIVE AGREEMENTS

	Unit of measurement	2019	2020	2021
Collective Agreement, LUKOIL Group	%	89	90	<b>93</b>
Russian entities	%	96	98	<b>99.5</b>

**Notes.** For more details see the [ESG Databook \(Appendix 9\)](#).

## MOTIVATION AND WAGES

LUKOIL strictly complies with statutory requirements for labor remuneration and payroll due dates. We are constantly working to expand the incentive system and introduce new approaches, taking into account industry best practices. A grade-based incentive system is being implemented<sup>1</sup>, which will make it possible to ensure the unity of payroll systems in different Group entities.

### Minimum wages

In Russia, the minimum subsistence level, the minimum wage<sup>2</sup>, and how often it is paid, is regulated by law. The Agreement between the Employer and Trade Union of PJSC LUKOIL for 2021-2023 sets the minimum monthly wage for a first-class worker at no less than the minimum wage in the Russian Federation. Depending on its size, in accordance with the provisions on the remuneration of labor, employees receive additional pay and allowances, compensation, bonuses and one-time payments. The deadlines for paying salaries are specified in the Internal Labor Rules of the Group's entities and are regulated by the Labor Code of the Russian Federation<sup>3</sup>.

Furthermore, the Sectoral Agreement for entities of the oil and gas industry and construction of oil and gas facilities of the Russian Federation for 2020-2022 defines the minimum monthly wage for a qualified employee, which is observed by all LUKOIL entities.

In Uzbekistan, Bulgaria and Romania, the minimum monthly wage of an employee is set not lower than the legally defined minimum wage in the country, while in Italy it is not lower than that set out in national collective bargaining agreements depending

on the profile of business activities. In Romania and Bulgaria, however, the minimum wage is determined after consultation with trade unions. Wage payment deadlines are established by collective bargaining agreements or other LRAs on the remuneration of the Group's entities, developed in accordance with local laws.

In 2021, the minimum wage rate at Group companies in significant regions of operation in Russia met or exceeded the established regional minimum wage. The initial wage of employees of foreign entities is also set not lower than the minimum wage in accordance with the norms of labor legislation of the country of presence, collective agreement, and /or LRAs.

The minimum wage rate is the same for men and women, with its size depending upon the duties performed, the complexity of the task, and the level of responsibility; it is set for each employee, taking into account the employee's education and experience.

By the end of 2021, the level of average wages in significant regions of operation in Russia, where mining, processing and power generation entities operate, exceeded the average wage in these regions by 1.3 - 2.6 times.

**Information on the ratio of average wages to average wages in significant regions of operation is provided in the [ESG Databook \(Appendix 9\)](#).**

### Improving the effectiveness of executives

As part of the Impulse project, we updated the composition of the indicators taken into account in the incentive system for managers, to form new approaches to establishing KPIs to evaluate their work. A system of cascading KPIs from PJSC LUKOIL to Group entities and service centers is being developed, transitioning to setting ambitious goals based on the definition of achievable potential.

### Managing employee performance

Our Russian organizations are implementing a system to manage labor efficiency and employee performance. The tool-set at launch includes the following processes:

- ▶ Goal-setting and Performance Evaluation for the Year – the definition by employees, together with their direct supervisors, of performance goals in connection with the goals of the unit and organization;
- ▶ Career and Succession – career and succession management;
- ▶ Training and Development – employees' independent planning of individual development.

<sup>1</sup> The grading system is ranking positions according to their value to the organization.

<sup>2</sup> According to the Labor Code of the Russian Federation, the minimum wage must not be lower than the subsistence level established for each subject of the Russian Federation.

<sup>3</sup> Article 136 Procedure, Place and Terms of Wages Payment.





**SOCIAL SUPPORT**

The employee incentive system includes [benefits and compensation](#), established by the agreement and collective bargaining agreements between the employer and the trade union, collective bargaining agreements and other LRAs. A significant part of the benefits and compensation is geared towards enhancing the quality of life of our employees through maintaining their health, providing support to them and their families, offering them housing assistance, etc. Social benefits are also provided to retired employees.

**Voluntary health insurance**

According to the Unified Rules for Voluntary Health Insurance (VHI) for Employees of LUKOIL Group<sup>1</sup> entities, all the employees working in LUKOIL Group's entities (as a primary job) are entitled to VHI insurance. In 2020, amendments were made to the document, according to which

newly hired employees (new hires) are subject to VHI from the end of the trial period stipulated by the employment contract, i.e. within one calendar month from the date of hire. Employees can, at their own expense, widen the coverage of health insurance programs to meet their specific needs.

**Housing program**

As part of the corporate Basic Housing Policy of LUKOIL Group, invited and young professionals may receive assistance from the Company in acquiring housing in the form of partial payment of interest on bank loans. In 2021, 490 employees participated in the program (in 2020, 521 employees participated).

**Pension benefits**

Russian entities finance a corporate-defined pension plan that covers most employees. One type of plan is based on the number of years of

service to the Company, the salary level as of the end of 2003, and any awards received during the entire period of employment in LUKOIL. The other type of pension plan is calculated in proportion to the salary level. These plans are financed solely by LUKOIL Group entities. Also, employees have an opportunity to contribute to pension savings with the Company's participation (up to 4% of the employees' annual salary).

Employees of foreign entities are provided pension benefits in line with the laws of the country of operation as well as the LRAs of entities. Some pension plans are financed solely by employers, while others are based on contributions from both employees and employers.

A defined benefit plan is a post-employment benefit plan for employees.

**TRAINING AND DEVELOPMENT**

**Corporate training** is a long-term priority area of our Human Capital Management Policy of PJSC LUKOIL. Our investments in employee training and development not only secure the Company's strategic needs for staff with the right qualifications and expertise but also keep employees' professional skills up to date, keeping them in high demand in the labor market. This approach prevents the growth of unemployment in the regions where we operate and strengthens family well-being.

**OUR ACTIONS**

Given the speed of technological development, there is a growing need for management personnel capable of solving non-standard tasks. The Human Capital Management Policy of PJSC LUKOIL sets out the principle of advanced development of employees' competencies and their continuous development. The Company focuses primarily on training and developing the necessary skills and competencies of employees, as well as attracting and developing young professionals.

**TRAINING PLANNING**

Training planning is carried out based on business needs in

acquiring or developing certain competencies in accordance with the Company's development strategy. The educational services market is monitored on an ongoing basis; in the absence of proposals, training programs are created with the involvement of experts and academics.

Job descriptions, employee performance evaluations, and individual training plans determine the need for professional development. A supervisor may recommend or assign an employee to complete a specific training program depending on the need for skills that have to be improved to fulfill the tasks at hand. Employees are encouraged to be proactive and submit a training request to their supervisor. After approval under established procedures, the request is incorporated into the Personnel Training Plan. The effectiveness of every completed training is evaluated during the year-end employee performance assessment.

**CONTINUITY OF MANAGEMENT PERSONNEL**

A new approach to the operation of the management succession system

is being developed in accordance with the leadership philosophy concept. It is envisioned that career opportunities along the management path will be provided to every employee, and one of the main factors in career development will be the positive impact of the employee's performance.

In 2021, the Career and Succession module was developed as part of the performance management system. The updated methodology includes the principles of equal career opportunities for all employees of LUKOIL Group entities. This will be achieved through an annual value-based performance assessment (performance, leadership, integrated safety and continuous development). Based on the results of the assessment, ratings for each value and for the entire set of values will be calculated automatically.

As part of the Impulse project, the Standard Management Practices program for training managers at all levels has been developed, consisting of standardized management practices that help to improve the manageability and efficiency of processes and change the production culture. This program is planned to be implemented in 2022-2023.

NON-STATE PENSION COVERAGE				
	Unit of measurement	2019	2020	2021
Number of former employees receiving a corporate pension (Russian entities)	people	52,854	53,519	<b>53,646</b>
Number of employees participating in the pension system (LUKOIL Group)	people	43,661	44,116	<b>43,302</b>

**Notes.** For more details see the [ESG Databook \(Appendix 9\)](#).

<sup>1</sup> The document establishes the requirements for the implementation of VHI for the employees in Russian entities of the Group. In foreign entities of the Group the Unified Rules are not binding, the employees are subject to VHI in accordance with the local regulations and employees' labor contracts.



**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 DLS.

The main goal of the DLS 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 to effectively achieve large-scale training objectives,

to test employee knowledge for compliance with corporate and statutory requirements, and to develop professional and managerial competencies, as well as to enhance the personal effectiveness skills of employees.

**EMPLOYEE TRAINING AT LUKOIL GROUP ENTITIES**

Indicator	Unit of measurement	2019	2020	2021
Number of trained employees	people	78,026	80,119	<b>83,861</b>
Number of trained employees by employee category				
managers	%		15	<b>15</b>
specialists	%		27	<b>25</b>
workers and other employees	%		58	<b>60</b>
Average number of training hours per one trained employee	hours	84	141	<b>103</b>

**Notes.** For more details see the [ESG Databook \(Appendix 9\)](#).

**EMPLOYEE TRAINING AT LUKOIL GROUP ENTITIES IN DISTANCE LEARNING**

Indicator	Unit of measurement	2020	2021
Scope of training	hours	6,963,587	<b>4,014,763</b>
Scope of training by employee category			
managers	person-courses	53,242	<b>44,760</b>
specialists	person-courses	60,231	<b>46,876</b>
workers and other employees	person-courses	356,882	<b>175,436</b>

**Best practices of the LUKOIL Group. Education for the Future**



Quality Education (SDG 4) is one of our priority sustainable development goals. The Group entities support many educational institutions, including the development and implementation of programs focused on society's future needs for qualified specialists.

**TRAINING OF RES SPECIALISTS**

Given the rapid development of the renewable energy sector in the global energy industry and in Russia, the current task is to provide the industry with qualified personnel. In 2017, with the assistance of LUKOIL at the Gubkin Russian State University of Oil and Gas (National Research University) the Renewable Energy Sources department was established, and a two-year educational program of the same name with a master's degree upon completion is being conducted.

The students receive a basic engineering education and the necessary knowledge and competencies for the development and implementation of projects using RES in the oil and gas industry. They study such disciplines such as Energy Accumulation and Storage Technologies, Energy Complexes Based on Renewable Energy Sources for the Oil and Gas Industry, and Autonomous Energy Supply of Oil and Gas Industry Facilities (a new subject, taught since 2019). In addition to mastering academic disciplines, the future specialists take part in scientific research and practical training at RES facilities at LUKOIL entities. In 2022, the department plans to launch a professional development program (for a total of 40 academic hours) on the topic Decarbonization: Technologies for Reducing the Carbon Footprint and the Specifics of Energy Facilities Based on Renewable Energy Sources for mastering related competences.

Since the department has been in operation, three graduations have taken place (26 specialists), many graduates found jobs in leading oil and gas, and energy companies, including two of them working at LLC LUKOIL-Energoengineering and LLC LUKOIL-Kubanenergo.

**FROM TODAY'S PROFESSIONALS TO FUTURE PROFESSIONALS**

In 2008, LITASCO SA took part in the development of two educational programs of the University of Geneva: The Master in Commodity Trading and The Diploma of Advanced Studies in Commodity Trading. Both programs are designed to allow students to combine their studies with work.

A feature of the programs is their focus on transferring the real experience of successful professionals working in today's markets to young people. Lectures are given by well-known professors and experts in the field of trading. It is a great honor for LITASCO SA that every year its leaders participate in the program as invited experts.

**The Master in Commodity Trading** is a program unique in Europe, focusing on the financial aspects of the organization of trade flows and transactions. The intensive three-semester academic course includes risk and logistics management, insurance and legal topics. Eligible students are young people with less than three years of work experience.

The one-year program **The Diploma of Advanced Studies in Commodity Trading** is a professional development and retraining program and is addressed at professionals with work experience of at least three years.

Graduates of the programs are in demand by international trading companies and global organizations, as well as in the banking and financial sectors. Since its foundation in 2000, LITASCO SA has created many jobs and provided opportunities for employment and career growth for several generations of employees, including professional training and development for senior management positions of LUKOIL Group. Since the start of the master's program, LITASCO SA has employed and sponsored the education of 23 young professionals; 17 employees have graduated from the one-year program.



# SOCIETY



## EXTERNAL SOCIAL POLICY PRIORITIES

### EXTERNAL SOCIAL PROGRAM MANAGEMENT SYSTEM

Elements of the management system	Description	Corporate documents
<b>Principles</b>	The Company's social responsibility principles are defined as follows: continuity of business; economic feasibility; control over the performance of obligations and public reporting. The Company's charity and sponsorship priorities and the mechanisms for their implementation and assessment have also been established.	The Social Code of PJSC LUKOIL, approved by the PJSC LUKOIL Board of Directors, Minutes No.16 dated October 24, 2017
<b>Priorities</b>	Science and education, environment, healthcare, the preservation of national and cultural identities, and sponsoring culture and sports and supporting socially vulnerable groups.	
<b>Interaction with the regions where we operate and with local communities</b>	PJSC LUKOIL's external social policy is implemented using the following mechanisms: <ul style="list-style-type: none"> <li>• social and economic cooperation agreements with constituent entities of the Russian Federation;</li> <li>• Social and Cultural Projects Competition;</li> <li>• charity projects and programs;</li> <li>• support for the indigenous minorities of the North;</li> <li>• corporate volunteering;</li> <li>• sponsorship.</li> </ul>	PJSC LUKOIL's Policy on Interactions with Subsidiaries on Key business activities of the Public Relations Department, approved by the Management Committee of PJSC LUKOIL, Minutes No.28 dated December 23, 2019
<b>Charity and Sponsorship Coordination Council of PJSC LUKOIL</b>	The main function of the Council is to form a policy and strategy in the field of charity and sponsorship activities.	Order of PJSC LUKOIL No.56 dated March 28, 2017
<b>Assessment of projects</b>	The main criterion for selecting projects we support is their potential contribution to resolving local issues. Our methods of assessing the efficacy of implemented projects include: <ul style="list-style-type: none"> <li>• meetings with stakeholders to discuss the effective implementation of cooperation agreements;</li> <li>• regular monitoring of the social and economic situation in Russian regions;</li> <li>• meetings with residents of Russian regions (roundtables, dialogue sessions, conferences).</li> </ul>	
<b>Additional information</b>	The LUKOIL Charity Fund Non-Profit Organization: <a href="http://www.bflukoil.ru/">http://www.bflukoil.ru/</a> . The Social and Cultural Projects Competition: <a href="http://www.lukoil.com/Responsibility/SocialInvestment/SocialProjectsCompetition">http://www.lukoil.com/Responsibility/SocialInvestment/SocialProjectsCompetition</a> . Our partner in the More than Just a Purchase program is the Our Future foundation of regional social programs: <a href="http://www.nb-fund.ru/en/">http://www.nb-fund.ru/en/</a> .	



## OUR ACTIONS

We recognize the importance of constant engagement with the residents of the Russian regions where 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.

Thanks to its state-of-the-art production facilities and stable employment, the Company is a major employer and taxpayer and contributes to maintaining a stable social and economic situation in most Russian regions where the Group's entities operate.

Our charity programs are focused on improving the social climate and quality of life of the population, our

employees and their family members and embody the Company's response to pressing social issues. Our social priorities have remained unchanged for over a quarter of a century, and are the same for all the regions and countries where LUKOIL Group entities operate. Many programs and regional projects are long-term and

are financed by the LUKOIL Charity Fund (the LUKOIL CF or the Fund) and directly by LUKOIL Group entities.

Social projects make it possible to build and renovate kindergartens, schools, sports facilities, medical centers, hospitals, cultural institutions, and other socially significant facilities.

In 2021, LUKOIL Group external social support expenses amounted to RUB 6.7 billion, including charity social projects and events under 29 cooperation agreements with constituent entities of the Russian Federation. Concurrently, significant funds were allocated to protect people from the COVID-19 pandemic.

## Regional support in the fight against COVID-19

### The primary areas of assistance are:

- ▶ procurement of equipment for medical institutions (ventilators, oxygen tanks, and compressors for intensive and resuscitation medical care for patients with severe cases of infection, CT scanners, X-ray machines, ECG recorders and other equipment, and medical supplies);
- ▶ procurement of medicines;
- ▶ procurement of personal protective equipment (masks, protective clothing for medical workers, sanitizers, etc.);
- ▶ supplying fuel to medical institutions and volunteers.



## REGULAR AREAS OF SUPPORT

### Areas of external social policy

#### Support for children, orphaned children, the disabled and veterans

We support public institutions that look after orphaned and abandoned children, as well as the children themselves. Our projects promote children's personal development, improve their health, and help them prepare for adult life.

By supporting disabled people, we not only provide them with financial assistance but also help them master new life skills.

The Company provides special attention and care to World War II 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

### Selected social policy initiatives<sup>1</sup>

We partner with public agencies and foundations that provide support to children.

#### Projects for children (Bulgaria)

Together with the Bulgarian Mothers' Movement Foundation, charity bazaars were held at LUKOIL filling stations in Sofia and Pazardzhik to help orphanages.

Support was given to the Bulgarian Christmas initiative aimed at fostering children's healthcare in the country, as well as to the St. Kambarev Charity Foundation to develop programs for talented children.

#### Projects for children (Serbia)

As part of the Children's Heart project, the School of Life Skills for disabled children was organized. Several schools and pre-school institutions from the cities of Aleksinac, Požega, Šabac, and Vladimirci have built children's playgrounds on their territories.

#### Support for public organizations (Belarus)

Support was given to the activities of the Belarusian Children's Hospice and the Iskorka Gomel Association, which helps families with disabled children.

#### Association of People with Disabilities (Republic of Moldova)

The Children's Day holiday was held.

#### Projects in Russia

##### Pchelka kindergarten (Kaliningrad region), Artisan Russia project

A mini-museum of folk crafts has been created, in which children are introduced to traditional local crafts.

##### Children's School of Arts (KhMAA – Yugra), Traditional Culture of Peoples of the North for Children

Master classes dedicated to the art of the Khanty people were held; children learned to embroider with beads, make applications and mosaics in the national style, and also studied the traditions and rituals of the Khanty peoples.

##### Yamine Charity Foundation (KhMAA – Yugra)

The foundation regularly runs the Open World, I am myself, and Mercy programs, which provide treatment for children with various illnesses at the request of indigenous people.

##### Vstrecha Foundation (Astrakhan)

The Social Fair of souvenirs made by pupils of the city's social institutions was organized.

<sup>1</sup> Examples of projects supported both as part of the Social Projects Competition and other initiatives of the Company.



**Areas of external social policy**

**Educational programs and projects**  
We believe that our programs for the younger generation and young oil industry specialists will be a valuable contribution to the future well-being of society. The Company works 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 about the oil and gas industry.

**Selected social policy initiatives<sup>1</sup>**

SPONSORSHIP PROGRAMS FOR STUDENTS AND TEACHERS OF HIGHER AND SECONDARY EDUCATION ORGANIZATIONS IN RUSSIA			
	2019	2020	2021
<b>Student scholarships</b>			
Number of scholarship holders, people	195	196	<b>194</b>
Level of financing, RUB million	6.2	6.4	<b>6.4</b>
<b>Grants to teachers</b>			
Number of teachers, people	79	86	<b>80</b>
Level of financing, RUB million	9.2	10.2	<b>8.7</b>

**Areas of external social policy**

**Supporting healthcare institutions and projects**  
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 improving medical services in the regions of operation. Since 2020, aid has been provided to protect the population during the coronavirus pandemic.

**Selected social policy initiatives<sup>1</sup>**

**Perm Territory**  
The district hospitals received 16 medical vehicles and assistance in equipping doctors' recreational facilities.

**Volgograd region**  
Assistance was provided to a mobile vaccination center in Volgograd, and medical equipment was purchased for hospitals, including the War Veterans Hospital, for the treatment of patients with coronavirus infection.

**Komi Republic**  
Assistance was provided to Ust-Tsilma Central District Hospital as part of Modern Laboratory project. A biochemical analyzer has been purchased for the diagnostics and treatment such illnesses as arthritis, arthrosis, and gout. The equipment will also be used for diagnostics of anemia of various etiologies.

<sup>1</sup> Examples of projects supported both as part of the Social Projects Competition and other initiatives of the Company.



**Areas of external social policy**

Special projects

**Selected social policy initiatives<sup>1</sup>**

**Croatia**  
Assistance was provided for the reconstruction of the town of Glina, which suffered from an earthquake in December 2020. The Night of the Book project was also supported, as part of which a temporary library was organized for residents of Petrinja.

**Areas of external social policy**

**Environmental projects and campaigns**  
Environmental campaigns have been held at LUKOIL Group entities throughout the Company's existence. They are a part of our corporate culture and deeply cherished by our employees. Traditionally, as part of these campaigns, our employees and partners plant trees and flowers, clean up natural areas, and remove litter from riverbanks and rivers.

**Selected social policy initiatives<sup>1</sup>**

Employees of Group entities annually take part in the **Clean Banks** campaign (organized by the Russian Ecological Society), which takes place in almost all regions where the Company operates. Participants remove litter from the banks and the beds of rivers and streams. In Komi Republic, a similar annual campaign is called **River Belt**. The Perm Territory also holds an annual campaign called **The City of Oil Workers – the City of Flowers**, involving trees, shrubs, and flowers being planted in the city.

**Republic of Tatarstan**  
The **Green Alleys** in Honor of the 30th Anniversary of LUKOIL environmental campaign was held.

**Volgograd region**  
An avenue of paulownia trees was planted, which absorb more carbon dioxide than other species.

**Kaliningrad region**  
As part of the **Pines at the Lighthouse** campaign, young cedar pine trees were planted on the territory of the reconstructed historical lighthouse in the village of Zalivino.

**Astrakhan region**  
Support was provided to the regional **Blue Patrols** program in which children and teenagers save young fish from death. The project helps to increase the volume of natural reproduction of fish and at the same time involve children in volunteer work.

**Tashkent, Karshi and Bukhara (Uzbekistan)**  
An eco-festival was organized, during which about 2 thousand trees were planted (paulownia, pine, chestnut, birch and ornamental shrubs)

**Mexico**  
A project to dispose of hazardous liquid and solid waste and recycle used lubricating oil to produce alternative fuels. The main goal of the project is to collect hazardous waste on the state territory and also to engage specialized agencies to clean both the territory and the seabed of accumulated pollution.

<sup>1</sup> Examples of projects supported both as part of the Social Projects Competition and other initiatives of the Company.



**Areas of external social policy**

**Social and Cultural Projects Competition**  
The Social and Cultural Projects Competition has been organized by LUKOIL CF in partnership with LUKOIL Group entities since 2002 and is our most well-known corporate program. Its main goal is to support initiatives from local citizens and entities to help resolve various issues, and to facilitate conditions that will increase the number of active citizens capable of implementing worthwhile social ideas. The Competition considers entries in three main categories: Environment, Spirituality and Culture, and Sports.

**Selected social policy initiatives<sup>1</sup>**

Selected projects that were financed in 2021

SOCIAL AND CULTURAL PROJECTS COMPETITION RESULTS			
Indicator	2019	2020	2021
Number of projects participating in the Competition	3,607	3,461	<b>2,683</b>
Number of winning projects, units	785	769	<b>580</b>
Financial support for winning projects, RUB million	159	157	<b>135</b>

**Solnechny Dom Residential Care Center (Volgograd region), Good Hands project**

Rehabilitation and care products were purchased for the elderly with disabilities for use at home.

**Organization Kovcheg (Kaliningrad), Inclusive Beach project**

The beaches in Zelenogradsk and Pionerskoye were adapted to improve the quality of life and leisure of people with disabilities: special areas were organized, equipment was installed, and volunteers and social workers were engaged to help.

**Author Sergey Misyurev from the village of Tanypskie Kluchi (Perm Territory), Mill of Time project**

Under the Happiness Factory project, completed in 2019-2020, a forge using old fur technology was recreated in the Krasnoe family estate. The new project involves the construction of a mill. Both sites are included in the tourist route to the Nikolsky Church.

**Areas of external social policy**

**Cultural heritage preservation programs and projects**

The Company is committed to fostering conditions that preserve national and cultural traditions and crafts in regions of operation, and supports various types of art, especially classical, as well as the territories where cultural monuments are located, including those representing valuable or particularly vulnerable cultural heritage sites. This program is aimed at developing Russian culture, promoting spirituality, and preserving national values and cultural heritage. For many years we have supported museums, theaters, and other cultural institutions. We take part in organizing exhibitions, festivals and concert tours, restoring cultural heritage sites, and repairing cultural and art centers in Russian regions.

**Selected social policy initiatives<sup>1</sup>**

**GEOLOG Center for Culture and Sports (YaNAA), Creative Plastic Theater Laboratory project**  
The teacher on the stage movement of the Russian University of Theatre Arts held a seminar for the participants of the Art-kids dance ensemble and composed a plastic performance, which will be demonstrated on the stage for the residents of Salekhard.

**Renewal of Astrakhan Organ Charity Foundation (Astrakhan region)** received support for holding the Easter Joy organ concert, and the **Astrakhan State Philharmonic Society** received support for organizing and holding the concert series To the Philharmonic with the Whole Family.

**A project to recreate old romances of Uzbek composers (Uzbekistan)**  
Books with romances of Uzbek composers were published and a video clip was filmed for each romance. The **Croatian Egg exhibition** was organized in Croatia. The authors are Russian craftswomen living in Croatia. The works are devoted to Russian and Croatian traditions.

**Areas of external social policy**

**Supporting sports teams and events**

LUKOIL's sports program is geared towards promoting healthy lifestyles and sports. We help both professional and amateur teams, support the Olympic movement, and organize corporate wellness programs. Special emphasis is placed on the development of children's sports. All sports projects are operated by the LUKOIL Sports Club. We continuously support the following sports: soccer, racing, basketball, competitive skiing, water polo, and handball. The Company also assists in organizing various competitions and city sports festivals.

**Selected social policy initiatives<sup>1</sup>**

The initiatives of the autonomous non-profit organization [LUKOIL Sport Club](#) are intended for young athletes, amateur and professional athletes, and disabled people.

Thanks to the Company's support, Russian car racers (Lukoil Racing Team), FC Spartak, the national skiing team, United Basketball League athletes, and regional teams have recorded impressive victories in various sports. All professional clubs supported by LUKOIL develop children's sports.

The Company supports the development of youth soccer at the international level (Children's Champions Cup, [Lukoil Cup](#); [Children's Soccer League](#)). Attention is also paid to sports veterans – LUKOIL is a founder of the Russian Olympians Foundation.

The following received support abroad:

- The Neftochim and Levski Lukoil men's volleyball teams (both from Bulgaria);
- The Jezero water polo club (Serbia)
- The Leda children's figure skating club and the Nogometni Klub Studenski Grad football club (Croatia)

Information on the activity of the autonomous non-profit organization LUKOIL Sport Club can be found on the website (<https://www.lukoilsporclub.com/>)

<sup>1</sup> Examples of projects supported both as part of the Social Projects Competition and other initiatives of the Company.

<sup>1</sup> Examples of projects supported both as part of the Social Projects Competition and other initiatives of the Company.



**CORPORATE VOLUNTEERING**

The practice of volunteering in campaigns and events for the benefit of the residents of cities and villages has long been part of LUKOIL Group's corporate culture. Our young 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 both 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, organizing related 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.

**SOCIAL ENTREPRENEURSHIP**

The **More Than Just a Purchase**<sup>1</sup> project is a unique joint initiative between LUKOIL Group Russian entities supplying oil products and the Our Future Foundation of Regional Social Programs<sup>2</sup>. Its purpose is to support social entrepreneurs<sup>3</sup> who receive the opportunity to sell their products at the Company's filling stations. Buying project-branded goods help provide jobs for people with disabilities, retirees, and other socially vulnerable groups. In 2021, ten new social entrepreneurs started offering their products at LUKOIL's filling stations.

As of December 31, 2021, 132 suppliers were involved in the project (122 in 2020). This is the largest network of operating social entrepreneurs in Russia who are also represented online.



**SUPPORTING INDIGENOUS MINORITIES OF THE NORTH**

We share the principles enshrined in the UN Declaration on the Rights of Indigenous Peoples, the UN Global Compact, and the Resolution of the World Conference on Indigenous Peoples, and are committed to ensuring a harmonious balance between the economic activities of LUKOIL Group entities in the territories of indigenous minorities of the North and the latter's interests in preserving their traditional lifestyle and economic activity.

LUKOIL Group entities have a practice of signing 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. Compensation includes cash payments, goods, transportation, and services. For almost 20 years, we have been running the **Red Chum** to preserve the health of nomadic indigenous people of the Arctic in the NAA.

The Company took part in the implementation of the Social and Economic Development of Indigenous Minorities of the North in KhMAA – Yugra for 2014-2021 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.

There were no cases of involuntary resettlement of indigenous people during the LUKOIL Group entities' operations in the traditional settlement areas and/or areas of economic activities of the indigenous minorities of the North in 2021. Also, no inquiries were received regarding violations of the rights of indigenous people of the North.

A number of important social projects received charitable support. In particular, a delegation of Khanty and Mansi peoples was supported to participate in the Northern Forum on Sustainable Development.

The charitable foundation supporting indigenous minorities of the North, Siberia and the Far East received funds to implement several projects, including the Indigenous Minorities of Russia. School of Public Diplomacy educational program; Children of the Arctic: Pre-school and School

Education; the Preservation of Trades and Development of Business Activities of Indigenous Minorities of the Arctic Zone seminar, and others.

The Saving Yugra association (KhMAA – Yugra) was assisted in compiling several thematic publications and in preparing for the International Decade of Indigenous Languages<sup>1</sup>, as well as for participation in the International Forum Public-Private Partnership and Sustainable Development of Indigenous Minorities.

The Yamal for Descendants (YaNAA), a public movement for the protection of the rights and interests of the indigenous minorities of the North, organized festivals for indigenous residents of the region dedicated to national and cultural traditions.

**SUPPORTING INDIGENOUS MINORITIES OF THE NORTH IN RUSSIA AS PART OF LICENSING OBLIGATIONS**

Russian region	Unit of measurement	2010	2020	2021
Total	RUB million	386	390	370
Khanty-Mansi Autonomous Area – Yugra	RUB million	355	359	340
Nenets Autonomous Area	RUB million	31	31	30

<sup>1</sup> 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.

<sup>2</sup> Information about the Our Future Foundation can be found at <http://www.nb-fund.ru/en/>.

<sup>3</sup> Social entrepreneurship refers to a special type of activity aimed at resolving or mitigating social issues using income from economic activities. Both small businesses and social non-profit organizations can be social entrepreneurs.

<sup>1</sup> The UN General Assembly (Resolution A/RES/74/135) proclaimed the period between 2022 and 2032 as the International Decade of Indigenous Languages.



# APPENDICES

## APPENDIX 1. Acronyms and abbreviations

### Names of LUKOIL Group entities

**Volgograd oil refinery, Oil Refinery in Volgograd** – LLC LUKOIL-Volgogradneftepererabotka

**Nizhny Novgorod oil refinery, Oil Refinery in Nizhny Novgorod** – LLC LUKOIL-Nizhegorodnefteorgsintez

**Ploesti oil refinery, Oil Refinery in Romania** – PETROTEL-LUKOIL S.A.

**Oil Refinery in Bulgaria** – LUKOIL Neftochim Burgas AD

**Oil Refinery in Italy, ISAB** – ISAB S.r.l.

**Perm oil refinery, Oil Refinery in Perm** – LLC LUKOIL-Permnefteorgsintez

**Ukhta oil refinery, Oil Refinery in Ukhta** – LLC LUKOIL-Ukhtaneftepererabotka, LLC LUKOIL-UNP

**LUKOIL-KGPZ** – limited liability company Korobkovsky gas refinery, LLC LUKOIL-KGPZ

**PJSC LUKOIL** – Public Joint-Stock Company Oil Company LUKOIL

### Abbreviations

**APG** – associated petroleum gas

**CF** – charity fund

**CHPP** – combined heat and power plant

**DLS** – distance learning system

**EBITDA** – earnings before interest, taxation, depreciation & amortization

**EIA** – environmental impact assessment

**ESG** – environmental, social and governance

**ESP** – Environmental Safety Program

**FER** – fuel and energy resources

**FFS** – fuel filling station

**FPM** – formation pressure maintenance

**GHG** – greenhouse gases

**HS** – health and safety

**HSE** – health, safety and environment

**IFRS** – International Financial Reporting Standards

**IMS** – Integrated System of Management of Industrial, Fire, Radiation Safety, Emergency Prevention, and Liquidation, the Protection of Civilians, Occupational Safety, and Environmental Protection

**ISP** – Program of Industrial Safety and Occupational Safety

**ITS** – Information Technology Support

**KPI** – key performance indicator

**LLC** – limited liability company

**LRA** – local regulatory act

**Media** – all types of mass media

**PPE** – personal protection equipment

**R&D** – research and development

**RES** – renewable energy sources

**SISCAC** – Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors of PJSC LUKOIL

**SPP** – solar power plant

**STF** – Sustainability Task Force

**STO** – standard of an organization

**UAV** – unmanned aerial vehicle

### Names of entities and initiatives, geographical names

**CDP** – Carbon Disclosure Project

**GRI** – Global Reporting Initiative

**EMERCOM of Russia** – The Ministry of the Russian Federation for Civil Defence, Emergencies and Elimination of Consequences of Natural Disasters

**IATUO** – International Association of Trade-Union Organizations of PJSC LUKOIL

**KhMAA – Yugra** – Khanty-Mansi Autonomous Area – Yugra

**MARPOL** – International Convention for the Prevention of Pollution from Ships

**MES** – Ministry of Emergency Situations

**NAA** – Nenets Autonomous Area

**RSPP** – Russian Union of Industrialists and Entrepreneurs

**OPEC** – Organization of the Petroleum Exporting Countries

**SASB** – Sustainability Accounting Standards Board

**SDGs** – UN Sustainable Development Goals (the UN 2030 Agenda for Sustainable Development)

**TCFD** – Task Force on Climate-related Financial Disclosures, <https://www.fsb-tcf.org/>

**UN** – United Nations

**UNCTAD** – United Nations Conference on Trade and Development

**WWF** – World Wildlife Fund

**YaNAA** – Yamal-Nenets Autonomous Area

### Units of measurement

**boe** – barrel of oil equivalent

**kg of oil equivalent** – tonne (kilogram) of oil equivalent

**CO<sub>2</sub>e** – carbon dioxide equivalent





## APPENDIX 2. Report boundaries

The information disclosed in the Report refers to Russian and foreign organizations of the LUKOIL Group with a share of PJSC LUKOIL of more than 50%. The disclosure reporting boundaries shall be determined considering the following criteria:

- ▶ for the indicators of the Report disclosed in the Group's IFRS financial statements, the disclosure boundaries include all Russian and foreign organizations of the Group within the scope of the IFRS financial statements;
- ▶ for the indicators of the Report specific to non-financial reporting, the disclosure reporting boundaries are determined and refined annually based on the assessment of significant economic, environmental and social impacts made by the Group organizations.

## APPENDIX 3. Reporting systems and identification of material topics

### REPORTING SYSTEMS

In preparing this Report, we used the following non-financial reporting standards and guidelines:

- ▶ Recommendations of the Central Bank of the Russian Federation (Letter No. IN-06-28/49 of July 12, 2021);
- ▶ Global Reporting Initiative Sustainability Reporting Standards (GRI SRS) ("Core" option). The table of standard general and specific GRI disclosures 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 data, we also considered legislative requirements in the countries of presence and the following initiatives:

- ▶ The Basic Performance Indicators of RSPP and "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.

### MATERIAL TOPICS

#### Methodology and procedures

On an annual basis, the Company performs a materiality analysis of the topics and issues that are relevant to the Company and its stakeholders; Regulations on the Preparation of the LUKOIL Group Sustainability Report have been developed; methodology for "double materiality" assessment is being elaborated. Materiality analysis results are reflected in the reports, including contexts and disclosure of the topics and issues recognized as material in each reporting year. The procedure of selecting material topics is an analytical process that includes the following steps:

- ▶ collection of data from various sources to identify predictive signals;
- ▶ collection of evidence (best practice) based on international and industry standards for responsible business;
- ▶ consultation with stakeholders;

- ▶ provision of insight into analytical reports and reviews of global and industry trends and risks;
- ▶ analysis of legislative requirements, including those for non-financial information disclosure;
- ▶ analysis of financial institutions' requirements, monitoring non-financial reporting systems and major initiatives in this area;
- ▶ analysis of reports and publications issued by oil and gas companies during the year under review;
- ▶ analysis of mass media publications released during the year under review;
- ▶ analysis of visiting of the interactive version of the report.

The procedure for identifying material topics is undertaken in accordance with the reporting standards listed above, and with due regard to the following directives and initiatives:

- ▶ Non-Financial Reporting Directive (NFRD) 2014/95/EU;
- ▶ UN Guiding Principles on Business and Human Rights.

### Consultations

The Board members and senior management are engaged in the materiality determination process through surveys of independent

members of the Board of Directors, members of the Management Committee of PJSC LUKOIL, heads of divisions of PJSC LUKOIL, heads of the LUKOIL Group entities (held once

every two years). Material topics and issues are ranked according to survey results (through a scoring system). Previous surveys were held in 2017 and 2019.

Respondents in 2021	Number of responses
Independent members of the Board of Directors	2
First Vice President	1
Corporate Secretary	1
Vice Presidents	11
Heads of departments/directorates	5
General Directors of the Russian LUKOIL Group entities	13
General Directors of the foreign LUKOIL Group entities	3

Consultations with external stakeholders held regularly in various formats are considered mandatory when determining material topics and issues, including the following types of research.

- ▶ Investor feedback analysis, the Company's ratings participation results (ESG and sustainability) – on an annual basis.
- ▶ Surveys of various stakeholder groups in the regions of the LUKOIL Group entities' areas of operation – once every two years. The previous survey was conducted in 2020.

- ▶ Interaction with representatives of the stakeholders during the reporting year (round tables, responses to inquiries, customer and employee surveys, industry task forces, participation in external initiatives, etc.) – on an annual basis.
- ▶ Analysis of the results of an audit and external assurance of the Report for the previous reporting period – on an annual basis.

The findings of the above-listed analyses are presented in the form of a list of issues. Based on the qualitative

analysis of the issues (repeatability, scale, level of risk in the corporate risk management system, rating issued by managers of PJSC LUKOIL divisions), material issues are identified and grouped into material topics. The list of material topics and issues is reviewed by the STF and approved by the SISCAC on an annual basis. Information on operations within material topics and issues is disclosed in the Sustainability Report and published on the corporate website, and in individual thematic brochures on the website.



**Public assurance**

The Company announces that in the preparation of the report for 2021 the recommendations of the RSPP Council on Non-Financial Reporting based on results of the review of the Group Sustainability Report for 2020 were applied.

RSPP Council recommendations	Response
Identify measurable targets for priority SDGs with expected deadlines for their achievement.	The Company accepts this recommendation and includes it in plans for the future.
Better present country-by-country information on hydrocarbons exploration and production activities in the context of sustainable development.	Information is available on the website in the section <a href="#">Sustainability / Sustainable development management</a> . Sustainability reports include examples of the activities of such entities.
To present consolidated quantitative data on foreign organizations, and also data disaggregated by business segment (extraction, refining, distribution) or by organizations.	The <a href="#">ESG Databook</a> contains quantitative indicators by types of Group operations, which describe the main types of environmental impacts (other than waste), including GHG emissions and pollutants, water consumption, industrial energy consumption, and the number of employees.
It is recommended to add notes to reporting indicators, especially in cases of significant changes in trends.	Comments are made to material changes in indicators: a) in the Report - in notes to the quantitative data tables or in the text of the Report in the Indicators sub-sections (if the indicator is included in the main text of the Report); b) in the ESG Databook (if the indicator is contained only in this document and is not contained in the text of the Report).
Pay more attention to the opportunities and risks for the Group's sustainable development arising from the development of digital technologies and their integration into the Company's business processes.	The Report includes the relevant information in the Technologies section, including the effects of implementing the projects of the Program for the development of information technology use support, as well as measures to strengthen information and cyber security.
It is recommended to disclose the structure of expenses by key areas of external social policy, and the productivity of specific projects.	The Company accepts this recommendation and includes it in plans for the future.
To develop the practice of involving stakeholders in the process of preparing reports, including dialogue, hearings on reports, obtaining feedback from representatives of the main groups of stakeholders on the social, economic, and environmental impact of the Company's enterprises, and to report on the results of these events.	The Regulations on the preparation of the LUKOIL Group Sustainability Report stipulate the formats of interaction with stakeholders in connection with the determination of material topics of the report. Considering the size of the Group's operations, measures are taken with varying frequency and coverage of stakeholders.
The climate agenda requires constant attention and disclosure in reports, including information on the Company's response to challenges in this area, financial assessment of climate risks and description of approaches to their minimization.	This topic is one of the material topics of the Report. Each year, the sustainability reports include information on climate strategy, including changes in management approaches, implementation of new tools, implementation of programs and projects to reduce greenhouse gas emissions.
To include in reports information on the interaction of PJSC LUKOIL with subsidiaries on the Company's strategic goals in the area of sustainable development and the system of control over the application of corporate policies and internal regulatory documents.	The Company accepts this recommendation and includes it in plans for the future.



**LUKOIL GROUP SUSTAINABILITY REPORT FOR 2021 MATERIAL ISSUES**

Issues	4 Quality	5 Decent work	6 Clean water and sanitation	7 Affordable and clean energy	8 Decent work	9 Industry, innovation and infrastructure	12 Responsible consumption and production	13 Climate action	14 Life below water	15 Life on land	17 Partnerships for sustainable development	Inquiry from stakeholders in 2021
Consideration of sustainable development issues and ESG-factors	●	●	●	●	●	●	●	●	●	●	●	PJSC LUKOIL management, ESG-ratings, Financial institutions, Government and regulatory authorities, Industry peers, Media
Anti-corruption							●					PJSC LUKOIL management, ESG-ratings, Industry peers, Government and regulatory authorities
Human Rights		●			●							PJSC LUKOIL management, Regulatory authorities, Investors, ESG-ratings, Financial institutions, Industry peers
Climate strategy and risk management Climate goals and KPIs GHG emissions Investments in decarbonization projects	●		●	●	●	●	●	●	●	●	●	PJSC LUKOIL management, Investors, ESG-ratings, Financial institutions, Government and regulatory authorities, Industry peers, Media
Emergency preparedness Prevention and elimination of environmental accidents' consequences						●	●	●	●	●		PJSC LUKOIL management, Investors, ESG-ratings, Financial institutions, Government authorities, Industry peers, Media
Occupational safety Industrial and Occupational safety in contractors						●						PJSC LUKOIL management, Investors, ESG-ratings, Financial institutions, Government authorities, Industry peers
Conservation of biodiversity and vulnerable ecosystems Water resources Emissions and waste (pollution)			●				●		●	●		PJSC LUKOIL management, Investors, ESG-ratings, Financial institutions, Government authorities, Industry peers
Just Transition Equal opportunities for all employees Development of employees' skills and competencies	●	●		●	●		●	●				PJSC LUKOIL management, Investors, ESG-ratings, Financial institutions, Industry peers
Social engagement, social programs in the regions of presence Interaction with indigenous minorities of the North Socio-economic development of regions of presence	●			●	●							PJSC LUKOIL management, Investors, ESG-ratings, Financial institutions, Government authorities, Industry peers, Media



## APPENDIX 4. Accidents and Incidents

In 2021, there were four significant spills at the Russian LUKOIL Group entities, the biggest among them was the Oshskoe field accident (the Komi Republic).

### OSHSKOE FIELD (KOMI REPUBLIC)

#### Accident information

**On May 11, 2021, at 10:00 p.m.**

**MSK**, while flying around the territory, employees of territorial production enterprise (TPE) LUKOIL-Severneftegaz<sup>1</sup> noticed oil leaks on Oshskoe field on the shoreline, 300 meters from the Kolva River, on the border of the Nenets Autonomous Area (NAA) and the Komi Republic.

**At 10:40 p.m.**, production was stopped at 17 wells of the Oshskoe field and the emergency oil collector (pipeline) was blocked.

**On May 17**, an intermunicipal emergency regime was announced in the Usinsk urban district, the Izhma and Ust-Tsilma municipal districts (all in the Komi Republic<sup>2</sup>).

**On June 23**, the emergency regime was canceled by Decree No. 81 of the Head of the Komi Republic after the completion of the major emergency response works.

**On October 15**, works to eliminate the consequences of the spill were completed, and the results were

accepted by the Interdepartmental Commission of the Komi Republic.

A formal investigation was also completed **on October 15**. The commission on the investigation of circumstances and causes of the accident included<sup>3</sup> representatives of the Pechora Rostekhnadzor managerial department, the Interregional managerial department of Federal Nature Management Supervision Service in the Komi Republic, and the NAA, Department of natural resources, ecology and agroindustrial complex of the NAA, administration of the Polar Region of NAA and the Usinsk urban district, territorial production enterprise (TPE) LUKOIL-Severneftegaz, and a branch of the Rosgosstrakh insurance company

The total amount of damages<sup>4</sup> charged to LLC LUKOIL-Komi was RUB 504 million, which was fully repaid.

#### Consequences of the incident and results of remediation works

Based on the results of the investigation, the oil spilled totaled 70 tonnes, including 44 tonnes on the soil surface and 26 tonnes on the water surface of the Kolva River (including

dissolved and emulsified oil products). The Pechora River was not affected by the incident, as evidenced by water samples taken at various points over a period of 6 months. The Usa River had a short-term increase of dissolved and emulsified oil products, which was only recorded using laboratory analytical methods and was noted only in May.

In the spring of 2021, the Kolva River flood was the lowest on record; the river remained in its course and did not overflow as intensively as in other years. Because of this, the shorelines and adjacent areas were left unpolluted; hayfields and pastures located on the right bank of the Kolva remained clean.

Given the area's remoteness and the topography's hydrological specifics around the field, there were no negative consequences for indigenous people. Thanks to active efforts to capture the main concentrations of the oil spill, there was no loss of animals, birds, or fish as a result of pollution<sup>5</sup>.

**On October 15**, works on eliminating the consequences of the spill were completed.

#### Efforts to eliminate the consequences of the accident

Upon detection of the accident, within four hours emergency measures were taken to localize the spill, and the necessary forces and facilities were engaged to eliminate the consequences.

An emergency response headquarters was immediately set up, comprised of representatives of the Naryan-Mar and Usinsk city administrations, Kolva and Ust-Usa community administrations, and state supervisory bodies, along with employees of all structural divisions of LUKOIL-Komi and several contracting organizations. To accelerate the works, the headquarters took a decision to divide the involved forces into several groups and ensure their continuous interaction. Among other things, a public relations group was formed to arrange meetings with residents of the neighboring localities in order to keep them up to date on the progress, receive comments on the elimination of pollution and to arrange field checks of the works.

LUKOIL employees, specialists and rescue teams worked 24 hours a day; the average number of people involved in the works in May through July totaled 200 during the day and 145 at night. Throughout the recovery period (May through October), the affected site was monitored using unmanned aerial vehicles (UAVs) and visual and laboratory-and-analytical methods. The UAVs promptly transmitted accurate information on the movement of the oil coverage along the river and about the riverbank works.

#### Timeline of works

The night of May 11 and 12, around 11:50 p.m. (May 11, 2021). Personnel was mobilized, and people, equipment and machinery delivered to the

accident site. Afterwards, additional specialized equipment and rescue teams were delivered additionally as needed.

**May 12.** Seven protection lines were arranged on the Kolva River near the water protection zones. Throughout the entire period of works, the state of the water body was assessed at each of them. Tugboats and river barges were used as traps to collect and remove the bulk of the contaminated ice, which was the most effective method under the ice drift conditions. The oil slicks on the water surface were collected by using motor- and airboats. At the same time, over 7 km of containment booms were deployed, including at the mouths of the streams flowing into the Kolva River, in order to prevent their contamination.

**May 16.** The mobile clean-up team commenced its work on collecting the contaminated snow and garbage from the traps along the right bank of the Usa River (between the head of the Kolva River and the village of Ust-Usa). Several wetlands were cleaned manually.

**May 17.** To protect the residential areas, safety booms were deployed in the villages of Ust-Usa, Schelyabozh, Zakharvan, Mutny Materik and Schelyayur along with additional lines in the villages of Izhma and Ust-Tsilma.

**May 21-30.** The Company took a decision to flush away the contaminated layer of soil from the area adjacent to the pipeline depressurization zone by using pressurized water. The decision was taken because the affected site was located in a water protection zone and wetlands, therefore using heavy special-purpose equipment was limited or impossible. The flow was

directed straight to the oil trap, the pollutants and waste were collected immediately from the water surface. This approach made it possible to quickly clean up the plants and soil on the river bank and prepare the area for reclamation.

**May 23-26.** The whole section of the damaged pipeline (from the place of depressurization to the culvert crossing) was dismantled.

**May-June.** The damaged pipeline was repaired; the new pipes with an internal anti-corrosion coating were laid in the culvert crossing.

**June 11.** Owing to the prompt response and well-coordinated work of all the participants, the major consequences of the emergency spill were eliminated.

**June.** After the ice drift on the Kolva River, three mobile camps were set up (on the barges previously used to collect contaminated ice) with a 24/7 staff stay, which significantly reduced the time spent on the works. A cascade system of adjustable containment booms (oil stain traps) was installed that did not interfere with the movement of river transport to collect the residual pollution.

**June-July.** The residual silvery and iridescent film was removed from the surface of the river by using natural sorbents.

The contaminated materials, sorbents and components of the natural environment collected during all the above works were removed for subsequent disposal, including their dispatch to the specialized landfills of the Kharyaginskoe and Usinskoe fields.

Collected for the entire period of the works:	Land	Water surface
Oil – 57 tonnes <sup>6</sup>	Area of contaminated land at the field – 1.6 ha (100% collected)	The water area of the Kolva River affected by the spill – 53.8 square km (100% of the surface was cleaned up).
Oil-contaminated lands – 3,883 cubic meters	Area of contaminated shoreline land – 41.7 ha (100% of the land was cleaned up)	
Used sorbent <sup>7</sup> – 44 tonnes		
Sorbent with oil – 4,549 cubic meters		
Contaminated shrubs – 6,782 cubic meters		
River ice with signs of contamination – 1,113 cubic meters		

<sup>1</sup> Division of LLC LUKOIL-Komi.

<sup>2</sup> The Nenets Autonomous Area (NAA) did not introduce the emergency regime.

<sup>3</sup> In accordance with Order No. PR-250-292-o of the Pechora Department of Rostekhnadzor of May 12, 2021.

<sup>4</sup> Damages mean a fine for environmental damage.

<sup>5</sup> The Interaction Group and the Company did not receive any reports from local residents on the loss of birds, animals or fish; LUKOIL employees and rescue workers did not discover any losses either.

<sup>6</sup> The bulk of the oil spilled was collected in May and early June, and subsequent works were performed to clean up the shoreline and residue on the water surface.

<sup>7</sup> Sorbents made from natural materials (sphagnum moss, high moor peat) and highly efficient in collecting oil products (up to 9 kg of oil per kg of sorbent) were used.



**THE RESOURCES AND FACILITIES USED TO LOCALIZE AND ELIMINATE THE CONSEQUENCES OF THE ACCIDENT**

Equipment	Emergency response teams and other participants
<p><b>Response lines</b> – six fixed and three mobile ones (barges)                      Confinement booms – 8,500 m, including: barrier booms – 7,800 m, sorbent booms – 700 m  <b>Sorbent</b> – over 50 tonnes  <b>Special-purpose machinery</b> – 65 units (including vacuum tankers, tractors, bulldozers, excavators, dump trucks, trawls and other types of machinery)  <b>Vessels</b> – 43 units (9 barges, 7 cutters, 27 boats)  <b>UAVs</b> – two units  <b>Helicopters</b> – up to three units</p>	<p>About 380 people involved in the works, including:</p> <ul style="list-style-type: none"> <li>• two professional emergency and rescue organizations: SPASF Priroda and SK EcoLife;</li> <li>• volunteer emergency response teams of TPP LUKOIL-Severneftegaz, NShPP Yareganeft, TPP LUKOIL-Ukhtaneftegaz;</li> <li>• LUKOIL employees.</li> </ul> <p>TPP LUKOIL-Ukhtaneftegaz, TPP LUKOIL-Usinskneftegaz, TPP LUKOIL-Severneftegaz, NShPP Yareganeft, Usinsk Gas Processing Plant, Department of Production and Technical Equipment of LUKOIL-Komi.</p> <p>Moreover, residents of shoreline villages, contractors' employees took part in works.</p>

**Informing the local communities and general public**

We made every effort to inform the residents of the villages and settlements, public organizations, mass media, and all the stakeholders as soon as possible about the progress of the works on eliminating the consequences of the accident. The President and Vice Presidents of PJSC LUKOIL commented on the event in the mass media.

The federal and regional mass media regularly (initially on a daily basis) covered the work of the emergency response services and the results of each stage of the works, including the Kolva water samples analysis. Numerous messages were published on social networks.

**On May 17 and 18**, meetings with the residents of the villages of Kolva and Mutny Materik were held, with the participation of Vladimir Uyba, Head of the Komi Republic, representatives of the regional government, the Usinsk urban district administration and the LUKOIL-Komi management. During the meetings, comprehensive answers were given to the participants' questions, including

their appeals related to the social support for the villages.

LUKOIL immediately commenced performing its social obligations. In 2021, children's and sports facilities were built in the village of Kolva, and health resort treatment and rest was arranged for 29 families and 14 schoolchildren from the Usinsk district. The site for new water pipelines in the villages of Kolva and Mutny Materik was made ready for construction. The latter is scheduled for water treatment system modernization and an expansion of the local outpatient clinic. All the works are planned for completion by the end of 2022.

**On June 15**, at the request of public and environmental organizations, there was a commission inspection attended by representatives of the Russian Environmental Society, Russian Center for Environmental Policy and Culture, Chamber of Commerce and Industry of the Russian Federation, All-Russian Society for the Protection of Nature and State Council of the Komi Republic. From a helicopter, they inspected the Kolva, Usa and

Pechora riverbeds for any oil stains, examined the Kolva bank line from a cutter, and took some soil and water samples. Based on the results of the inspection, the commission concluded that the elimination of the accident consequences was coming to its completion.

**Monitoring of water quality in the Kolva, Usa and Pechora rivers**

**From May to October 2021**, water samples were collected and analyzed along the entire course of the Kolva River as well as in settlements located on the Kolva, Usa and Pechora rivers<sup>1</sup>. Over the course of six months, over 900 samples at nine permanent (established at the response lines) and 22 mobile observation points were collected. Five<sup>2</sup> independent laboratories analyzed the samples. The sampling and analytical studies were conducted as follows:

- ▶ May to June: on a daily basis;
- ▶ July to August: twice a week (eight times a month);
- ▶ September to October: once a week.

The results of the analyses were discussed at the interdepartmental commissions and operational meetings held by the Usinsk and Komi Republic Emergency Commission.

**DESCRIPTION OF OTHER SIGNIFICANT SPILLS IN 2021**  
**On the border of the Lokosovskoye and Chumpasskoye fields (Khanty-Mansi Autonomous Area – Yugra)**

**On April 13, 2021**, at the dead arm of the Uryevsky Yegan River, the pipeline was depressurized at the underwater passage as a result of internal corrosion, which caused a 10 kg oil spill. The land was not contaminated. A team to eliminate the consequences of the incident was immediately formed; the oil pumping was re-directed to the backup pipeline, and oil-spill recovery was duly organized. Upon completion of the works, the level of content of oil products in the river was within allowable values.

**Usinskoye field (Komi Republic)**

**On May 26, 2021**, there was an outbreak at one of the wells of the reservoir pressure maintenance system and the formation water containing clay rock was discharged

to the surface. The water and clay solution got into the Domkin-El stream flowing into the Kolva River, however the clay solids did not enter the river. Based on the results of the chemical composition study, the discharged rock belonged to hazard class IV (low hazard).

Upon detection of the accident, the well was stopped, and the spill was localized by using the containment lines installed at a distance of 500 meters from the place where the stream entered the Kolva River. The land was recultivated by a contractor in June-September. The results were approved by the Interdepartmental Commission of the Komi Republic in October.

**Perm Territory**

**On July 14, 2021**, an oil spill was detected at the Kylasovo oil treatment unit – LLC LUKOIL Permnefteorgsintez underground stock-tank pipeline, outside the field. Oil spilled on the

soil and entered the streams and wetlands. The oil pipeline section was blocked, the spill was localized, the pipeline was repaired, and traps were installed in water bodies. The consequences of the incident were eliminated on August 13, 2021. Upon the technical reclamation of the land, the content of residual oil products in the soil did not exceed the maximum permissible concentration; the biological reclamation is underway.

Based on the results of the technical investigation, the commission found that the incident was caused by illegal actions of third parties (unauthorized tie-in for oil stealing). An application for the instigation of a criminal case on the fact of the unauthorized tie-in was submitted to the Department of the Ministry of Internal Affairs of the Russian Federation for the Perm Territory.

<sup>1</sup> The villages of Kolva and Zakharvan, Ust-Usa, Schelyabozh, Mutny Materik, and Schelyayur.  
<sup>2</sup> Vyatka-Stroy (Kirov), TsNIPR (Usinsk branch), TsLATI (Syktyvkar), Vodokanal-Servis (Usinsk), and FBUZ Center of Hygiene and Epidemiology (Usinsk).



## APPENDIX 5. GRI Content Index

The information in LUKOIL Group's Sustainability Report for 2021 has been prepared and published in accordance with Global Reporting Initiative (GRI) Standards (Core option)

In accordance with the GRI standards, the following reporting principles were applied when compiling the reporting information:

- ▶ stakeholder engagement (see [Appendix 3](#));
- ▶ sustainability context (see sub-sections Strategic environment);
- ▶ materiality (see [Appendix 3](#));
- ▶ completeness (see [Appendix 3](#) and [Appendix 5](#)).

The principles ensuring the quality of the reporting information:

- ▶ **Accuracy and preciseness.** The reporting information is included in the Sustainability Report, Appendices to the Report and the ESG Databook, and is also published on the corporate website in the Sustainability section. Together, these sources ensure the compliance with this principle; the information is also provided in the About the Report section of this Report.
- ▶ **Clarity.** The reporting information is presented in a clear and comprehensive manner for the stakeholders; any specific terms and definitions are accompanied by footnotes in the text of the Report and detailed explanations in [Appendix 8](#).

▶ **Consistency and comparability.**

The reporting data is provided for the period of three years (in the Report) and five years (in the ESG Databook); any changes in the reporting boundaries or in other characteristics of the indicators are accompanied by explanations.

▶ **Reliability.** Reliability of the data is ensured by the internal procedures for reviewing the reporting information under the Regulations on Sustainability Reporting of PJSC LUKOIL as well as by an external procedure conducted by a third party (audit firm).

▶ **Timeliness.** The report is published annually.

### GRI STANDARDS AND INDICATORS TABLE

102-55

Index	Indicator	Section and/or page of the Report	Topic and indicator boundaries
GRI 101. Reporting Principles			
Appendix 5. GRI Content Index, <a href="#">p. 134</a>			
GRI 102. General Disclosures 2016			
<b>1. Organization profile</b>			
102-1	Name of the organization	About the Company: highlights of the year, <a href="#">p. 10</a>	LUKOIL Group
102-2	Activities, brands, products, and services	About the Company: highlights of the year, <a href="#">p. 10</a> . Two-page opening Business Model	LUKOIL Group
102-3	Location of headquarters	About the Company: highlights of the year	LUKOIL Group
Other sources: <a href="http://www.lukoil.com/Company/contacts">http://www.lukoil.com/Company/contacts</a>			
102-4	Location of operations	About the Company: highlights of the year	LUKOIL Group
Other sources: <a href="http://www.lukoil.com/Company/BusinessOperation/GeographicReach">http://www.lukoil.com/Company/BusinessOperation/GeographicReach</a>			
102-5		Annual Report	
Information about the share capital and securities of PJSC LUKOIL is available on the corporate website <a href="http://www.lukoil.com/InvestorAndShareholderCenter/Securities/sharecapital">http://www.lukoil.com/InvestorAndShareholderCenter/Securities/sharecapital</a>			
102-6	Markets served	About the Company: highlights of the year	LUKOIL Group
102-7	Scale of the organization	About the Company: highlights of the year, <a href="#">p. 10</a>	LUKOIL Group
102-8	Information on employees and other workers	Our employees, <a href="#">p. 94</a> ESG Databook ( <a href="#">Appendix 9</a> )	LUKOIL Group
The information on employment contracts is consolidated by the Company without a breakdown by permanent and temporary employees. The employees legally recognized as self-employed and persons not employed by LUKOIL Group entities either permanently or temporarily perform an insignificant scope of work.			
102-9	Supply chain	Supply chain, <a href="#">p. 86</a>	LUKOIL Group
102-10	Significant changes to the organization and its supply chain		
Data on the supply chain is not consolidated			
102-11	Precautionary Principle	Integrated management system, <a href="#">p. 49</a>	LUKOIL Group
102-12	External initiatives	Climate agenda, <a href="#">p. 30</a> <a href="#">Appendix 3</a> . Reporting systems and identification of material topics	LUKOIL Group
102-13	Membership of associations	Indicator not disclosed	

Index	Indicator	Section and/or page of the Report	Topic and indicator boundaries
<b>2. Strategy</b>			
102-14	Statement from senior decision-maker	The Indicator is not disclosed	
102-15	Key impacts, risks, and opportunities	Sustainable development management, <a href="#">p. 16</a>	LUKOIL Group
<b>3. Ethics and integrity</b>			
102-16	Values, principles, standards, and norms of behavior	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
102-17	Mechanisms for advice and concerns about ethics	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
<b>4. Governance</b>			
102-18, 102-19	The corporate governance system is detailed in the Annual Report for 2021, p. 47, as well as on the corporate website <a href="http://www.lukoil.com/Company/CorporateGovernance">http://www.lukoil.com/Company/CorporateGovernance</a>		
102-20	Executive-level responsibility for economic, environmental, and social topics	Sustainable development management system, <a href="#">p. 16</a>	LUKOIL Group
102-21	Consulting stakeholders on economic, environmental, and social topics	Stakeholder engagement, <a href="#">p. 181</a> . <a href="#">Appendix 10</a> . Stakeholder engagement	LUKOIL Group
From 102-22 to 102-28	The corporate governance system is detailed in the Annual Report for 2021, <a href="#">p. 47</a> , as well as on the corporate website <a href="http://www.lukoil.com/Company/CorporateGovernance">http://www.lukoil.com/Company/CorporateGovernance</a>		
102-29	Identifying and managing economic, environmental, and social impacts	The procedure for identifying material topics is described in <a href="#">Appendix 3</a> . Each material topic in the Report starts with a description of the management system.	LUKOIL Group
102-31	Review of economic, environmental, and social topics	<a href="#">Appendix 10</a> . Stakeholder engagement	LUKOIL Group
102-32	Highest governance body's role in sustainability reporting	Sustainable development management system, <a href="#">p. 16</a>	LUKOIL Group
102-33, 102-34	Communicating critical concerns	Sustainable development management system, <a href="#">p. 16</a>	LUKOIL Group
From 102-35 to 102-37	The corporate governance system is detailed in the Annual Report for 2021, p. 47, as well as on the corporate website <a href="http://www.lukoil.com/Company/CorporateGovernance">http://www.lukoil.com/Company/CorporateGovernance</a>		
102-38	Ratio of the annual total compensation for the organization's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual)	Annual Report 2021, p. 67	LUKOIL Group
The indicator is partly disclosed: remuneration of the Board members			
102-39	Increase in the annual compensation ratio	Annual Report 2021, p. 67	LUKOIL Group
The indicator is partly disclosed: remuneration of the Board members			
<b>5. Stakeholder engagement</b>			
102-40	List of stakeholder groups	Stakeholder engagement, <a href="#">p. 181</a>	LUKOIL Group
102-41	Collective bargaining agreements	Cooperation with trade unions and employees, <a href="#">p. 181</a>	LUKOIL Group
102-42	Identifying and selecting stakeholders	Stakeholder engagement, <a href="#">p. 181</a>	LUKOIL Group
102-43	Approach to stakeholder engagement	<a href="#">Appendix 10</a> . Stakeholder engagement	
102-44	Key topics and concerns raised		
<b>6. Reporting practice</b>			
102-45	Entities included in the consolidated financial statements	<a href="https://lukoil.com/InvestorAndShareholderCenter/FinancialReports">https://lukoil.com/InvestorAndShareholderCenter/FinancialReports</a>	LUKOIL Group
102-46	Defining report content and material topic boundaries	About the Report, <a href="#">p. 8</a> <a href="#">Appendix 3</a> . Reporting systems and identification of material topics	LUKOIL Group
102-47	List of material topics	<a href="#">Appendix 3</a> . Reporting systems and identification of material topics	LUKOIL Group
102-48	Restatements of information		
APG flaring and APG utilization indicators were adjusted to the GHG accounting boundaries and restated for 2021 and previous reporting periods to maintain a common approach to reflecting climate indicators			
102-49	Changes in the list of material topics and material topic boundaries	<a href="#">Appendix 3</a> . Reporting systems and identification of material topics	LUKOIL Group
The list of material topics remained the same as compared to the Sustainability Report for 2020. Indicators boundaries are specified in <a href="#">Appendix 5</a> and <a href="#">Appendix 9</a> .			



Index	Indicator	Section and/or page of the Report	Topic and indicator boundaries
102-50	Reporting period	About the Report, <a href="#">p. 8</a>	LUKOIL Group
102-51	Date of most recent report		
102-52	Reporting cycle		
102-53	Contact point for questions regarding the report	<a href="#">p. 191</a>	
102-54	Claim of reporting in accordance with the GRI Standards	<a href="#">Appendix 5</a> GRI Content Index	
102-55	GRI Standards and Indicators Table	<a href="#">Appendix 5</a> GRI Content Index	
102-56	External assurance	About the Report, <a href="#">p. 8</a> <a href="#">Appendices 11 and 12</a>	
GRI 103: Management Approach 2016			
103-1	Explanation of the material topic and its boundary	<a href="#">Appendix 3</a> , Reporting systems and identification of material topics	
	Indicators boundaries are specified in <a href="#">Appendix 9</a>		
103-2	The management approach and its components		
	The management approach is disclosed in the Report prior to each material topic or issue.		
103-3	Evaluation of the management approach		
	The management approaches are evaluated within the framework of certification and supervisory audits of relevant management systems, and as part of corporate inspections. The information on these activities is contained in the present Report.		
GRI 201: Economic Performance 2016			
201-1	Economic value generated and distributed	<a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
201-3	Defined benefit plan obligations and other retirement plans	Social Policy, <a href="#">p. 108</a>	LUKOIL Group
GRI 202: Market Presence 2016			
202-2	Proportion of senior management hired from the local community in foreign entities	Employment relations, <a href="#">p. 105</a>	LUKOIL Group in significant regions of operation
GRI 203: Indirect Economic Impacts 2016			
203-1	Infrastructure investments and services supported	External social policy priorities, <a href="#">p. 115</a>	LUKOIL Group
	The indicator is partly disclosed		
GRI 204: Procurement Practices 2016			
204-1	Proportion of spending on local suppliers in significant areas of operations	Supply chain, <a href="#">p. 86</a>	Russian entities of LUKOIL Group
GRI 206: Anti-competitive Behavior 2016			
206-1	Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
GRI 207: Tax 2019			
207-1, 207-2, 207-3	Management approaches	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
	Information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Taxpolicy">https://www.lukoil.com/Sustainability/Taxpolicy</a>		
GRI 302: Energy 2016			
103-1, 103-2, 103-3	Management approaches	Decarbonization program, <a href="#">p. 36</a>	Russian entities of LUKOIL Group
	Department in charge: Department of Energy Efficiency and Energy Supply of PJSC LUKOIL		
302-1	Energy consumption within the organization	Decarbonization program, <a href="#">p. 36</a>	LUKOIL Group
302-3	Energy intensity	Decarbonization program, <a href="#">p. 36</a>	LUKOIL Group
302-4	Reduction of energy consumption	Decarbonization program, <a href="#">p. 36</a>	LUKOIL Group

Index	Indicator	Section and/or page of the Report	Topic and indicator boundaries
GRI 303: Water and Effluents 2018			
303-1, 303-2	Interactions with water as a shared resource. Management of water discharge-related impacts.	Water resources, <a href="#">p. 52</a>	LUKOIL Group
	Department in charge: Department for Environmental Safety and Decarbonization of PJSC LUKOIL		
303-3	Water withdrawal	Water resources, <a href="#">p. 52</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
303-4	Water discharge	Water resources, <a href="#">p. 52</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
GRI 304: Biodiversity 2016			
304-1, 304-2, 304-3	Protected or rehabilitated areas	Biodiversity conservation, <a href="#">p. 62</a>	LUKOIL Group
GRI 305: Emissions 2016			
103-1, 103-2, 103-3	Management approaches	Emissions, <a href="#">p. 57</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
	Department in charge: Department for Environmental Safety and Decarbonization of PJSC LUKOIL		
305-1	Direct (Scope 1) GHG emissions	Targets and indicators of accounting for GHG emissions, <a href="#">p. 42</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
305-2	Energy indirect (Scope 2) GHG emissions	Targets and indicators of accounting for GHG emissions, <a href="#">p. 42</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
305-4	GHG emissions intensity (Scope 1)	Targets and indicators of accounting for GHG emissions, <a href="#">p. 42</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
305-5	Reduction of GHG emissions	Targets and indicators of accounting for GHG emissions, <a href="#">p. 42</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
305-6	Emissions of ozone-depleting substances (ODS)		LUKOIL Group
	The Company does not use ozone-depleting substances (ODS) on an industrial scale.		
305-7	Nitrogen oxides (NO <sub>x</sub> ), sulfur oxides (SO <sub>x</sub> ), and other significant air emissions	Emissions, <a href="#">p. 57</a> <a href="#">Appendix 9</a>	LUKOIL Group
GRI 306: Waste 2020			
103-1, 103-2, 103-3	Management approaches	Waste and land reclamation, <a href="#">p. 58</a> Additional information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Environment/Waste">https://www.lukoil.com/Sustainability/Environment/Waste</a>	LUKOIL Group
	Department in charge: Department for Environmental Safety and Decarbonization of PJSC LUKOIL		
306-1	Waste generation and significant waste-related impacts	Waste generation and management, <a href="#">p. 58</a>	LUKOIL Group
306-2	Management of significant wasterelated impacts	Waste generation and management, <a href="#">p. 58</a> Pre-privatization waste management, <a href="#">p. 60</a>	LUKOIL Group
306-3	Waste generated	<a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
306-5	Waste directed to disposal	<a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
	The indicator is partially disclosed: the information refers to waste disposed at the LUKOIL Group organizations' own production sites		
GRI 307: Environmental Compliance 2016			
307-1	Non-compliance with environmental laws and regulations	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
GRI 308: Supplier Environmental Assessment 2016			
103-1, 103-2, 103-3	Management approaches	Procurement, <a href="#">p. 91</a>	LUKOIL Group
	Regulations: Regulations on Holding Tenders to Select Suppliers and Contractors of the LUKOIL Group Entities; HSE Policy of PJSC LUKOIL in the 21st Century; PJSC LUKOIL Standard Health, Safety and Environment Management System: Contractors Requirements		
308-1	New suppliers that were screened using environmental criteria	Procurement, <a href="#">p. 91</a>	LUKOIL Group



Index	Indicator	Section and/or page of the Report	Topic and indicator boundaries
GRI 401: Employment 2016			
103-1, 103-2, 103-3	Management approaches Department in charge: HR Policy Department of PJSC LUKOIL	Labor relations, <a href="#">p. 105</a>	LUKOIL Group
401-1	New employee hires and employee turnover	Labor relations, <a href="#">p. 105</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees Social benefits are granted to all employees regardless of type of employment.	Social policy, <a href="#">p. 108</a> <a href="#">Appendix 9</a> , ESG Databook	LUKOIL Group
GRI 402: Labor/Management Relations 2016			
402-1	Minimum notice periods regarding operational changes	<a href="#">Appendix 6</a> , Individual GRI Indicators	LUKOIL Group
GRI 403: Occupational Health and Safety 2018			
403-1	Occupational health and safety management system Department in charge: Department of Industrial Safety, Ecology and Scientific and Technical Works of PJSC LUKOIL	Integrated management system, <a href="#">p. 49</a> Occupational health and safety (OHS), <a href="#">p. 99</a>	LUKOIL Group
403-2	Hazard identification, risk assessment, and incident investigation Additional information is published on the corporate website <a href="https://lukoil.ru/Sustainability/Safety/OccupationalHealthandSafety">https://lukoil.ru/Sustainability/Safety/OccupationalHealthandSafety</a>	Industrial safety, <a href="#">p. 64</a>	LUKOIL Group
403-3	Occupational health services Additional information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Safety/OccupationalHealthandSafety">https://www.lukoil.com/Sustainability/Safety/OccupationalHealthandSafety</a>	Occupational health and safety (OHS), <a href="#">p. 99</a>	LUKOIL Group
403-4	Worker participation, consultation, and communication on occupational health and safety	Information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Safety/Leadershipandsafetyculture">https://www.lukoil.com/Sustainability/Safety/Leadershipandsafetyculture</a>	LUKOIL Group
403-5	Worker training on occupational health and safety	<a href="#">Appendix 9</a> ESG Databook	LUKOIL Group
403-6	Promotion of worker health	Occupational health and safety (OHS), <a href="#">p. 99</a>	LUKOIL Group
403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships Additional information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Safety/OccupationalHealthandSafety">https://www.lukoil.com/Sustainability/Safety/OccupationalHealthandSafety</a>	Occupational health and safety (OHS), <a href="#">p. 99</a>	LUKOIL Group
403-8	Workers covered by an occupational health and safety management system As the Company has an integrated HSE management system in place, certified under ISO 14001 and ISO 45001 standards, the proportion of employees covered by this management system is the same in terms of environmental protection management and labor protection management	Integrated management system, <a href="#">p. 49</a>	LUKOIL Group
403-9	Work-related injuries	Occupational health and safety (OHS), <a href="#">p. 99</a>	LUKOIL Group
403-10	Work-related ill health		
GRI 404: Training and Education 2016			
103-1, 103-2, 103-3	Management approaches Department in charge: Department of Personnel Assessment and Development of PJSC LUKOIL	Training and education, <a href="#">p. 111</a>	LUKOIL Group
404-1	Average hours of training per year per employee	Training and education, <a href="#">p. 111</a>	LUKOIL Group
404-2	Programs for upgrading employee skills and transition assistance programs	<a href="#">Appendix 6</a> Individual GRI Indicators	LUKOIL Group
404-3	Percentage of employees receiving regular performance and career development reviews Information is provided without breakdown by gender or categories of employees as this information is not consolidated and is not used to manage this issue.	<a href="#">Appendix 9</a> ESG Databook	PJSC LUKOIL
GRI 405: Diversity and Equal Opportunity 2016			
405-1	Diversity of governance bodies and employees	<a href="#">Appendix 9</a> ESG Databook	LUKOIL Group

Index	Indicator	Section and/or page of the Report	Topic and indicator boundaries
405-2	Ratio of basic salary and remuneration of women to men Additional information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Ouremployees/LabourRelations">https://www.lukoil.com/Sustainability/Ouremployees/LabourRelations</a>	Social policy, <a href="#">p. 108</a>	
GRI 406: Non-discrimination 2016			
406-1	Incidents of discrimination and corrective actions taken	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
GRI 407: Freedom of Association and Collective Bargaining 2016			
	The management approach Information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Ouremployees/Socialpartnership">https://www.lukoil.com/Sustainability/Ouremployees/Socialpartnership</a>		LUKOIL Group
GRI 408: Child Labor 2016			
	Management approaches Additional information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Humanrights">https://www.lukoil.com/Sustainability/Humanrights</a>	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
GRI 409: Forced or Compulsory Labor 2016			
	Management approaches Additional information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Humanrights">https://www.lukoil.com/Sustainability/Humanrights</a>	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
GRI 411: Rights of Indigenous Peoples 2016			
103-1, 103-2, 103-3	Management approaches Information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Society/IndigenousminoritiesoftheNorth">https://www.lukoil.com/Sustainability/Society/IndigenousminoritiesoftheNorth</a> . Department in charge: Regional Communications Department of PJSC LUKOIL	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
411-1	Incidents of violations involving rights of indigenous peoples	Supporting indigenous minorities of the North, <a href="#">p. 123</a>	LUKOIL Group
GRI 412: Human Rights Assessment 2016			
103-1, 103-2, 103-3	Management approaches Information is published on the corporate website <a href="https://www.lukoil.com/Sustainability/Humanrights">https://www.lukoil.com/Sustainability/Humanrights</a>		LUKOIL Group
412-1	Operations that have been subject to human rights reviews or impact assessments	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
GRI 413: Local Communities 2016			
103-1, 103-2, 103-3	Management approaches Department in charge: Regional Communications Department PJSC LUKOIL	External social policy priorities, <a href="#">p. 115</a>	LUKOIL Group
413-1	Operations with local community engagement, impact assessments, and development programs All the LUKOIL Group entities of the Geological Exploration and Production and Refining and Distribution business segments, as well as major entities of the Corporate and Other business segment, have programs in place related to local community engagement and support.	External social policy priorities, <a href="#">p. 115</a>	LUKOIL Group
GRI 415: Public Policy 2016			
GRI 415-1	Political contributions According to the Anti-corruption Policy of PJSC LUKOIL, the Group is not involved in any political activity either within the Russian Federation or abroad, 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 within the Russian Federation or abroad). In 2021, political contributions: none; incentive payments to representatives of state authorities: none.	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
GRI 419: Socio-economic Compliance			
103-1, 103-2, 103-3	Management approaches Regulations: Antimonopoly Policy Department; Department in charge: Legal Support Department of PJSC LUKOIL	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group
419-1	Significant fines and non-financial sanctions for non-compliance with requirements in the social and economic area	Corporate ethics and behavior, <a href="#">p. 80</a>	LUKOIL Group



## APPENDIX 6. Individual GRI Indicators

404-2	Programs for upgrading employee skills and transition assistance programs
<b>PROGRAMS FOR UPGRADING EMPLOYEE SKILLS</b>	
<b>Type of training</b>	<b>Training programs and courses</b>
Internal training courses	DLS. Over 300 educational 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, people management, human resources management, effective negotiations, production orientation, 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, he is entitled to an academic leave and a guarantee that his position in the Company is kept by the employer for the entire term of studies.

## APPENDIX 7. SASB Content Index

Segments: E – Extraction, R – Refining and Distribution, S – Services (drilling, other), T – Transportation.

Code	Definition	Segment	Response / reference to indicators in the Sustainability Report for 2021
<b>Management</b>			
EM-EP 110a.3 EM-RM 110a.3 EM-MD 110a.3	Long- and mid-term strategy to reduce direct GHG emissions reduction targets. Analysis of the activities related to these targets	E, R	Sub-section Strategic planning (Strategy and corporate governance section), <a href="#">p. 22</a>
EM-EP 160 a.1	Description of the environmental management system	E, T	Sub-section Integrated HSE management system (Environment section), <a href="#">p. 49</a>
<b>Greenhouse gases</b>			
EM-EP 110a.1 EM-RM 110a.1 EM-MD 110a.1	Total gross GHG emissions, including the share of methane. The share of emissions by countries with legal regulation of GHG emissions.	E, T, R	Sub-section GHG emissions accounting – goals and indicators (Climate agenda section), <a href="#">p. 42</a> PJSC LUKOIL discloses data on GHG emissions (Scopes 1 and 2) based on the operational control criterion. For information on the Percentage of methane in total GHG emissions (Scope 1), Percentage of emissions (Scope 1) covered under emissions-limiting regulations indicators see <a href="#">Appendix 9</a> ESG Databook.
<b>Emissions</b>			
EM-EP 120 a.1 EM-RM 120 a.1 EM-MD 120 a.1	Volume of NOX, SOX, and other pollutant emissions to the atmosphere, VOCs, and PM10 dust	E, T, R	Sub-section Emissions (Environment section), <a href="#">p. 57</a> Information on emissions of solid substances is provided without indicating the level of dispersion ability. For details, see <a href="#">Appendix 9</a> ESG Databook
<b>Water</b>			
EM-EP 140 a.1 EM-RM 140 a.1	Amount of freshwater withdrawn, share of total consumption, share in regions with severe water scarcity	E, R	Sub-section Water resources (Environment section), <a href="#">p. 52</a> For details, see <a href="#">Appendix 9</a> , ESG Databook
<b>Occupational safety</b>			
EM-RM 320 a.2	Description of the management system to improve safety culture	E, R	Sub-section Occupational health and safety (OHS) (Our employees section), <a href="#">p. 99</a> For details see <a href="#">Appendix 9</a> , ESG Databook
EM-EP 320 a.1 EM-RM 320 a.1 EM-SV 320 a.1	Total Recordable Injury Rate (TRIR), Fatality Rate, Near-Miss Frequency Rate (NMFR), Average Duration of OHS Training for a) Staff, b) Contractors, c) Short-Term Employees	E, R, S	This indicator is recorded partly (no data on the average duration of training of the contractors' personnel and short-term employees and the frequency of incidents) as this data is not collected by the Company. Sub-section Occupational health and safety (OHS) (Our Employees section), <a href="#">p. 99</a> For details, see <a href="#">Appendix 9</a> , ESG Databook





Segments: E – Extraction, R – Refining and Distribution, S – Services (drilling, other), T – Transportation.

Code	Definition	Segment	Response / reference to indicators in the Sustainability Report for 2021
<b>Extraction</b>			
EM-ER-160a.2	Total number and volume of hydrocarbon spills, including a) in the Arctic, b) impacting coastlines in categories 8–10 of the Environmental Sensitivity Index (ESI) (mangroves, marshes, rocky shores, and others), percentage of recovered sites	E	Sub-section Reliability pipeline system in Russia (Industrial safety section), <a href="#">p. 68</a> Of the 71 tonnes of the oil spilled in 2021 as a result of significant spills, 70 tonnes were in the Arctic zone of the Russian Federation. There were no category 8-10 spills affecting the coast.
EM-EP 210 a.3	Engagement with stakeholders and risk assessment with respect to human rights, rights of the indigenous small-numbered peoples of the North, and activities in the conflict zone	E	Sub-section Supporting indigenous minorities of the North (Society section), <a href="#">p. 123</a> Sub-section Human rights (Corporate ethics and behavior section), <a href="#">p. 123</a>
EM-EP 420 a.4	How does price or demand for hydrocarbons and/or climate regulation affect capital investment strategy for exploration and extraction projects and asset acquisitions	E	For the detailed analysis, see the <a href="#">Global Energy Outlook until 2050 presentation</a>
EM-EP 420 a.1	Sensitivity of hydrocarbon reserves to future price projection scenarios that account for carbon price or emissions	E	For the detailed analysis, see the <a href="#">Global Energy Outlook until 2050 presentation</a>
EM-EP 420 a.3	Investments in RES, share of income received from RES		Decarbonization program section, <a href="#">p. 36</a>
EM-EP 420 a.4	Assessment of price and demand for hydrocarbons and/or climate regulation affecting capital investment strategy for exploration, acquisition, and development of assets	E	For the detailed analysis, see the <a href="#">Global Energy Outlook until 2050 presentation</a>
EM-EP-510a.2	Management system for the prevention of corruption in the company and supply chain	E	Sub-section Corporate ethics and behavior, <a href="#">p. 80</a> Procurement (Supply chain section), <a href="#">p. 88</a>
EM-ER-540 a.2	Describe the risk management system for catastrophic events and accidents	E, S	Sub-section The Program of Industrial Safety and Occupational Safety (Industrial safety section), <a href="#">p. 66</a>
<b>Refining and distribution</b>			
EM-RM-110 a.2	Long- and mid-term strategy to reduce GHG emissions (Scope 1), established targets and analysis of the achievement results	R, T	Sub-sections Strategic planning and GHG emissions accounting – goals and indicators (Climate agenda section), <a href="#">p. 22, 42</a>
EM-RM 120 a.2	Number of plants located in or in the vicinity of heavily populated cities	R	Oil refineries are located in the following cities with population of 1 mln or more people: Volgograd, Perm, and Nizhny Novgorod (all in Russia).

Segments: E – Extraction, R – Refining and Distribution, S – Services (drilling, other), T – Transportation.

Code	Definition	Segment	Response / reference to indicators in the Sustainability Report for 2021
EM-RM 150 a.1	Amount of hazardous waste generated, share of recycled waste	R	Sub-section Waste and land reclamation (Environment section), <a href="#">p. 58</a>
EM-RM 410 a.1	Production of renewable fuels	R	Sub-section Products (Supply chain section), <a href="#">p. 91</a>
EM-RM 410 a.2	Market share of new-generation renewable fuels	R	The issue of the prospects for next generation renewable fuels is being considered within the framework of the LUKOIL Group's climate strategy
EM-RM 520 a.2	Number of court-ordered penalties for price-gouging and price-fixing	R	Corporate ethics and behavior section, <a href="#">p. 80</a>
EM-RM 540 a.3	Description of the labor discipline management system	R	Sub-section Employment relations (Our employees section), <a href="#">p. 94</a>
<b>Transport</b>			
EM-MD 520 a.1	Total losses from lawsuits related to pipelines and storage facilities	T	Corporate ethics and behavior section, <a href="#">p. 80</a>
EM-MD 540 a.1	Number of pipeline-related incidents reported, percentage of significant incidents	T	Sub-section Reliability pipeline system in Russia (Industrial safety section), <a href="#">p. 68</a>
EM-MD 540 a.2	Share of inspected gas pipelines (natural gas) and pipelines for transferring hazardous materials	T	The indicator is disclosed partly. The Report contains a description of the system for managing methane leaks at equipment and pipelines and data on the inspection of gas pipelines, <a href="#">p. 42</a>
EM-MD 540 a.3	Number of emergency and non-emergency spills during railway transportation	T	All railway transportation operations are performed by the contractors. The contractors are liable for transportation safety
<b>Services (contractors)</b>			
EM-SV 150 a.2	Strategy and plans to mitigate risks associated with the use of chemicals	S	Information is presented in the Sustainability Report for 2020, the Ensuring environmental safety during hydraulic fracture treatment (HFT) section. The information is also published on the <a href="#">website</a>
EM-SV 160 a.2	Strategy and plans to mitigate risks associated with environmental impacts in services	S	Sub-section Procurement (Supply chain section), p. 88 The information is also published on the <a href="#">website</a>



## APPENDIX 8. References: definitions and calculation formulas

### Indicators, calculation formulas

**Refinery yield** is calculated by the following formula:

$$\text{Refinery yield} = \frac{Q - (\text{FFO} + L)}{Q} \times 100\%$$

**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 from the 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 the losses at 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 / employee headcount for a reporting period × 1,000 employees.

**Lost Time Injury Frequency Rate, LTIFR** = number of lost time injuries / number of man-hours worked × 1,000,000 man-hours.

**Rate of Fatalities as a Result of Work-Related Injury** = number of fatalities as a result of work-related injury / number of hours worked × 1,000,000 man-hours.

**Rate of High-Consequence<sup>1</sup> Work-Related Injuries** = number of high-consequence work-related injuries

(excluding fatalities) / number of hours worked × 1,000,000 man-hours. Injuries are classified as severe on the basis of the criteria established by national legislations.

**The total recordable injury frequency rate (TRIFR)** = the number of all registered industrial accidents (including mild, hard accidents, fatalities and micro injuries) / the number of hours worked × 1,000,000 man-hours

**The 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 total values of the indicators given in the Report or in Appendix 9 (ESG Databook) may differ from the sum of the indicators as a result of rounding (the difference should not exceed 1).

**Definitions**  
**Circulating water** means water that is consistently and repeatedly used in processes based on the principle of closed systems without discharging into surface water bodies or sewage systems.

**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 LUKOIL Group entity. For the public reporting purposes, only completed

cases in which a final decision has been rendered and which are 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 the LUKOIL Group, taking into account the industry specifics and determining the level of achievement of strategic goals.

**Material claim relating to the breach of the anti-monopoly law** means a claim meeting the following criteria (one or more):

- ▶ criminal prosecution of officials of PJSC LUKOIL or the LUKOIL Group entities in accordance with the sentence passed and entered into legal force;
- ▶ administrative action in the form of disqualification of the officials of PJSC LUKOIL or the LUKOIL Group entities in accordance with the sentence passed and entered into legal force;
- ▶ entry into force 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 for the purchase of goods (work, service).

**Material claim related to the breach of the environmental law** means a claim meeting one of the following criteria:

- ▶ 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;

- ▶ 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 Russian 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.

**Material digression/weakness in the implementation of the local regulations** 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.

**Payroll** means the indicator calculated in accordance with the instructions for filling out forms of federal statistical monitoring, approved by Order of the Federal State Statistics Service No. 832 of November 24, 2021. 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 food and accommodation in accordance with the methodology for filling out the payroll field in Form No. P-4 Information on Headcount and Labor Pay.

**Reused water supply** is the use of water that has retained its quality indicators after being used in a technological process and is supplied without treatment for reuse or

returned to natural objects. The water produced along with oil that is sent to the needs of FPM is considered reused.

**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 the following return to the seconding entity or termination of the labor relations with the seconding entity.

**Significant incident with environmental impact** means an emergency with environmental impact. An environmental impact can include destruction of facilities and/or technical devices used at the facilities of the LUKOIL Group entities, or any other event resulting in one or a combination of the following environmental impacts:

- ▶ pollution of surface and underground water bodies, which resulted in exceeding the established standards for permissible impact;
- ▶ uncontrolled release of hazardous substances, i.e. a release of a hazardous substance into the environment not provided for by technical regulations and/or project documentation without restricting or containing it by emergency protection systems and/or other systems and means of accident prevention and containment provided for by technical regulations and/or project documentation, or release in the absence of sufficient containment capability in such systems and means in the amount exceeding the threshold values for accidents presented in Tables 1 and 2 of Annex 4 to the Safety Manual "Methodological Recommendations for the Classification of Man-made Events in the Field of Industrial Safety at Hazardous Production Facilities of the Oil and Gas Complex" dated January 24, 2018, No. 29, approved by Order of Rostekhnadzor of January 24, 2018, No. 29.

**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:

- ▶ in the Russian Federation – constituent entities where the headcount of one LUKOIL Group entity is 500 or more;
- ▶ 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.

**Significant spills** – spills into water bodies of any volume, as well as emergency spills on land with environmental consequences of volume more than 10 tonnes.

**Substantial violation of human rights** is a violation of the fundamental standards of compliance with and respect for human rights set forth both in the Company's local laws and internal regulations and in international law, including: prevention of any forms of discrimination, child, forced, slave, and bound labor, forced relocation of indigenous people; promotion of freedom of association and collective bargaining; ensuring safe working conditions; and compliance with the rights to receive statutory minimum wages in the region of presence.

**Young employees** are the employees of PJSC LUKOIL and the LUKOIL Group entities aged under 35 years, including young professionals.

**Young professionals** are the employees aged under 30 years who have a higher or secondary vocational education and who joined with the Company in positions corresponding to their education, including manual labor jobs, within six months of graduation or within three months of completion of military service in the Armed Forces of the Russian Federation.

<sup>1</sup> High-Consequence Work-Related Injury is an injury having the following consequences: the employee died or was injured, and within six months of being injured the employee is unable to recover, has not recovered their health, or is not expected to recover their health.



## APPENDIX 9. ESG Databook

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The ESG Databook should be read in conjunction with the Sustainability Report.

The Independent Practitioner JSC "KPMG" issued Limited Assurance Report on Sustainability Report 2021.

The ESG Databook discloses indicators according to multiple reporting systems. The corresponding reporting systems are indicated for the respective indicators.

### Reporting system designations used:

- GRI** – Global Reporting Initiative
- IPIECA** – International Petroleum Industry Environmental Conservation Association
- SASB** – Sustainability Accounting Standards Board
- RSPP** – Russian Union of Industrialists and Entrepreneurs
- UNCTAD** – United Nations Conference on Trade and Development

## GREENHOUSE GASES

### GHG EMISSIONS BY THE LUKOIL GROUP ENTITIES

Indicator	Unit of measurement	2017	2018	2019	2020	2021	Reporting system	
<b>LUKOIL Group</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	50.897	48.546	48.433	43.651	41.491	GRI 305-1 GRI 305-2 IPIECA CCE-4 SASB EM-ER-110a.1 RSPP UNCTAD B3.1 UNCTAD B3.2	
Scope 1	million tonnes of CO <sub>2</sub> e	40.448	39.599	39.796	36.705	36.388		
Scope 2	million tonnes of CO <sub>2</sub> e	10.450	8.947	8.636	6.947	5.103		
<b>Russian entities</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	43.522	41.308	40.539	36.947	36.260		
Scope 1	million tonnes of CO <sub>2</sub> e	34.043	33.403	32.851	30.780	31.786		
Scope 2	million tonnes of CO <sub>2</sub> e	9.479	7.906	7.689	6.166	4.474		
<b>Foreign entities</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	7.375	7.237	7.893	6.705	5.230		
Scope 1	million tonnes of CO <sub>2</sub> e	6.405	6.196	6.945	5.924	4.602		
Scope 2	million tonnes of CO <sub>2</sub> e	0.970	1.042	0.948	0.781	0.628		
GHG emissions by Russian entities by business activity								
<b>Exploration and production</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	17.925	16.250	16.246	14.632	13.619		
Scope 1	million tonnes of CO <sub>2</sub> e	10.043	9.833	10.065	9.920	10.442		
Scope 2	million tonnes of CO <sub>2</sub> e	7.882	6.417	6.181	4.712	3.177		
<b>Oil Refining and Petrochemicals, LLC LLK-International</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	12.789	12.466	12.440	11.847	12.894		
Scope 1	million tonnes of CO <sub>2</sub> e	11.454	11.271	11.217	10.770	11.902		
Scope 2	million tonnes of CO <sub>2</sub> e	1.335	1.195	1.223	1.078	0.991		
<b>Power Generation</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	12.627	12.355	11.611	10.189	9.422		
Scope 1	million tonnes of CO <sub>2</sub> e	12.468	12.213	11.479	9.980	9.239		
Scope 2	million tonnes of CO <sub>2</sub> e	0.159	0.142	0.132	0.209	0.182		
<b>Transportation</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	0.124	0.137	0.143	0.144	0.228		
Scope 1	million tonnes of CO <sub>2</sub> e	0.078	0.0865	0.091	0.111	0.203		
Scope 2	million tonnes of CO <sub>2</sub> e	0.046	0.050	0.052	0.033	0.026		
<b>Oil Product Supply</b>								
Scope 2	million tonnes of CO <sub>2</sub> e	0.057	0.101	0.100	0.134	0.098		
GHG emissions by foreign entities by business activity and geography								
<b>Exploration and Production (Central Asia)</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	0.329	0.586	0.565	0.422	0.521		
Scope 1	million tonnes of CO <sub>2</sub> e	0.223	0.393	0.360	0.297	0.394		
Scope 2	million tonnes of CO <sub>2</sub> e	0.105	0.193	0.205	0.125	0.127		
<b>Oil Refining and Petrochemicals (the European Union)</b>								
Scope 1 + 2	million tonnes of CO <sub>2</sub> e	7.000	6.605	7.282	6.230	4.649		
Scope 1	million tonnes of CO <sub>2</sub> e	6.181	5.803	6.585	5.628	4.208		
Scope 2	million tonnes of CO <sub>2</sub> e	0.819	0.803	0.697	0.603	0.441		
<b>Oil product supply</b>								
Scope 2	million tonnes of CO <sub>2</sub> e	0.046	0.046	0.046	0.053	0.060		

**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 and Petrochemicals, and Power Generation entities, all of the Oil Product Supply entities (Scope 2 only), as well as LLC LUKOIL-KGPZ (as part of LLC LUKOIL-Volgogradneftepererabotka), 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).

In 2021, as in previous periods, the data for Oil Refining and Petrochemicals refer to the Oil Refining and Petrochemicals entities, as well as to LLC LLK-International and LLC LUKOIL-KGPZ. At the same time LLC LUKOIL-KGPZ is accounted for as part of LLC LUKOIL-Volgogradneftepererabotka, as since November 1, 2021, this entity was reorganized and merged with LLC LUKOIL-Volgogradneftepererabotka.



## CLIMATE REGULATION

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Percentage of emissions (Scope 1)</b> covered under emissions-limiting regulations (Romania, Bulgaria, Italy)	%	15	15	17	15	12	SASB EM-EP-110a.1

## GHG EMISSIONS BY COMPOSITION

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Scope 1. Direct gross GHG emissions</b>	million tonnes of CO <sub>2</sub> e	40.448	39.599	39.796	36.705	36.388	
· Carbon dioxide (CO <sub>2</sub> )	million tonnes of CO <sub>2</sub> e	39.024	38.615	38.999	35.764	35.160	
· Methane (CH <sub>4</sub> )	million tonnes of CO <sub>2</sub> e	1.396	0.959	0.772	0.916	1.193	IPIECA CCE-5
Percentage of methane in total GHG emissions (Scope 1)	%	3.5	2.4	1.9	2.5	3.3	
· Nitrogen monoxide (N <sub>2</sub> O)	million tonnes of CO <sub>2</sub> e	0.028	0.025	0.025	0.024	0.035	
· Other GHGs	million tonnes of CO <sub>2</sub> e	0	0	0	0	0	

**Notes.** In 2021, the increase in methane emissions was due to higher hydrocarbon production as a result of the increased quota under the OPEC+ agreement, and also due to the improved accounting for methane emissions at the Group entities. The increase in nitrogen monoxide emissions was due to the increased fuel combustion by mobile sources.

## GHG EMISSIONS (SCOPE 1 + 2) INTENSITY BY BUSINESS ACTIVITY OF LUKOIL GROUP ENTITIES

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Exploration and Production	kg of CO <sub>2</sub> e / boe	23.954	21.106	21.009	21.622	19.321	GRI 305-4
	g of CO <sub>2</sub> e / MJ	4.008	3.602	3.585	3.690	3.297	IPIECA CCE-4 RSPP
Oil Refining and Petrochemicals	tonnes of CO <sub>2</sub> e / tonne of processed raw materials	0.293	0.282	0.291	0.305	0.276	
Power Generation	tonnes of CO <sub>2</sub> e / MWh of generated electricity and heating	0.340	0.323	0.328	0.350	0.339	

**Notes.** GHG emissions intensity by Oil Refining and Petrochemicals entities are calculated based on GHG emissions from oil refineries and petrochemical complexes (in total) excluding LLC LLK-International (business activity – production of oils and lubricants). Emissions intensity by Power generation entities is calculated except for LLC LUKOIL-Energoseti (business activity – power transmission).

## FLARING GHG EMISSIONS

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Flaring emissions (Scope 1)	million tonnes of CO <sub>2</sub> e	2.721	1.637	1.490	1.512	1.599	IPIECA CCE-7

**Notes.** The data refer to the oil and gas production, oil refining, petrochemicals, and power generation entities.

## APG UTILIZATION AND FLARING

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Total APG flaring	million cubic meters	507	290	282	260	291	IPIECA CCE-7
APG utilization rate	%	95.6	97.5	97.6	97.7	97.5	

**Notes.** Data was calculated within GHG reporting boundaries (only Russian entities included). There is no APG production from the project in Uzbekistan.

The APG flaring increased in 2021 primarily due to the commissioning of new fields.

## REDUCTION OF GHG EMISSIONS RESULTING FROM RENEWABLE ENERGY CONSUMPTION BY GROUP ENTITIES AND EXTERNAL CONSUMERS

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Avoided GHG emissions	tonnes of CO <sub>2</sub> e				334,411	436,435	GRI 305-5
Reduced GHG emissions	tonnes of CO <sub>2</sub> e				5,573	6,372	

**Notes.** Avoided GHG emissions - GHG emissions that did not occur for external consumers from purchased electricity produced at LUKOIL Group renewable energy facilities. Reduced GHG emissions - GHG emissions that did not occur at the Company's facilities due to substitution of grid electricity with electricity produced from LUKOIL Group renewable energy facilities and consumed for the Group's own needs.

## ENERGY

## ENERGY CONSUMPTION FOR PRODUCTION PURPOSES WITHIN LUKOIL GROUP ENTITIES

Indicators	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Energy consumption for production purposes (1.1 + 1.2 + 1.3 - 1.4)</b>	mIn GJ	468	502	502	465	477	GRI 302-1 RSPP IPIECA CCE-6 UNCTAD B5.1
1.1. Energy purchased for consumption for production purposes	mIn GJ	96	79	74	69	66	
· Electricity	mIn GJ	61	59	57	54	51	
· Heating	mIn GJ	35	20	17	15	15	
· Cooling	mIn GJ	0	0	0	0	0	
· Steam	mIn GJ	0	0	0	0	0	
1.2. Non-renewable fuel consumed by stationary production facilities (supporting power generation)	mIn GJ	494	553	545	515	518	
1.3. Renewable electric energy consumed (supporting power generation)	mIn GJ		0.005	0.037	0.049	0.054	
1.4. Sold energy	mIn GJ	122	130	117	119	107	
· Electricity	mIn GJ	75	74	66	68	57	
· Heating	mIn GJ	47	56	51	51	50	
· Cooling	mIn GJ	0	0	0	0	0	
· Steam	mIn GJ	0	0	0	0	0	

**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).



## ENERGY CONSUMPTION BY BUSINESS ACTIVITY OF THE LUKOIL GROUP ENTITIES AND GEOGRAPHY

	Unit of measurement	2017	2018	2019	2020	2021
<b>LUKOIL Group</b>	mIn GJ	<b>468</b>	<b>502</b>	<b>502</b>	<b>465</b>	<b>477</b>
<b>Exploration and Production</b>	mIn GJ	<b>159</b>	<b>179</b>	<b>182</b>	<b>172</b>	<b>181</b>
· Russian entities	mIn GJ	158	176	178	169	<b>177</b>
· Foreign entities	mIn GJ	0,996	2,9	4,4	3,1	<b>3,8</b>
<b>Refining and Distribution</b>	<b>mIn GJ</b>	<b>309</b>	<b>323</b>	<b>320</b>	<b>293</b>	<b>296</b>
Oil Refining	mIn GJ	224	240	240	219	<b>214</b>
· Russian entities	mIn GJ	163	161	159	151	<b>156</b>
· Foreign entities	mIn GJ	61	79	81	68	<b>58</b>
Petrochemicals (Russian entities)	mIn GJ	8,2	8,4	7,6	7,7	<b>7,2</b>
Power Generation (Russian entities)	mIn GJ	75	72	69	64	<b>72</b>
Oil Product Supply and Transportation (Russian and foreign entities)	mIn GJ	2,9	2,9	3,0	2,9	<b>3,1</b>

**Notes.** For the purposes of calculating the "Energy Consumption by Business Activity" indicator, LLC LUK-International is accounted for together with oil refining entities; LLC LUKOIL-AERO is accounted for together with the Oil Product Supply and Transportation entities. In the organizational structure of LUKOIL Group, both entities are included in the Other entities related to Refining and Distribution business segment.

The data on LLC KGPZ were included in the Oil Refining line of activity, as in 2021, this entity was reorganized and merged with LLC LUKOIL-Volgogradneftepererabotka, and the data for the previous reporting periods were retrospectively recalculated.

## ENERGY INTENSITY

	Unit of measurement	2018	2019	2020	2021	Reporting system
Exploration and Production	GJ / boe	0,224	0,227	0,247	<b>0,247</b>	GRI 302-3 RSPP
Oil Refining	GJ / tonne of manufactured products	3,9	3,7	4,0	<b>3,6</b>	
· Russian entities	GJ / tonne of manufactured products	3,7	3,5	3,7	<b>3,6</b>	
· Foreign entities	GJ / tonne of manufactured products	4,3	4,3	4,8	<b>3,7</b>	
Petrochemicals	GJ / tonne of processed main raw materials		4,2	4,1	<b>4,1</b>	

**Notes.** In 2021, the calculation method for the indicator "Energy intensity" in the Exploration and Production business segment was revised and brought in line with the calculation of the GHG emissions intensity in the indicated business segment. The indicator calculation formula: Total energy consumption for production purposes by the Exploration and Production business segment entities included in the GHG emissions reporting boundaries / 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). Data for the previous reporting periods were recalculated.

Oil refining: 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 refineries are calculated taking into account intragroup supply of oil products transferred for further processing.

Petrochemicals: Data are presented for the Russian entities LLC Stavrolen and LLC Saratovorgsintez.

In 2020, the increase in energy intensity in the Oil Refining entities was due to a decrease in oil refineries utilization during the pandemic.

## DYNAMICS OF SOLOMON EII AS COMPARED TO 2014

	Unit of measurement	2014	2016	2018	2020
Energy Intensity Index	%	100	98,8	96,5	96,6

**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.

## RENEWABLE ELECTRIC ENERGY GENERATION BY LUKOIL GROUP

	Unit of measurement	2017	2018	2019	2020	2021
<b>Total amount of renewable energy generated (1+2)</b>	<b>mIn kWh</b>	<b>1,053</b>	<b>1,367</b>	<b>1,110</b>	<b>836</b>	<b>1,021</b>
<b>1. Commercial renewable electric energy generation (Supplies to external customers)</b>	<b>mIn kWh</b>	<b>1,053</b>	<b>1,365</b>	<b>1,100</b>	<b>822</b>	<b>1,008</b>
· wind power	mIn kWh	228	192	218	211	<b>204</b>
· solar power	mIn kWh	12	17	14	12	<b>14</b>
· hydroelectric energy	mIn kWh	<b>813</b>	<b>1156</b>	<b>868</b>	<b>599</b>	<b>790</b>
including by geography:	mIn kWh					
· in Russia	mIn kWh	812	1161	880	611	<b>804</b>
· abroad	mIn kWh	241	204	220	211	<b>204</b>
Total electric energy produced by all commercial power generating facilities (including RES)	mIn kWh	<b>20,189</b>	<b>19,919</b>	<b>18,307</b>	<b>17,139</b>	<b>15,801</b>
Percentage of renewable electric energy in total electric energy produced by all commercial power generating facilities	%	5,2	6,9	6,0	4,8	<b>6,4</b>
<b>2. Supporting power generation (for own use), solar power</b>	<b>mIn kWh</b>	<b>0</b>	<b>1,5</b>	<b>10</b>	<b>14</b>	<b>13</b>
Total electric energy produced by all self-generating facilities (including RES)	mIn kWh	6,222	7,319	7,453	7,080	<b>7,171</b>
Percentage of renewable electric energy in total electric energy generated (commercial + supporting power generation)	%	4,0	5,0	4,3	3,5	<b>4,4</b>

**Notes.** The supporting power generation data change is due to the commissioning of several solar power plants at production facilities and fuel filling stations of the LUKOIL Group entities. Also in 2021, the first phase of the 10 MW solar power plant at the Volgograd Refinery began supplying electric energy for LLC Stavrolen's own needs.



## RENEWABLE ENERGY CONSUMPTION FOR PRODUCTION PURPOSES

	Unit of measurement	2018	2019	2020	2021	Reporting system
<b>LUKOIL Group</b>	mln kWh	1.5	10.4	13.6	15.0	GRI 302-1
	mln GJ	0.005	0.037	0.049	0.054	
· Russian entities	mln kWh	0	0	0	2.3	
· Foreign entities	mln kWh	1.5	10.4	13.6	12.8	
Percentage of renewable energy consumption in total energy consumption for production purposes by the LUKOIL Group entities	%	0.0011	0.0075	0.0105	0.0113	
<b>Consumption by energy type</b>						
· Geothermal energy	mln kWh	0	0	0	0	
· wind power	mln kWh	0	0	0	0	
· solar power	mln kWh	1.5	10.4	13.6	15.0	
· Hydroelectric energy	mln kWh	0	0	0	0	
· Energy from biomass	mln kWh	0	0	0	0	

**Notes.** Data for 2018 refer to the refinery in Bulgaria (LUKOIL Neftochim Burgas AD), while data for 2019 refer to both refineries in Bulgaria and Romania (PETROTEL-LUKOIL S.A.). The renewable energy consumption increase in 2019 was due to a structural reorganization with the transfer of a 9-MW solar power plant from S.C. LUKOIL ENERGY & GAS ROMANIA S.R.L. to the refinery in Romania, after which the plant began supplying electricity for the refinery's own needs.

In 2020, a solar power plant was commissioned at the LUKOIL ROMANIA fuel filling station with an installed capacity of 17.5 kW. In 2021, the first phase of the 10 MW solar power plant at the Volgograd Refinery began supplying electric energy for LLC Stavroler's own needs.

## ECONOMIC INDICATORS OF LUKOIL GROUP'S RES ADVANCEMENT PROJECTS

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Investments in RES advancement	RUB mln		2,580	526	1,865	2,023	SASB EM-ER-420a.3 UNCTAD A3.1
Percentage of investments in RES projects in the Power Generation business sector CAPEX	%		47	12	37	18	
Percentage of income from sales of renewable electric energy	%	8.5	10.5	11.7	13.9	13.8	

**Notes.** The indicator "Percentage of investments in RES projects in the Power Generation business segment 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. Income means revenue from the sale of electric energy.

## CERTIFICATION OF MANAGEMENT SYSTEMS

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
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	RSPP
Number of Russian entities that have certificates confirming their energy management systems' compliance with the ISO 50001 standard	Entities	26	25	25	25	25	

**Notes.** Percentage of the Russian LUKOIL Group entities' employees covered by the certificates confirming the energy management systems' compliance = the Headcount of employees of the Russian LUKOIL Group entities which have certificates confirming their management systems' compliance with the specified international standards' requirements / the Headcount of the LUKOIL Group entities in the reporting year.

## ECONOMIC IMPACT OF THE IMPLEMENTATION OF THE ENERGY CONSERVATION PROGRAM

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Russian entities	RUB mln	1,185	1,165	1,445	1,261	1,387	RSPP

## INTEGRATED MANAGEMENT SYSTEM

## CERTIFICATION OF MANAGEMENT SYSTEMS

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Percentage of LUKOIL Group entities' employees covered by certificates confirming their HSE management systems' compliance with ISO 14001 and ISO 45001 standards	%	80	84	83	82	81	GRI 403-8 RSPP
Number of LUKOIL Group entities that have certificates confirming their HSE management systems' compliance with ISO 14001 and ISO 45001 standards	Entities	46	48	44	42	44	

**Notes.** 100% of LUKOIL Group employees are covered by the Integrated Management System (IMS). Percentage of the LUKOIL Group entities' employees covered by the certificates confirming HSE management systems compliance = the Headcount of employees of the LUKOIL Group entities which have certificates confirming their management system compliance with the specified international standards' requirements / the Headcount of the LUKOIL Group entities in the reporting year.

## NUMBER OF THE LUKOIL GROUP ENTITIES WHERE THE STATE OF HSE MANAGEMENT SYSTEMS WAS INSPECTED

	Unit of measurement	2018	2019	2020	2021
External audits for compliance with ISO 14001 and ISO 45001 standards	Entities	19	20	16	17
Internal audits for compliance with corporate requirements	Entities	27	23	17	19

**Notes.** External audits are conducted in a three-year cycle in accordance with ISO Committee recommendations. During this period, all LUKOIL Group entities declared for certification or supervisory audits are audited.



## TOTAL COSTS FOR HSE TARGETED AND INVESTMENT PROGRAMS AT LUKOIL GROUP

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>LUKOIL Group</b>	RUB mln	54,719	45,702	47,968	53,630	54,041	RSPP
<b>Environmental safety program (ESP)</b>	RUB mln	42,412	35,529	35,903	22,440	21,384	
Capital expenditures	RUB mln	21,927	28,498	30,046	17,857	14,337	
<b>Program of Industrial Safety, Improvement of Labor Conditions and Occupational Safety, and Emergency Prevention and Liquidation (ISP)</b>	RUB mln	12,307	10,093	12,008	31,161	32,620	
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	
Costs to reduce accident, incident, fire, and emergency risks	RUB mln		5,147	6,727	24,629	25,214	
<b>R&amp;D, experimental engineering, and scientific technical works in Russia</b>	RUB mln		80	57	29	37	
Environmental protection	RUB mln		58	34	19	34	
Industrial safety	RUB mln		22	23	10	3	

**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 LUKOIL GROUP EMPLOYEES

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Scope of training</b>	man-courses	56,481	60,106	59,314	65,220	71,066	GRI 403-5 IPIECA SOC-7 RSPP
· Russian entities	man-courses	42,114	46,485	1,894	52,685	62,130	
· Foreign entities	man-courses	14,367	13,621	2,330	12,535	8,936	
<b>By employee category</b>							
· Managers	people		14,385	16,334		19,746	
· Specialists	people		11,194	12,257		13,158	
· Workers and other employees	people		33,735	36,629		38,162	
<b>Training costs (Employee Training and Advanced Vocational Training category)</b>	RUB mln	328	323	264	340	256	

**Notes.** The scope of employee training data refer to mandatory HS training and training under certification programs, and includes both in-person and distance learning.

## WATER

## WATER WITHDRAWAL BY LUKOIL GROUP ENTITIES

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>1. Water withdrawal and retrieval (1 = 1.1 + 1.2 + 1.3)</b>	million cubic meters		449.8	694.0	611.0	680.9	GRI 303-3 SASB EM-ER-140a.1 SASB EM-RM-140a.1 RSPP
· sea water	million cubic meters		11.4	61.5	57.8	44.9	
· fresh water	million cubic meters		340.3	342.7	290.5	331.5	IPIECA ENV-1 UNCTAD B1.3
· other water (mineralized, waste water, centralized water supply, etc.)	million cubic meters		98.1	289.8	262.7	304.5	
<b>Share of withdrawal of fresh water in total water withdrawal by LUKOIL Group</b>	%		75.7	49.4	47.5	48.7	
· Share of fresh water withdrawn by Russian entities from the total water withdrawal in Russia	%		75	73	69	68	
· Share of fresh water withdrawn by foreign entities from the total water withdrawal in foreign countries	%		91	9	9	9	
<b>Water withdrawn by sources</b>							
<b>1.1. From surface sources</b>	million cubic meters		287.0	340.5	285.5	311.5	
<b>Russian entities</b>	million cubic meters	279.7	267.6	269.7	227.5	269.0	
· sea water	million cubic meters		11.4	11.0	16.7	17.1	
· water from other surface sources (freshwater)	million cubic meters		256.2	258.7	210.8	251.9	
<b>Foreign entities</b>	million cubic meters		19.4	70.8	58.0	42.5	
· sea water	million cubic meters		0.0	50.5	41.1	27.8	
· water from other surface sources (freshwater)	million cubic meters		19.4	20.3	16.9	14.7	
<b>1.2. From underground sources</b>	million cubic meters		99.0	104.8	114.0	122.9	
<b>Russian entities</b>	million cubic meters	76.1	97.1	99.7	108.3	117.3	
· fresh water	million cubic meters		64.7	61.2	60.1	59.4	
· other water	million cubic meters		32.4	38.5	48.2	57.9	
<b>Foreign entities</b>	million cubic meters		1.9	5.1	5.7	5.6	
· fresh water	million cubic meters		0.04	2.5	2.7	5.5	
· other water	million cubic meters		1.9	2.6	3.0	0.1	
<b>1.3. From other sources</b>	million cubic meters		63.8	248.7	211.5	246.5	
· Russian entities	million cubic meters	155.3	63.8	71.6	59.0	73.9	
· Foreign entities	million cubic meters		0.0	177.1	152.5	172.6	

**Notes.** For all the indicators related to water in section Water, the reporting boundaries for foreign entities from 2018 include LUKOIL Neftohim Burgas, PETROTEL-LUKOIL S.A., LUKOIL Uzbekistan Operating Company. The reporting boundaries from 2019 include the same entities plus ISAB S.r.l., IOOO LUKOIL Belorussia, and LUKOIL-BULGARIA EOOD. LLC Volgodosk Heat Supply Networks (Russia) has been included in the reporting boundaries since 2021.

Data exclude water produced as a by-product with hydrocarbons and subsequently used to maintain the formation pressure during oil production.

Water withdrawal from underground sources (other water) includes water produced as a by-product with hydrocarbons and subsequently pumped into subsoil horizons.

Water withdrawal from other sources includes water from centralized water supply sources, and also wastewater received and used by the Group's entities.

\*Almost all of the withdrawn water is taken from the own water intakes of 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 USAGE BY THE LUKOIL GROUP ENTITIES

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Water withdrawal and retrieval</b>	million cubic meters		<b>449.8</b>	<b>694.0</b>	<b>611.0</b>	<b>680.9</b>	GRI 303-3
· Russian entities	million cubic meters	511.1	428.5	441.0	394.8	<b>460.2</b>	
· including by electric energy entities	million cubic meters	331.9	297.7	303.6	252.7	<b>298.8</b>	
Foreign entities	million cubic meters		21.3	253.0	216.2	<b>220.7</b>	
Water consumption for own needs (household, industrial, other)	million cubic meters		<b>374.4</b>	<b>609.0</b>	<b>543.2</b>	<b>588.0</b>	
· Russian entities	million cubic meters	376.4	354.9	358.0	328.7	<b>369.0</b>	
· Foreign entities	million cubic meters		19.5	251.0	214.5	<b>219.0</b>	
<b>Other operations</b>	million cubic meters		<b>34.5</b>	<b>28.9</b>	<b>0.0</b>	<b>2.3</b>	
· Russian entities	million cubic meters	24.2	34.5	28.1	0.0	<b>1.8</b>	
· Foreign entities	million cubic meters		0.0	0.8	0.0	<b>0.5</b>	
<b>Unused water transferred to third-party consumers</b>	million cubic meters		<b>40.9</b>	<b>56.1</b>	<b>63.1</b>	<b>90.4</b>	
· Russian entities	million cubic meters		39.1	54.9	62.0	<b>89.3</b>	
· Foreign entities	million cubic meters		1.8	1.2	1.1	<b>1.1</b>	

**Notes.** In 2020, the approach to accounting for "Other operations" was revised: earlier, 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" and "Water usage for own needs" categories respectively. In 2020, the difference between water withdrawn and retrieved and its total use is due to the clarification of data on water losses during transportation. Since 2021, this category reflects water transportation losses.

In 2018, the water usage accounting methodology in the Russian entities was changed: double counting of water used in intra-group transfers (between the LUKOIL Group entities) was excluded.

## WATER USAGE FOR OWN NEEDS BY BUSINESS ACTIVITY OF THE LUKOIL GROUP ENTITIES

	Unit of measurement	2020	2021
Exploration and Production	million cubic meters	104.9	<b>101.7</b>
Oil Refining and Petrochemicals, LLC LLK-International	million cubic meters	249.3	<b>253.1</b>
Power Generation	million cubic meters	188.0	<b>231.9</b>
Oil product supply, Transportation, LLC LUKOIL-AERO	million cubic meters	1.2	<b>1.3</b>

**Notes.** For the purposes of calculating the indicator "Water usage for own needs by business activity", LLC LLK-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 business sector Other entities related to Oil Refining and Distribution business segment.

The data on LLC KGPZ were included in the Oil Refining line of activity, as in 2021, this entity was reorganized and merged with LLC LUKOIL-Volgogradneftepererabotka, and the data for the previous reporting periods were retrospectively recalculated.

## WATER PRODUCED AS BY-PRODUCT WITH HYDROCARBONS AND SUBSEQUENTLY USED TO MAINTAIN THE FORMATION PRESSURE DURING OIL PRODUCTION

	Unit of measurement	2020	2021
LUKOIL Group	million cubic meters	350.1	<b>374.5</b>
· Russian entities	million cubic meters	350.1	<b>374.5</b>
· Foreign entities	million cubic meters	0.02	<b>0.03</b>

## VOLUMES OF CIRCULATING WATER SUPPLY AND REUSED WATER IN THE LUKOIL GROUP ENTITIES

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>LUKOIL Group</b>	million cubic meters		<b>3,380.7</b>	<b>3,322.2</b>	<b>3,178.2</b>	<b>3,384.2</b>	UNCTAD B1.1
<b>Russian entities</b>	million cubic meters	<b>3,128.6</b>	<b>3,180.7</b>	<b>3,106.0</b>	<b>2,967.6</b>	<b>3,186.2</b>	
· volume of circulating water supply	million cubic meters	2,253.1	2,284.2	2,240.9	2,160.9	<b>2,396.9</b>	
· volume of reused – sequentially used water	million cubic meters	875.5	896.5	865.1	806.7	<b>789.3</b>	
<b>Foreign entities</b>	million cubic meters		<b>200.0</b>	<b>216.2</b>	<b>210.6</b>	<b>198.0</b>	
· volume of circulating water supply	million cubic meters		198.9	214.0	207.8	<b>194.1</b>	
· volume of reused – sequentially used water	million cubic meters		1.1	2.2	2.8	<b>3.9</b>	

**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. 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 used to maintain the formation pressure during oil production is considered reused.

## WATER CONSUMPTION INTENSITY USED FOR OWN PRODUCTION NEEDS IN THE RUSSIAN ENTITIES OF LUKOIL GROUP

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Exploration and Production	cubic meters/tonne of oil equivalent in hydrocarbon resources	1	1	1	1	<b>1.1</b>	RSPP
Oil Refining	cubic meters/tonne of processed oil	0.5	0.5	0.5	0.5	<b>0.5</b>	
Petrochemicals	cubic meters/tonne of processed raw materials	7.3	6.4	6.9	6.8	<b>6.8</b>	
Oil Product Supply	cubic meters/tonne of oil products sold	0.07	0.1	0.07	0.07	<b>0.1</b>	
Transportation	cubic meters/tonne of oil, oil products transported	0.02	0.02	0.01	0.02	<b>0.02</b>	
Power Generation	cubic meters/tonne of oil equivalent in consumed fuel	34.4	34	35.3	32.9	<b>38.5</b>	

**Notes.** The indicator for the Power Generation business sector is calculated according to the formula: 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 the data on power generating entities, which is explained by the specifics of technological processes.

Fluctuations in the indicators of petrochemical companies are mainly caused by changes in the production volume.





## WATER DISCHARGE BY THE LUKOIL GROUP ENTITIES

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>1. Water discharge consolidated (1 = 1.1 + 1.2 + 1.3 + 1.4 + 1.5)</b>	million cubic meters		<b>352.5</b>	<b>568.0</b>	<b>485.3</b>	<b>529.6</b>	GRI 303-4 IPECA ENV-2 RSPP
· Russian entities	million cubic meters	236.4	337.6	344.3	297.5	<b>325.3</b>	
· Foreign entities	million cubic meters		14.9	223.7	187.8	<b>204.3</b>	
By destination							
<b>1.1. Water discharge into surface water bodies (excluding water discharge into the sea)</b>	million cubic meters		<b>218.1</b>	<b>216.6</b>	<b>161.7</b>	<b>210.3</b>	
· Russian entities	million cubic meters		203.4	203.4	151.3	<b>197.8</b>	
· Foreign entities	million cubic meters		14.7	13.2	10.4	<b>12.5</b>	
<b>1.2. Water discharge into the sea</b>	million cubic meters		<b>11.3</b>	<b>221.2</b>	<b>188.4</b>	<b>202.7</b>	
· Russian entities	million cubic meters		11.3	10.9	12.7	<b>12.7</b>	
· Foreign entities	million cubic meters		0.0	210.3	175.7	<b>190.0</b>	
<b>1.3. Water discharge into subsoil horizons</b>	million cubic meters		<b>104.2</b>	<b>106.7</b>	<b>109.7</b>	<b>83.6</b>	
· Russian entities	million cubic meters		104.0	106.5	109.5	<b>83.5</b>	
· Foreign entities	million cubic meters		0.2	0.2	0.2	<b>0.1</b>	
<b>1.4. Water transferred after use to third parties (excluding intra-group transfers)</b>	million cubic meters		<b>18.4</b>	<b>23.4</b>	<b>25.5</b>	<b>33.0</b>	
· Russian entities	million cubic meters		18.4	23.4	24.0	<b>31.3</b>	
· Foreign entities	million cubic meters		0.0	0.0	1.5	<b>1.7</b>	
<b>1.5. Other water discharge</b>	million cubic meters		<b>0.5</b>	<b>0.1</b>	<b>0.0</b>	<b>0.0</b>	
· Russian entities	million cubic meters		0.5	0.1	0.0	<b>0.0</b>	
· Foreign entities	million cubic meters		0.0	0.0	0.0	<b>0.0</b>	

**Notes.** Water discharge into underground horizons includes water produced as a by-product with hydrocarbons and subsequently pumped into absorption wells.

In 2020, the volume of water discharge into subsoil horizons (1.3) increased in the Russian entities due to geological specifics of licensed areas; the increase in the volume of water transferred to third parties (1.4) was due to the increased water consumption of the third parties.

## SPECIFIC DISCHARGE OF INSUFFICIENTLY TREATED WASTEWATER INTO WATER BODIES BY THE RUSSIAN ENTITIES OF LUKOIL GROUP

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Oil and Gas Production	cubic meters/tonne of oil equivalent in hydrocarbon resources	0.008	0.004	0.004	0.0005	<b>0.0000003</b>	RSPP
Oil Refining	cubic meters/tonne of processed oil	0	0	0.037	0.2	<b>0.185</b>	
Oil Product Supply	cubic meters/tonne of oil products sold	0.004	0.003	0.002	0.002	<b>0.004</b>	
Transportation	cubic meters/tonne of oil, oil products transported	0.008	0.009	0.008	0.008	<b>0.008</b>	

**Notes.** No insufficiently treated water is discharged into water bodies by petrochemical and energy generating entities (excluded from the table).

The specific discharge of insufficiently treated wastewater by oil refining entities are calculated based on the volume of production wastewater from LLC LUKOIL-Ukhtaneftepereperabotka, excluding any utility wastewater received from a third party (Municipal Institution Ukhtavodokanal).

## WATER DISCHARGE INTO SURFACE WATER BODIES AND INTO THE SEA BY THE LUKOIL GROUP ENTITIES BY WASTEWATER QUALITY

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Water discharge into surface water bodies and the sea (1 + 2)</b>	million cubic meters			<b>437.8</b>	<b>350.1</b>	<b>413.0</b>	GRI 303-4
· Russian entities	million cubic meters	236.4	214.7	214.3	164.0	<b>210.5</b>	
· Foreign entities	million cubic meters			223.5	186.1	<b>202.5</b>	
<b>1. Water discharge into surface water bodies by wastewater quality (1 = 1.1 + 1.2 + 1.3)</b>	million cubic meters			<b>216.6</b>	<b>161.7</b>	<b>210.3</b>	
· Russian entities	million cubic meters			203.4	151.3	<b>197.8</b>	
· Foreign entities	million cubic meters			13.2	10.4	<b>12.5</b>	
<b>1.1. clean standard-quality wastewater</b>	million cubic meters			<b>185.0</b>	<b>126.4</b>	<b>172.5</b>	
· Russian entities	million cubic meters	206.2	186.3	176.1	126.4	<b>172.5</b>	
· Foreign entities	million cubic meters			8.9	0.0	<b>0.0</b>	
<b>1.2. wastewater treated to standard quality</b>	million cubic meters			<b>20.2</b>	<b>26.7</b>	<b>29.3</b>	
· Russian entities	million cubic meters	29.1	27.5	16.8	16.3	<b>16.8</b>	
· Foreign entities	million cubic meters			3.4	10.4	<b>12.5</b>	
<b>1.3. polluted wastewater</b>	million cubic meters			<b>11.4</b>	<b>8.6</b>	<b>8.5</b>	
· Russian entities	million cubic meters	1.1	0.9	10.5	8.6	<b>8.5</b>	
· Foreign entities	million cubic meters			0.9	0.0	<b>0.0</b>	
<b>2. Water discharge into the sea by wastewater quality (2 = 2.1 + 2.2 + 2.3)</b>	million cubic meters			<b>221.2</b>	<b>188.4</b>	<b>202.7</b>	
· Russian entities	million cubic meters			10.9	12.7	<b>12.7</b>	
· Foreign entities	million cubic meters			210.3	175.7	<b>190.0</b>	
<b>2.1. clean standard-quality wastewater</b>	million cubic meters			<b>220.6</b>	<b>188.0</b>	<b>202.3</b>	
· Russian entities	million cubic meters			10.7	12.5	<b>12.5</b>	
· Foreign entities	million cubic meters			209.9	175.5	<b>189.8</b>	
<b>2.2. wastewater treated to standard quality</b>	million cubic meters			<b>0.4</b>	<b>0.2</b>	<b>0.0</b>	
· Russian entities	million cubic meters			0.0	0.0	<b>0.0</b>	
· Foreign entities	million cubic meters			0.4	0.2	<b>0.0</b>	
<b>2.3. polluted wastewater</b>	million cubic meters			<b>0.2</b>	<b>0.2</b>	<b>0.4</b>	
· Russian entities	million cubic meters			0.2	0.2	<b>0.2</b>	
· Foreign entities	million cubic meters			0	0	<b>0.2</b>	

**Notes.** Polluted water is insufficiently treated wastewater and wastewater which is not treated.

In 2020, an increase in the discharge of clean standard-quality wastewater into the sea by Russian entities was due to an increase in the volume of seawater withdrawal for equipment cooling during boreholes drilling at LLC LUKOIL-Nizhnevolzhskneft and subsequent discharge (return) of water into the sea.

In 2019, the volume of polluted wastewater discharged into surface water bodies by Russian entities increased due to a change in the permissible discharge rates for the biological treatment facilities of the oil refinery in Ukhta (Komi Republic).



## EMISSIONS

AIR EMISSIONS (NET OF CO<sub>2</sub>) AT LUKOIL GROUP

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Total pollutant emissions</b>	thousands tonnes		<b>451</b>	<b>429</b>	<b>395</b>	<b>425</b>	GRI 305-7 SASB EM-ER-120a.1 SASB EM-MD-120a.1 SASB EM-RM-120a.1 IPIECA ENV-5 RSPP
· Russian entities	thousands tonnes	503	433	402	376	<b>403</b>	
· Foreign entities	thousands tonnes		18	26	19	<b>22</b>	
Including by pollutant type:							
<b>NOx emissions</b>	thousands tonnes		<b>49</b>	<b>50</b>	<b>45</b>	<b>42</b>	
By business activity							
· Exploration and Production	thousands tonnes					<b>17</b>	
· Oil Refining, Petrochemicals, LLC LUK-International	thousands tonnes					<b>7</b>	
· Power Generation	thousands tonnes					<b>17</b>	
· Oil Product Supply, Transportation, LLC LUKOIL-AERO	thousands tonnes					<b>0.3</b>	
By geography							
· Russian entities	thousands tonnes	50	47	46	42	<b>40</b>	
· Foreign entities	thousands tonnes		2	3	3	<b>2</b>	
<b>SO<sub>2</sub> emissions</b>	thousands tonnes		<b>38</b>	<b>41</b>	<b>31</b>	<b>35</b>	
By business activity							
· Exploration and Production	thousands tonnes					<b>19</b>	
· Oil Refining, Petrochemicals, LLC LUK-International	thousands tonnes					<b>15</b>	
· Power Generation	thousands tonnes					<b>0.3</b>	
· Oil Product Supply, Transportation, LLC LUKOIL-AERO	thousands tonnes					<b>0.7</b>	
By geography							
· Russian entities	thousands tonnes	23	25	22	19	<b>19</b>	
· Foreign entities	thousands tonnes		12	19	12	<b>16</b>	
<b>Solid particle discharges</b>	thousands tonnes		<b>15</b>	<b>15</b>	<b>14</b>	<b>18</b>	
By business activity							
· Exploration and Production	thousands tonnes					<b>18</b>	
· Oil Refining, Petrochemicals, LLC LUK-International	thousands tonnes					<b>0.4</b>	
· Power Generation	thousands tonnes					<b>0.03</b>	
· Oil Product Supply, Transportation, LLC LUKOIL-AERO	thousands tonnes					<b>0.04</b>	
By geography							
· Russian entities	thousands tonnes	24	15	15	14	<b>18</b>	
· Foreign entities	thousands tonnes		0.2	0.2	0.2	<b>0.2</b>	
<b>CO emissions</b>	thousands tonnes		<b>156</b>	<b>155</b>	<b>143</b>	<b>177</b>	
By business activity							
· Exploration and Production	thousands tonnes					<b>167</b>	
· Oil Refining, Petrochemicals, LLC LUK-International	thousands tonnes					<b>5</b>	
· Power Generation	thousands tonnes					<b>4</b>	
· Oil Product Supply, Transportation, LLC LUKOIL-AERO	thousands tonnes					<b>0.2</b>	
By geography							
· Russian entities	thousands tonnes	217	154	152	141	<b>175</b>	
· Foreign entities	thousands tonnes		2	2	2	<b>2</b>	

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Hydrocarbon emissions</b>	thousands tonnes		<b>74</b>	<b>61</b>	<b>49</b>	<b>37</b>	GRI 305-7 SASB EM-ER-120a.1 SASB EM-MD-120a.1 SASB EM-RM-120a.1 IPIECA ENV-5 RSPP
By business activity							
· Exploration and Production	thousands tonnes					<b>35</b>	
· Oil Refining, Petrochemicals, LLC LUK-International	thousands tonnes					<b>2</b>	
· Power Generation	thousands tonnes					<b>0.2</b>	
· Oil Product Supply, Transportation, LLC LUKOIL-AERO	thousands tonnes					<b>0.02</b>	
By geography							
· Russian entities	thousands tonnes	188	73	60	47	<b>35</b>	
· Foreign entities	thousands tonnes		1	1	2	<b>2</b>	
<b>Volatile organic compounds (VOC) emissions</b>	thousands tonnes		<b>115</b>	<b>106</b>	<b>111</b>	<b>116</b>	
By business activity							
· Exploration and Production	thousands tonnes					<b>87</b>	
· Oil Refining, Petrochemicals, LLC LUK-International	thousands tonnes					<b>15</b>	
· Power Generation	thousands tonnes					<b>0.6</b>	
· Oil Product Supply, Transportation, LLC LUKOIL-AERO	thousands tonnes					<b>13</b>	
By geography							
· Russian entities	thousands tonnes		115	106	111	<b>115</b>	
· Foreign entities	thousands tonnes		0.00	0.05	0.03	<b>0.52</b>	
<b>Emissions of other pollutants</b>	thousands tonnes		<b>4</b>	<b>2</b>	<b>2</b>	<b>1</b>	
By business activity							
· Exploration and production	thousands tonnes					<b>0.5</b>	
· Oil Refining, Petrochemicals, LLC LUK-International	thousands tonnes					<b>0.2</b>	
· Power Generation	thousands tonnes					<b>0.1</b>	
· Oil Product Supply, Transportation, LLC LUKOIL-AERO	thousands tonnes					<b>0.1</b>	
By geography							
· Russian entities	thousands tonnes	1	4	1	2	<b>1</b>	
· Foreign entities	thousands tonnes		0.01	0.56	0.02	<b>0.02</b>	

**Notes.** For all the indicators related to emissions, the reporting boundaries for foreign entities from 2018 include LUKOIL Neftohim Burgas, PETROTEL-LUKOIL S.A., LUKOIL Uzbekistan Operating Company. The reporting boundaries from 2019 include the same entities plus ISAB S.r.l., IOOO LUKOIL Belorussia, and LUKOIL-BULGARIA EOOD. LLC Volgodonsk Heat Supply Networks has been included in the reporting boundaries since 2021.

For the purposes of calculating the indicator "Pollutant emissions by business activity", 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 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 "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 has been recalculated.

Hydrocarbon emissions for 2017 include VOCs.


**SPECIFIC AIR EMISSIONS BY THE RUSSIAN ENTITIES OF LUKOIL GROUP BY BUSINESS ACTIVITY**

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Exploration and Production	kg/tonne of oil equivalent in extracted hydrocarbon resources	4.1	3.4	3.2	3.3	<b>3.5</b>	RSPP
Oil Refining	kg/tonne of refined oil	0.9	0.8	0.9	0.8	<b>0.8</b>	
Petrochemicals	kg/tonne of processed raw materials	1.3	1.1	1.4	1.6	<b>1.5</b>	
Oil Product Supply	kg/tonne of oil products sold	0.8	0.8	0.7	0.7	<b>0.9</b>	
Transportation	kg/tonne of oil, oil products transported	0.1	0.2	0.2	0.2	<b>0.2</b>	
Power Generation	kg/tonne of oil equivalent in consumed fuel	2.6	2.9	2.9	3.5	<b>3.2</b>	

**Notes.** In 2020, the indicator's increase in the Power Generation business segment was due to the combustion of reserve fuel (fuel oil) at several CHPPs. Change in the indicator in the Petrochemicals business segment was caused by an increase in production output.

Specific pollutant emissions in 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 MANAGEMENT AT LUKOIL GROUP**

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Waste at the beginning of the reporting year</b>	thousand tonnes		<b>956</b>	<b>910</b>	<b>947</b>	<b>913</b>	GRI 306-3 (2020) UNCTAD B2.1
· Russian entities	thousand tonnes	765	933	885	920	<b>885</b>	RSPP
· Foreign entities	thousand tonnes		23	25	27	<b>28</b>	UNCTAD B2.2 GRI 306-5 (2020)
<b>Waste generated during the reporting year</b>	thousand tonnes		<b>1,556</b>	<b>1,783</b>	<b>2,178</b>	<b>2,065</b>	
· Russian entities	thousand tonnes	1,434	1,529	1,672	1,960	<b>1,968</b>	
· Foreign entities	thousand tonnes		27	111	218	<b>97</b>	
<b>Waste received from third parties</b>	thousand tonnes		<b>6</b>	<b>5</b>	<b>4</b>	<b>6</b>	
· Russian entities	thousand tonnes		6	5	4	<b>6</b>	
· Foreign entities	thousand tonnes		0.0	0.1	0.1	<b>0.2</b>	
<b>Waste used, neutralized, and transferred to specialized entities, as well as landfill waste</b>	thousand tonnes		<b>1,609</b>	<b>1,751</b>	<b>2,217</b>	<b>2,020</b>	
· Russian entities	thousand tonnes	1,396	1,582	1,642	2,000	<b>1,921</b>	
· Foreign entities	thousand tonnes		27	109	217	<b>99</b>	
Percentage of waste landfilled at the Group's own disposal facilities	%			3.9	4.0	<b>3.6</b>	
<b>Waste at the end of the reporting year</b>	thousand tonnes		<b>904</b>	<b>947</b>	<b>912</b>	<b>964</b>	
· Russian entities	thousand tonnes	933	885	920	884	<b>938</b>	
· Foreign entities	thousand tonnes		19	27	28	<b>26</b>	

**Notes.** For all the indicators related to waste and land in section Land and Waste, the reporting boundaries for foreign entities from 2018 include LUKOIL Neftohim Burgas, PETROTEL-LUKOIL S.A., LUKOIL Uzbekistan Operating Company. The reporting boundaries from 2019 include the same entities plus ISAB S.r.l., IOOO LUKOIL Belorussia, and LUKOIL-BULGARIA EOOD. LLC Volgodonsk Heat Supply Networks has been included in the reporting boundaries since 2021.

The amount of waste at the beginning and end of each reporting period (waste remaining in accumulation) depends mainly on the production process and the schedules for recycling/neutralizing 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 of 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.

Data on waste across Russian entities is provided without taking into account rock formed as a result of mine oil production at LLC LUKOIL-Komi.

The difference between the data of waste as of the end of 2018 and 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 of waste as of the end of 2020 and at the beginning of 2021 was due to the reporting boundaries extension and taking into account the waste that was at the beginning of 2021 at LLC Volgodonsk Heat Supply Networks.

Percentage of waste landfilled at the Group's own disposal facilities is calculated from the total waste disposed of in the reporting year (recycled, neutralized, landfilled and transferred to specialized entities) at LUKOIL Group.



## WASTE BY HAZARD CLASS AT LUKOIL GROUP

	Unit of measurement	2019	2020	2021	Reporting system
<b>Waste generated per year</b>	thousand tonnes		2,178	2,065	GRI 306-3 (2020) SASB EM-RM-150a.1 RSPP UNCTAD B2.3
By business activity					
Exploration and Production	thousand tonnes			1,640	
· hazardous	thousand tonnes			267	
· non-hazardous and low-hazardous	thousand tonnes			1,373	
Oil Refining and Petrochemicals, LLC LUKOIL-International	thousand tonnes			337	
· hazardous	thousand tonnes			144	
· non-hazardous and low-hazardous	thousand tonnes			193	
Power Generation	thousand tonnes			29	
· hazardous	thousand tonnes			3	
· non-hazardous and low-hazardous	thousand tonnes			26	
Oil product supply and Transportation, LLC LUKOIL-AERO				59	
By geography					
Russian entities	thousand tonnes	1,672	1,960	1,968	
· hazardous (Hazard Classes I-III)	thousand tonnes	253	304	362	
· non-hazardous and low-hazard (Hazard Classes IV-V)	thousand tonnes	1,419	1,656	1,606	
Foreign entities	thousand tonnes		218	97	
· hazardous	thousand tonnes		143	51	
· non-hazardous and low-hazardous	thousand tonnes		75	46	
<b>Waste at the end of the year at LUKOIL Group</b>	thousand tonnes		912	964	
· hazardous	thousand tonnes		45	50	
· non-hazardous and low-hazardous	thousand tonnes		867	914	
<b>Russian entities</b>	thousand tonnes	920	884	938	
· Hazard Class I	thousand tonnes	0.002	0.0016	0.001	
· Hazard Class II	thousand tonnes	0.0043	0.0089	0.004	
· Percentage of waste of Hazard Classes I and II	%	0.0007	0.0012	0.0005	
· Hazard Class III (incl. oil-containing)	thousand tonnes	21	21	25	
· Percentage of waste of Hazard Classes I, II, and III	%	2.3	2.4	2.7	
<b>TOTAL Hazardous (Classes I, II, and III)</b>	thousand tonnes	21	21	25	
· Hazard Class IV	thousand tonnes	868	829	878	
· Hazard Class V	thousand tonnes	31	34	35	
<b>TOTAL non-hazardous and low-hazard (Classes IV and V)</b>	thousand tonnes	899	863	913	
<b>Foreign entities</b>	thousand tonnes		28	26	
· hazardous	thousand tonnes		24	25	
· non-hazardous	thousand tonnes		3.5	0.9	

**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 indicator "Waste generated by business activity", 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 segment.

## PRE-PRIVATIZATION WASTE

	Unit of measurement	2018	2019	2020	2021	Reporting system
<b>Waste eliminated in the reporting year</b>						GRI 306-2 (2020)
LUKOIL Group	thousand tonnes	107	69	52	25	
· Russian entities	thousand tonnes	50	51	39	3.1	
· Foreign entities	thousand tonnes	57	18	13	22	
<b>Waste at the end of the reporting year</b>						
LUKOIL Group	thousand tonnes	666	601	549	523	
· Russian entities	thousand tonnes	269	223	184	180	
· Foreign entities	thousand tonnes	397	378	365	343	

## FORMATION AND REMEDIATION OF CONTAMINATED LAND

	Unit of measurement	2018	2019	2020	2021	Reporting system
<b>Land contaminated during the reporting year</b>						SASB EM-MD-120a.1
LUKOIL Group	hectares	52	40	58	38	
· Russian entities	hectares	52	40	58	38	
· Foreign entities	hectares	0	0	0	0	
<b>Land remediated during the reporting year</b>						
LUKOIL Group	hectares	50	57	44	49	
· Russian entities	hectares	50	57	44	45	
· Foreign entities	hectares	0	0	0	4	
<b>Contaminated land area at the end of the reporting year</b>						
LUKOIL Group	hectares	63	46	60	49	
· Russian entities	hectares	59	42	56	49	
· Foreign entities	hectares	4	4	4	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 PREPAREDNESS FOR EMERGENCIES OF THE LUKOIL GROUP RUSSIAN ENTITIES**

	Unit of measurement	2017	2018	2019	2020	2021
Number of trainings conducted	trainings	193	178	200	163	126
· Including training on the elimination of a potential oil/oil product spill	trainings	109	91	117	94	78
Number of staff involved in trainings	people	6,640	5,810	6,692	4,631	3,573
Number of site drills	drill	10,566	11,996	10,739	12,812	20,342
Number of staff involved in the drills	people	75,649	88,300	97,852	83,859	86,329
Number of employees trained to act in case of an accident or emergency	people					57,087

**RELIABILITY INDICATORS OF THE PIPELINE SYSTEM IN RUSSIA**

	Unit of measurement	2017	2018	2019	2020	2021
Percentage of corrosion-resistant pipelines	%	25.2	26.8	30.4	32.2	34.2

**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**

	Unit of measurement	2018	2019	2020	2021	Reporting system
Volume of oil spilled in accidents	tonnes	32	16	43	73	GRI 11: 306-3 (2021) SASB EM-ER-160a.2 SASB EM-MD-160a.4 IPIECA ENV-6
· Including resulting from significant spills	tonnes	0	0	6	71	
Number of significant spills	incidents	0	0	4	4	
Specific oil spill coefficient	kg of spilled oil and oil products per 1,000 tonnes of extracted oil and gas condensate	0.4	0.2	0.6	0.97	
<b>Spills of other substances</b>						
· Combustible-lubricative materials	tonnes	0	0	0.6	0	
· Highly toxic substances (acids, alkalis, process solutions)	tonnes	0	0	0	0	
· Technological products	tonnes	0	0	0	0	
· Other spills	tonnes	0	0	0	0	

**Notes.** Data on oil spills are provided for all 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).

Significant spills = Spills into water bodies of any volume + Emergency spills on land of more than 10 tonnes with environmental consequences.



**NUMBER OF EMERGENCY RESCUE TEAMS (STAFF AND NON-STAFF)**

	Unit of measurement	2020	2021
Komi Republic	people	392	460
Khanty-Mansi Autonomous Area – Yugra, Yamal-Nenets Autonomous Area, Nenets Autonomous Area	people	423	441
Astrakhan Region	people	159	146
Perm Region	people	391	418
Volgograd Region	people	188	188
Kaliningrad Region	people	66	66
Stavropol Territory	people	95	94
Other regions	people	381	324
<b>Total</b>	<b>people</b>	<b>2,095</b>	<b>2,137</b>

**OCCUPATIONAL SAFETY**

**NUMBER OF OCCUPATIONAL ACCIDENTS AND EMPLOYEES INJURED IN WORKPLACE ACCIDENTS AT LUKOIL GROUP ENTITIES**

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Total number of occupational accidents (injuries)</b>	incidents	20	21	19	28	17	GRI 403-9 (2018) SASB EM-ER-320a.1 SASB EM-RM-320a.1 IPIECA SHS-3 RSPP UNCTAD C3.2
· fatal	incidents	4	1	2	2	0	
· high-consequence work-related injuries	incidents		5	8	7	5	
· minor injuries	incidents		15	9	19	12	
Number of microtraumas	incidents		3	7	4	1	
<b>Number of employees injured in workplace accidents (total number of injuries)</b>	incidents	22	23	25	28	17	
· number of fatalities (traumas) (FA)	incidents	4	1	2	2	0	
· number of lost-time injuries (traumas) (LTI)	incidents	18	22	23	26	17	

**Notes.** If during the reporting period an employee suffered more than one injury, each case is counted as a separate injury. The term "microtrauma" is used according to the GRI definition.



## INDICATORS RELATED TO OCCUPATIONAL INJURIES AT LUKOIL GROUP

	2017	2018	2019	2020	2021	Reporting system
Lost Time Accident Frequency Rate (LTAFR)	0.2	0.2	0.19	0.28	<b>0.17</b>	GRI 403-9 (2018) RSPP
Lost Time Injury Frequency Rate (LTIFR)		0.12	0.13	0.15	<b>0.10</b>	
Rate of fatalities		0.01	0.01	0.01	<b>0</b>	
Rate of high-consequence injuries (net of fatalities)		0.03	0.05	0.04	<b>0.03</b>	
Total Recordable Injury Frequency Rate (TRIFR)		0.15	0.18	0.19	<b>0.11</b>	

**Notes.** The lower all the indicators are the better.

Lost Time Accident Frequency Rate, LTAFR = Number of accidents / Employee headcount for a reporting period × 1,000 employees.  
Lost Time Injury Frequency Rate, LTIFR = Number of lost time injuries / Number of man-hours worked × 1,000,000 man-hours.

Rate of fatalities as a result of work-related injury = Number of fatalities as a result of work-related injury / Number of hours worked × 1,000,000 man-hours.

Rate of high-consequence work-related injuries = Number of high-consequence work-related injuries (excluding fatalities) / Number of hours worked × 1,000,000 man-hours. Injuries are classified as high-consequence on the basis of the criteria established by national legislations.

Total Recordable Injury Frequency Rate (TRIFR) = Number of all registered industrial accidents (including mild, hard accidents, fatalities and microtraumas) / Number of hours worked × 1,000,000 man-hours.

## OCCUPATIONAL ILLNESS AT THE RUSSIAN ENTITIES OF LUKOIL GROUP

Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Occupational disease rate (ODR)						GRI 403-10 (2018) IPIECA SHS-3 RSPP
· per 1,000 workers	0.06	0.19	0.130	0.083	<b>0.092</b>	
· per 1,000,000 man-hours		0.11	0.08	0.05	<b>0.057</b>	
Number of workers with newly diagnosed occupational diseases	5	16	11	7	<b>8</b>	

**Notes.** Occupational disease rate (ODR) = Number of persons with newly diagnosed occupational diseases / Average headcount \* 1,000 employees.

Occupational disease rate (ODR) = Number of persons with newly diagnosed occupational diseases / Number of man-hours worked \* 1,000,000 man-hours.

The 2020 data for the indicator "Number of workers with newly diagnosed occupational diseases" was adjusted from the previously published data due to the fact that the investigation of one case was completed in 2021.

## NUMBER OF OCCUPATIONAL ACCIDENTS AND EMPLOYEES WITH WORK-RELATED INJURIES AT CONTRACTOR ORGANIZATIONS IN RUSSIA AND ABROAD

Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Total number of occupational accidents	20	9	13	10	<b>16</b>	GRI 403-9 (2018) SASB EM-SV-320a.1
· Fatal	7	1	6	3	<b>3</b>	
· High-consequence work-related injuries	4	3	1	1	<b>6</b>	
Number of employees with work-related injuries (total number of injuries)	25	9	16	11	<b>17</b>	
· Number of fatalities (FA)	10	1	7	4	<b>3</b>	
· Number of lost-time injuries (LTI)	15	8	9	7	<b>14</b>	

**Notes.** If during the reporting period an employee suffered more than one injury, each case is counted as a separate injury.

## EMPLOYEES DETAILS

## Headcount and personnel characteristics

## AVERAGE HEADCOUNT OF LUKOIL GROUP

Unit of measurement	2017	2018	2019	2020	2021	Reporting system
LUKOIL Group	103,647	102,508	101,374	100,768	<b>102,424</b>	GRI 102-8 RSPP
· Russian entities	85,790	85,105	84,356	84,383	<b>86,541</b>	
· Foreign entities	17,857	17,403	17,018	16,385	<b>15,883</b>	

## LUKOIL GROUP HEADCOUNT (AS AT DECEMBER 31 OF EACH REPORTING YEAR)

Unit of measurement	2017	2018	2019	2020	2021	Reporting system
LUKOIL Group	107,405	105,991	105,624	104,264	<b>106,835</b>	GRI 102-8 RSPP
· Russian entities	89,323	88,019	88,434	87,858	<b>90,808</b>	
	83	83	84	84	<b>85</b>	
· Foreign entities	18,082	17,972	17,190	16,406	<b>16,027</b>	
	17	17	16	16	<b>15</b>	



## TURNOVER RATE AT LUKOIL GROUP

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Turnover rate</b>	%	6.7	7.8	7.5	6.7	<b>9.1</b>	GRI 401-1 RSPP
· Men	%					<b>7.6</b>	
· Women	%					<b>11.6</b>	
Russian entities	%	5.6	7	6.6	6.1	<b>8.8</b>	
· Men	%					<b>7.1</b>	
· Women	%					<b>11.3</b>	
Foreign entities	%	11.6	11.5	11.7	10.2	<b>10.7</b>	
· Men	%					<b>9.7</b>	
· Women	%					<b>13.5</b>	

## INFORMATION ON NEWLY HIRED EMPLOYEES

	Unit of measurement	2017	2018	2019	2020	2021
<b>LUKOIL Group</b>	people	20,101	26,358	16,624	13,295	<b>18,878</b>
· Men	people			8,620	6,468	<b>9,313</b>
· Women	people			8,004	6,827	<b>9,565</b>
· Percentage of men hired	%			52	49	<b>49</b>
· Percentage of women hired	%			48	51	<b>51</b>
Russian entities	people			13,544	10,878	<b>16,441</b>
· Men	people			6,460	4,927	<b>7,460</b>
· Women	people			7,084	5,951	<b>8,981</b>
Foreign entities	people			3,080	2,417	<b>2,437</b>
· Men	people			2,160	1,541	<b>1,853</b>
· Women	people			920	876	<b>584</b>

## PERSONNEL CHARACTERISTICS BY TYPE OF EMPLOYMENT, EMPLOYMENT CONTRACT AND GENDER AS AT DECEMBER 31 OF EACH REPORTING YEAR

	Unit of measurement	2018	2019	2020	2021	Reporting system
<b>Headcount of LUKOIL Group</b>	people	105,991	105,624	104,264	<b>106,835</b>	GRI 102-8 RSPP
Employee breakdown by gender						
· Men	people	62,205	62,007	61,183	<b>63,034</b>	
· Women	people	43,786	43,617	43,081	<b>43,801</b>	
Percentage of men / women headcount						
· Men	%	59	59	59	<b>59</b>	
· Women	%	41	41	41	<b>41</b>	
Employee breakdown by type of employment						
· Full-time	people	86,319	105,168	103,972	<b>106,500</b>	
· Part-time	people	406	456	292	<b>335</b>	
Percentage of employees in each employment category in the headcount						
· Full-time	%	99.5	99.6	99.7	<b>99.7</b>	
· Part-time	%	0.5	0.4	0.3	<b>0.3</b>	
Employee breakdown by type of employment contract						
Permanent contract	people	79,542	98,020	96,659	<b>98,914</b>	
Percentage of the employees in the category "Permanent contract" in the headcount	%	92	93	93	<b>93</b>	
· Men	people		58,808	57,854	<b>59,446</b>	
· Percentage of men in the headcount	%		95	95	<b>94</b>	
· Women	people		39,212	38,805	<b>39,468</b>	
· Percentage of women in the headcount	%		90	90	<b>90</b>	
Fixed-term contract	people	7,167	7,604	7,605	<b>7,921</b>	
Percentage of the employees in the category "Fixed-term contract" in the headcount	%	8	7	7	<b>7</b>	
· Men	people		3,202	3,329	<b>3,588</b>	
· Percentage of men in the headcount	%		5.2	5.4	<b>5.7</b>	
· Women	people		4,402	4,276	<b>4,333</b>	
· Percentage of women in the headcount	%		10.1	9.9	<b>9.9</b>	

**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**

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Headcount</b>	people	<b>107,405</b>	<b>105,991</b>	<b>105,624</b>	<b>104,264</b>	<b>106,835</b>	GRI 102-8 RSPP
Breakdown by category							
· managers	people	13,323	12,840	12,806	12,694	<b>12,953</b>	
· specialists	people	28,829	28,091	28,691	28,319	<b>28,793</b>	
· workers and other employees	people	65,253	65,060	64,127	63,251	<b>65,089</b>	
<b>Russian entities</b>		<b>89,323</b>	<b>88,019</b>	<b>88,434</b>	<b>87,858</b>	<b>90,808</b>	
· managers	people	11,365	10,873	10,853	10,845	<b>11,129</b>	
· specialists	people	24,557	23,950	24,538	24,141	<b>24,559</b>	
· workers and other employees	people	53,401	53,196	53,043	52,872	<b>55,120</b>	
<b>Foreign entities</b>		<b>18,082</b>	<b>17,972</b>	<b>17,190</b>	<b>16,406</b>	<b>16,027</b>	
· managers	people	1,958	1,967	1,953	1,849	<b>1,824</b>	
· specialists	people	4,272	4,141	4,153	4,178	<b>4,234</b>	
· workers and other employees	people	11,852	11,864	11,084	10,379	<b>9,969</b>	
Breakdown by gender							
· 35 and younger	people	42,772	41,174	39,179	36,955	<b>36,515</b>	
· 36 to 40 years	people	17,253	17,346	17,670	17,962	<b>18,694</b>	
· 41 to 50 years	people	28,564	29,069	29,793	30,266	<b>31,472</b>	
· 51 and above	people	18,816	18,402	18,982	19,081	<b>20,154</b>	
<b>Russian entities</b>	people	<b>89,323</b>	<b>88,019</b>	<b>88,434</b>	<b>87,858</b>	<b>90,808</b>	
· 35 and younger	people	35,931	34,700	33,310	31,615	<b>31,468</b>	
· 36 to 40 years	people	14,007	14,142	14,624	15,085	<b>15,952</b>	
· 41 to 50 years	people	23,274	23,725	24,545	25,136	<b>26,349</b>	
· 51 and above	people	16,111	15,452	15,955	16,022	<b>17,039</b>	
<b>Foreign entities</b>	people	<b>18,082</b>	<b>17,972</b>	<b>17,190</b>	<b>16,406</b>	<b>16,027</b>	
· 35 and younger	people	6,841	6,474	5,869	5,340	<b>5,047</b>	
· 36 to 40 years	people	3,246	3,204	3,046	2,877	<b>2,742</b>	
· 41 to 50 years	people	5,290	5,344	5,248	5,130	<b>5,123</b>	
· 51 and above	people	2,705	2,950	3,027	3,059	<b>3,115</b>	

**INDICATORS RELATED TO WORKING WITH YOUNG EMPLOYEES AND PROFESSIONALS**

	Unit of measurement	2017	2018	2019	2020	2021
Number of young employees	people	42,772	41,174	39,179	36,955	<b>36,515</b>
number of young professionals	people	1,945	1,639	1,423	1,317	<b>1,351</b>
Young employees recruited	people	12,125	14,624	9,427	7,603	<b>10,625</b>
young professionals	people	706	589	631	523	<b>661</b>
Number of students studying under agreements with LUKOIL Group entities	people	295	173	281	325	<b>146</b>

**Notes.** Young employees are employees of PJSC LUKOIL and 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**

	Unit of measurement	2019	2020	2021
Breakdown of employees by region				
Russia	%	83.7	84.3	<b>85.0</b>
Europe	%	10.8	10.4	<b>9.7</b>
Asia	%	2.8	2.8	<b>2.7</b>
Middle East and Africa	%	2.6	2.4	<b>2.5</b>
North America	%	0.1	0.1	<b>0.1</b>
Breakdown of Group entities employees by business activity				
Exploration and Production	%	36	36	<b>38</b>
Oil Product Supply, Transportation as well as Other entities from the Refining and Distribution business segment	%	35	35	<b>33</b>
Power Generation	%	12	12	<b>12</b>
Oil Refining and Petrochemicals	%	12	12	<b>12</b>
Corporate center and other activities	%	5	5	<b>5</b>

**Notes.** From 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 OF TOTAL NUMBER OF MANAGERS OF THE RESPECTIVE LEVEL AT LUKOIL GROUP ENTITIES

Unit of measurement	2019	2020	2021	Reporting system
Employee category				UNCTAD C1.1
CEO of a LUKOIL Group entity %	1	2	4	
Deputy Heads, Chief Engineer, Chief Accountant %	18	18	16	
Head of a branch, TPU, or another standalone business unit %	4	7	4	
Heads of departments (excluding mentioned above) %	26	27	26	

### INFORMATION ON LOCAL MANAGERS IN THE FOREIGN ENTITIES OF LUKOIL GROUP IN SIGNIFICANT REGIONS OF OPERATIONS AS AT DECEMBER 31 OF EACH REPORTING YEAR

Unit of measurement	2017	2018	2019	2020	2021
Senior managers people	87	89	89	88	89
Including locals people	28	28	29	31	31
Percentage of local senior managers %	32	31	33	35	35

**Notes.** 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 citizens of relevant country.

### Social support

#### PERCENTAGE OF EMPLOYEES COVERED BY COLLECTIVE AGREEMENTS AT LUKOIL GROUP

Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Percentage of employees covered by collective agreements in the LUKOIL Group entities %	88	90	89	90	93	GRI 102-41 RSPP UNCTAD C4.1
Percentage of employees covered by collective agreements in the Russian entities %	95	98	96	98	99.5	

**Notes.** Percentage of employees covered by collective agreements (in the LUKOIL Group entities or Russian entities) = Headcount of employees (in the LUKOIL Group entities or Russian entities, respectively) that have collective agreements / Headcount of employees (in the LUKOIL Group entities or Russian entities, respectively).

### SCOPE OF SERVICES PROVIDED UNDER SOCIAL PROGRAMS AT LUKOIL GROUP

Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>LUKOIL Group</b> services	<b>468,150</b>	<b>430,323</b>	<b>456,495</b>	<b>456,750</b>	<b>478,553</b>	GRI 401-2 RSPP
Health protection services	325,711	286,746	322,795	321,215	340,375	
Social support for families with children services	65,311	62,241	59,480	60,267	62,334	
Non-state pension coverage people	12,453	12,263	12,115	13,361	12,799	
Support for pensioners people	43,281	44,990	42,825	43,468	40,397	
Other services	21,394	24,083	19,280	18,439	22,648	
<b>Russian entities</b> services	<b>402,709</b>	<b>357,277</b>	<b>387,154</b>	<b>386,541</b>	<b>411,532</b>	
Health protection services	276,063	229,781	267,830	265,984	287,593	
Social support for families with children services	61,461	58,664	55,308	56,650	59,350	
Non-state pension coverage people	5,795	6,363	6,345	7,308	6,975	
Support for pensioners people	43,116	44,884	42,689	43,265	40,240	
Other services	16,274	17,585	14,982	13,334	17,374	

**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.

### PERCENTAGE OF PJSC LUKOIL EMPLOYEES RECEIVING REGULAR PERFORMANCE AND CAREER DEVELOPMENT REVIEWS

Unit of measurement	2017	2018	2019	2020	2021	Reporting system
PJSC LUKOIL headcount people	2,331	2,351	2,406	2,204	1,920	GRI 404-3
Total PJSC LUKOIL employees who received an official performance review people	2,109	2,121	2,210	2,012	1,689	
Percentage of the total number of PJSC LUKOIL employees %	90	90	92	91	88	

### NON-STATE PENSION COVERAGE

Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Pension liabilities, LUKOIL Group RUB mln		8,910	12,544	13,794	12,105	GRI 401-2 RSPP
Number of former employees receiving a corporate pension, in Russia people	46,294	49,441	52,854	53,519	53,646	
Average non-state (corporate) pension level in Russia RUB	2,240	2,272	2,134	2,241	2,291	



## Training

### EMPLOYEE TRAINING AT LUKOIL GROUP ENTITIES

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Number of trained employees	people	70,183	74,684	78,026	80,119	<b>83,861</b>	GRI 404-1 IPECA SOC-7 RSPP UNCTAD C2.1
Number of trained employees by employee category							
· Managers	%				15	<b>15</b>	
· Specialists	%				27	<b>25</b>	
· Workers and other employees	%				58	<b>60</b>	
Amount of training	man-courses	193,761	243,467	258,728	584,621	<b>409,435</b>	
· Managers	%				14	<b>19</b>	
· Specialists	%				14	<b>18</b>	
· Workers and other employees	%				72	<b>63</b>	
Average number of training hours per one trained employee	h			84	141	<b>103</b>	
Average annual training costs per one trained employee	RUB			12,548	9,266	<b>10,186</b>	

**Notes.** Average number of training hours per one trained employee = 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 one trained employee = 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

	Unit of measurement	2020	2021	Reporting system
Scope of training	hour	6,963,587	<b>4,014,763</b>	GRI 404-1 IPECA SOC-7 RSPP
· Russian entities	hour	6,886,936	<b>3,968,713</b>	
· Foreign entities	hour	76,651	<b>46,050</b>	
Scope of training	man-courses	470,355	<b>267,072</b>	
· Russian entities	man-courses	461,644	<b>259,187</b>	
· Foreign entities	man-courses	8,711	<b>7,885</b>	
By employee category				
· Managers	man-courses	53,242	<b>44,760</b>	
· Specialists	man-courses	60,231	<b>46,876</b>	
· Workers and other employees	man-courses	356,882	<b>175,436</b>	

## Specific revenue and payroll

### SPECIFIC REVENUE

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
Labor productivity	RUB mln / person	57	78	77	56	<b>92</b>	RSPP

### AVERAGE SALARIES AT THE RUSSIAN LUKOIL GROUP ENTITIES

	Unit of measurement	2019		2020		2021		Reporting system
		Average salary (LUKOIL)	Average salary in the region	Average salary (LUKOIL)	Average salary in the region	Average salary (LUKOIL)	Average salary in the region	
Regions where production facilities are located								
RSPP								
Astrakhan Region	RUB	92,620	35,792	95,488	39,037	<b>108,298</b>	<b>41,694</b>	
Volgograd Region	RUB	65,277	32,737	66,904	35,599	<b>74,009</b>	<b>38,055</b>	
Kaliningrad Region	RUB	89,645	34,357	87,477	37,497	<b>103,129</b>	<b>41,645</b>	
Nenets Autonomous Area	RUB	128,702	86,815	138,227	91,677	<b>149,479</b>	<b>95,480</b>	
Nizhny Novgorod Region	RUB	71,593	35,692	73,828	37,449	<b>80,726</b>	<b>41,508</b>	
Perm Territory	RUB	79,152	38,562	79,877	41,203	<b>86,664</b>	<b>45,555</b>	
Komi Republic	RUB	103,113	53,162	106,758	56,780	<b>116,518</b>	<b>59,691</b>	
Samara Region	RUB	60,156	36,362	57,384	38,747	<b>65,238</b>	<b>42,886</b>	
Saratov Region	RUB	57,996	28,503	64,010	33,365	<b>69,902</b>	<b>37,073</b>	
Stavropol Territory	RUB	54,736	31,867	56,880	33,708	<b>61,906</b>	<b>37,354</b>	
Khanty-Mansi Autonomous Area – Yugra	RUB	109,058	74,525	112,514	79,057	<b>119,812</b>	<b>85,372</b>	
Yamal-Nenets Autonomous Area	RUB	131,225	100,456	136,883	110,759	<b>147,733</b>	<b>116,203</b>	
Regions where only Oil Product Supply entities operate, as well as LLC LUKOIL-Technologies and LLC LUKOIL-Engineering								
Moscow (excluding PJSC LUKOIL)	RUB	137,143	94,011	111,262	100,506	<b>131,591</b>	<b>111,092</b>	
Republic of Bashkortostan	RUB	73,090	36,495	73,561	38,706	<b>79,704</b>	<b>41,662</b>	
Vologda Region	RUB	45,144	39,132	45,549	42,779			
Krasnodar Territory	RUB	52,249	36,155	51,517	37,666	<b>58,034</b>	<b>40,774</b>	
Moscow Region	RUB	56,660	55,270	58,533	57,087	<b>68,853</b>	<b>63,410</b>	
Rostov Region	RUB	38,443	33,490	39,109	35,563	<b>43,167</b>	<b>39,090</b>	
Saint-Petersburg (city)	RUB	73,440	63,157	73,101	68,383	<b>82,531</b>	<b>75,958</b>	
Sverdlovsk Region	RUB	47,567	40,900	48,866	43,154	<b>53,572</b>	<b>48,415</b>	
Tyumen Region	RUB	165,436	72,221	164,825	77,795	<b>176,773</b>	<b>83,928</b>	
Chelyabinsk Region	RUB	44,437	37,308	46,664	38,693	<b>51,344</b>	<b>43,778</b>	

**Notes.** The average salary in the operating regions is given for January through December of each reporting year.

Given the large number of countries where LUKOIL Group entities operate, the indicator is disclosed by significant regions (regions where Group entities with a headcount of over 500 employees operate).

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

	Unit of measurement	2018	2019	2020	2021	Reporting system
LUKOIL Group	RUB mln	145,706	147,284	151,528	<b>169,235</b>	RSPP UNCTAD C2.2
Payroll	RUB mln	136,475	138,180	142,809	<b>159,842</b>	
Social benefits and payments, social support for employees	RUB mln	8,403	8,125	7,977	<b>8,539</b>	
Training	RUB mln	828	979	742	<b>854</b>	
Including in the Russian entities		103,903	105,267	107,432	<b>121,705</b>	
Payroll	RUB mln	97,386	98,883	101,446	<b>115,006</b>	
Social benefits and payments, social support for employees	RUB mln	5,876	5,670	5,403	<b>5,995</b>	
Training	RUB mln	641	714	583	<b>704</b>	

**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.



## CORPORATE GOVERNANCE

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Composition of the Board of Directors</b>							
Chairman of the Board of Directors	people			1	1	<b>1</b>	
Independence of the Chairman of the Board of Directors at appointment				No	No	<b>No</b>	
Independent directors	people			6	6	<b>6</b>	
Non-executive directors	people			2	3	<b>3</b>	
Executive directors <sup>1</sup>	people			3	2	<b>2</b>	
Total number of Board members	people			11	11	<b>11</b>	
Percentage of independent directors	%			55	55	<b>55</b>	GRI 102-22
Number of sustainability and climate-related issues addressed at Board of Directors meetings	issues			20	13	<b>20</b>	GRI 102-20 UNCTAD D1.4
Percentage of independent members of the Board of Directors committees							GRI 102-2
Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors	%			100	50	<b>50</b>	
Audit Committee	%			100	100	<b>100</b>	
Human Resources and Compensation Committee	%			100	100	<b>100</b>	
<b>Health, Safety and Environmental Committee of PJSC LUKOIL</b>							
Number of members	people			11	15	<b>15</b>	
Number of meetings (in-person and remote)	meetings			2	2	<b>2</b>	UNCTAD D1.4
Number of sustainability and climate-related issues addressed	issues			7	8	<b>7</b>	GRI 102-20
Percentage of women	%			0	0	<b>0</b>	GRI 405-1
<b>Strategy, Investment, Sustainability and Climate Adaptation Committee of the Board of Directors of PJSC LUKOIL</b>							
Number of members	people			4	4	<b>4</b>	
Number of meetings (in-person and remote)	meetings			7	7	<b>8</b>	UNCTAD D1.4
Number of sustainability and climate-related issues addressed	issues			20	10	<b>11</b>	GRI 102-20
Percentage of women	%			25	25	<b>25</b>	GRI 405-1
<b>Gender composition of the Board of Directors</b>							
Men	people			9	9	<b>9</b>	
Women	people			2	2	<b>2</b>	
Percentage of women	%			18	18	<b>18</b>	GRI 405-1

<sup>1</sup> In accordance with the recommendations of the Corporate Governance Code of the Bank of Russia, executive directors are defined not only as members of the Management Committee of PJSC LUKOIL but also as persons employed by the Company.

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Gender composition of the Management Committee</b>							
Men	people			14	14	<b>13</b>	GRI 102-22 GRI 405-1
Women	people			0	0	<b>0</b>	
Percentage of women	%			0	0	<b>0</b>	
<b>Membership in the Board of Directors</b>							
Up to 5 years	people			4	7	<b>6</b>	
Up to 10 years	people			2	1	<b>2</b>	
Over 10 years	people			3	3	<b>3</b>	
<b>Qualification balance of the Board of Directors members</b>							
Percentage of members of the Board of Directors of PJSC LUKOIL competent in sustainability and climate-related issues	%			73	73	<b>73</b>	GRI 102-22 GRI 102-2
<b>Persons responsible</b>							
Number of vice-presidents responsible for the Company's climate change-related activities	people			0	1	<b>1</b>	GRI 102-20
Number of vice-presidents responsible for sustainability issues	people			1	1	<b>1</b>	
<b>Task Forces</b>							
<b>Decarbonization and Climate Change Adaptation Task Force</b>							
Number of members	people				15	<b>37</b>	GRI 102-20
Number of meetings (in-person and remote)	meetings				1	<b>4</b>	UNCTAD D1.4
Number of issues addressed	issues				9	<b>17</b>	GRI 102-20
<b>Sustainability Task Force</b>							
Number of members	people			13	13	<b>13</b>	GRI 102-32
Number of meetings	meetings			4	7	<b>5</b>	UNCTAD D1.4
Number of addressed sustainability and climate-related issues	issues			7	20	<b>21</b>	GRI 102-20
<b>Quality of corporate governance</b>							
Incidents of corruption and theft <sup>1</sup>	incidents				0	<b>0</b>	
Incidents of violation of antitrust laws <sup>2</sup>	incidents	12	3	0	0	<b>1</b>	GRI 206-1
Number of employee appeals on corporate ethics, employment practices and human rights issues reviewed	appeals		4	7	9	<b>5</b>	
Number of incidents of human rights violations (including those related to discrimination)	incidents			0	0	<b>0</b>	

<sup>1</sup> Number of cases completed in the reporting year.

<sup>2</sup> Number of significant cases completed in the reporting year.



## GRI 201-1

## ECONOMIC VALUE GENERATED AND DISTRIBUTED

	Unit of measurement	2017	2018	2019	2020	2021	Reporting system
<b>Direct economic value generated</b>	<b>RUB mln</b>	<b>6,010,089</b>	<b>8,058,338</b>	<b>7,876,876</b>	<b>5,655,070</b>	<b>9,456,922</b>	201-1 (2016) UNCTAD A1.1
Revenues	RUB mln	5,936,705	8,035,889	7,841,246	5,639,401	9,435,143	
Revenue from financial investments	RUB mln	15,151	19,530	25,134	13,051	16,519	
Revenue from sales of physical assets	RUB mln	58,233	2,919	10,496	2,618	5,260	
<b>Economic value distributed</b>	<b>RUB mln</b>	<b>-5,394,491</b>	<b>-7,267,222</b>	<b>-6,985,273</b>	<b>-5,472,090</b>	<b>-8,593,615</b>	
Operating costs	RUB mln	-3,908,114	-5,297,908	-5,076,133	-3,750,966	-6,309,207	
Employee wages	RUB mln	-127,851	-135,671	-143,602	-156,597	-166,844	
Other employee payments and benefits	RUB mln	-1,135	-31,300	-31,366	-31,366	-31,366	
Payments to providers of capital, including:	RUB mln	-180,371	-200,286	-226,376	-449,998	-392,425	
· Dividends paid	RUB mln	-141,499	-160,365	-184,787	-410,898	-361,602	
· Interest paid to providers of loans	RUB mln	-38,872	-39,921	-41,589	-39,100	-30,823	
Payments to government	RUB mln	-1,168,011	-1,593,272	-1,498,568	-1,074,740	-1,687,122	
Community investments	RUB mln	-9,009	-8,785	-9,228	-8,423	-6,651	
<b>Economic value retained</b>	<b>RUB mln</b>	<b>615,598</b>	<b>791,116</b>	<b>891,603</b>	<b>182,980</b>	<b>863,307</b>	

**Notes.** The data are presented on the accruals basis, except for the "Payments to providers of capital" indicator, for which the cash basis approach was used.

Revenue from financial investments = Revenue from interest on deposits + Revenue from interest on loans issued + Other financial revenues.

Revenue from sales of physical assets = Revenue from sales and disposal of assets (excludes other types of revenues, other than revenue from the sales or disposal of assets).

Operating costs = Operating costs + Cost of purchased oil, gas and refined products + Transportation expenses + Selling, general and administrative expenses – Employee wages – Other employee payments and benefits + Exploration expenses.

Employee wages = Labor pay (including labor pay, estimated liabilities, compensation and incentive payments, pension insurance, voluntary health insurance, voluntary accident insurance).

Other employee payments and benefits = Employee reward program payments.

Dividends paid = Dividends paid on Company shares + Dividends paid to non-controlling interest holders.

Interest paid to providers of loans = Interest expense (on the cash basis).

Payments to government = Taxes (other than income tax) + Excise taxes and export duties + Current income tax (excluding deferred taxes).

Community investments = Charity expenses.

## APPENDIX 10. Stakeholder engagement

Stakeholders	Principal regular engagement channels	Main events in 2021	Engagement issues in 2021	Results
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. Participation in the task forces on protection of the fuel dispensing unit software from criminal intervention – ongoing. "Public Control" – work with public organizations, the Society of Blue Buckets, the Association of Car Owners of Russia and others – ongoing.	Regular participation in the Task Force on Technical Regulation of Oil & Gas Companies. Participation in updating the list of measurements related to the sphere of state regulation of ensuring the consistency of measurements. Regular participation of the experts of PJSC LUKOIL in expert analysis of the draft law initiatives in the area of activities. Participation of the Company's specialists in the Task Force on Amendments to Federal Industrial Safety Standards and Rules loyalty programs and promotions for the clients.	A set of issues related to state regulation of the area of activities. Terms of participation in the loyalty programs.	Customer satisfaction remains on a high level (see the Products section). The LUKOIL loyalty program won the annual National Loyalty Awards Russia 2021 in three categories. LUKOIL filling stations are the leaders in the Romir assurance rating.
Employees and trade unions	Meetings of the President of PJSC LUKOIL with the Group employees – regularly 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. Sports competitions – on an annual basis (taking into account the epidemiological situation).	Online conference of the employees and representatives of the Volgograd Regional Center for Public Health and Medical Prevention (Volgograd). Round tables with representatives of regional administrations and doctors on the vaccination issues (Samara).	Principles of action of domestic vaccines, methods for assessing the state of the immunological system.	Clarifying the health effects of the COVID-19 vaccination.
Shareholders and investors	Instruments of communication: investor conferences – regularly; meetings and calls with investors – regularly interviews with mass media senior management; press releases – regularly; annual and other reports, the Analytics Handbook – on an annual basis; corporate website – regularly.	Participation in 20 conferences. Over 200 meetings held, and attended by over 500 investors. Over 2,000 requests from shareholders and professional securities market participants processed. Two General Shareholders Meetings held. The most popular international ratings in the area of sustainable development, top-requested by the investment community, were analyzed; the Company improved its positions in the ratings. The climate strategy provisions and updated targets for reducing the greenhouse gas emissions were presented to the investment community.	Responses to inquiries from representatives of the investment community and credit rating agencies were provided, including the following topics: climate strategy and climate management system; activities to minimize oil spillages in the Komi Republic and liquidation of their consequences; ensuring safety of facilities in the Arctic zone; human rights observance; interaction on social and environmental issues with the supply chain; optimization of water consumption; biodiversity conservation; gender equality; waste management.	



Stakeholders	Principal regular engagement channels	Main events in 2021	Engagement issues in 2021	Results
Suppliers and contractors	Tender procedures – regularly. Hotline – ongoing. Agreements with strategic suppliers – as may be necessary. Technology field days in Russia's regions – on an annual basis.	Supplier's Day at the Tyumen Oil and Gas Forum and Perm Exhibition Forum on Oil and Gas, Chemicals, Fuel and energy complex.	Events aimed at expanding the competitive environment and attracting regional and local producers of products purchased by the Company are held annually.	
State 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.	Continuous expert analysis of legislative initiatives in the spheres of activity, participation in discussing and elaborating the regulatory documents.	The Company submitted proposals on the draft laws related to: climate-related regulation; prevention of oil and oil product spills; management of hazardous production facilities; responsibility of manufacturers for the disposal of goods that have lost their marketability; reforestation; non-financial statements of public companies.	The Company's position, expert assessments and proposals submitted.
	Joint work with the Ministry of Energy, the Department of State Supervision and Control of Rosstandart of the Russian Federation on the issues relating to oil products quality, participation in task forces on technical regulation issues.	Regular participation in the Task Force on Technical Regulation of Oil & Gas Companies. Participation in the Task Force on Amendments to Federal Industrial Safety Standards and Rules "Rules for the Industrial Safety of Oil and Oil Products Warehouses."	Development of the public quality control over the oil products at filling stations. Equipping all the tanks - with an over 20 years lifespan - with an automated system for monitoring and analyzing the parameters indicating the tank safety.	The Company's position, expert assessments and proposals submitted.
Society: the regions of presence	Meetings of the President of PJSC LUKOIL with the heads of constituent entities of the Russian Federation. Working meetings and discussions of the LUKOIL Group representatives with governments of the constituent entities of the Russian Federation, executive authorities, and with representatives of local governments	Four meetings (in person and online) were held in Komi, the Perm Territory, Khanty-Mansi Autonomous Area, Leningrad Region.	On the progress in the implementation of the agreements on social and economic cooperation and on the production plans of the Group entities. On the scientific cooperation in the Perm Territory. On the measures for preventing COVID-19 and the vaccination feedback.	Cooperation agreements (or supplementary agreements) signed with 29 constituent entities of the Russian Federation.
	Major forums, some of which are attended by the Company on an annual basis.	XXI International Environmental Forum The Baltic Sea Day (Saint Petersburg, Russia). The Activities of PJSC LUKOIL in the Sustainable Development in Kaliningrad Region round table.	Development plan for D33 deposit in the Baltic Sea. Reduction of GHG emissions, application of the Zero Discharge principle, environmental monitoring of the offshore deposits, social support program.	The standards of LUKOIL's operations for development of the offshore deposits submitted.

Stakeholders	Principal regular engagement channels	Main events in 2021	Engagement issues in 2021	Results
Society: the regions of presence		Tyumen Oil and Gas Forum TNF 2021 (Tyumen, Russia) – on an annual basis.  International Youth Research and Practical Forum Oil Capital (Khanty-Mansiysk, Russia) – on an annual basis.	Sustainability: The Global Model of the Future, Climate Agenda and Green Energy.	Involvement of young engineers in scientific activities.
Society: mass media	Coverage of the Company's activities by information agencies (TASS, RIA Novosti, Reuters, Bloomberg, Kommersant, etc.), business publications (RBC, Vedomosti), industry media – ongoing. Social networking – ongoing.	Participation in international and Russian economic and sectoral forums and high-level conferences. Speeches and public meetings of the President of PJSC LUKOIL. The Kazakhstan Foreign Investors' Council.	impact of the pandemic and climate agenda on LUKOIL's business; changes in the global economy, environmental requirements and social support of citizens; cooperation on the development of non-resource exports; reduction in the level of carbon intensity of the fuel and energy sector; energy transition and economic regulatory mechanisms; environmental practices in development of the offshore deposits.	47 TV stories and special reports, 1,908 media publications, over 100 thousand media references and 138 Company press releases.
Society: residents of regions and countries of presence, public, municipal and non-profit organizations	Round tables, dialogues, public discussions and hearings in Russia's regions.	LUKOIL Environmental and Social Projects Activity (Astrakhan). Corporate Social Responsibility of LUKOIL in the Republic of Kalmykia (Elista). The Role of Business in Supporting the Healthcare System during the Pandemic (Nizhny Novgorod).	The Company's participation in the social development of the regions and environmental recovery.	The long-term programs and projects discussed.
		Public discussion of the Conservation of Biodiversity and Development of Environmental Tourism federal program under the Ecology National Project (Elista). Conservation of the Caspian ecosystem under Conditions of Development of Oil and Gas Deposits, Conservation of the Biodiversity of the Lower Volga and Northern Caspian (Astrakhan).		
	Meetings with residents of the regions of presence. The first personal reception of citizens was held in Kstovo.	Meeting with residents of Podlesovo, Novolikeevo, Kstovo district and the town of Kstovo (Nizhny Novgorod region). Meetings with residents of the Komi Republic.	The saiga protection project and the results of environmental monitoring of maritime projects in the Caspian were submitted.	Expansion of the Zero Discharge principle in the Caspian Expansion of biodiversity conservation activities.
			Addressing the issues on social infrastructure and leisure facilities.	



## APPENDIX 11. Independent Practitioner's Assurance Report



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### Independent Practitioner's Limited Assurance Report on Sustainability Report of LUKOIL Group for 2021

To the Shareholders of PJSC LUKOIL

#### Introduction

We were engaged by the Management of PJSC LUKOIL ("the Management") to report on Sustainability Report of LUKOIL Group ("the Group") for 2021 ("the Report") in the form of a limited assurance conclusion on whether the Management's Statement that the Report is prepared based on the "core" version of the Global Reporting Initiative Sustainability Reporting Standards ("the GRI Standards") and is free from material misstatement 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 in accordance with 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 are 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



#### PJSC LUKOIL

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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 meaningful level of assurance in respect of the Management's Statement that the Report is prepared based on the "core" version of the GRI Standards and is free from material misstatement.

#### Our Independence and Quality Control

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.

We apply the *International Standard on Quality Control 1*, and accordingly maintain a comprehensive system of quality control including documented policies and 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, depend on our 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.

Engaging entity: PJSC LUKOIL

Registration number in the Unified State Register of Legal Entities: No. 1027700035769.

Audit firm: JSC "KPMG", a company incorporated under the Laws of the Russian Federation and a member firm of the KPMG global organization of independent member firms. For more detail about the structure of the KPMG global organization please visit [home.kpmg/governance](http://home.kpmg/governance)



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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-ENERGOSETI, Moscow,
  - LLC LUKOIL Uzbekistan Operating Company, Tashkent,
 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.

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.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our qualified opinion.

#### Criteria Used

To evaluate the Report, GRI Standards were used which are available at the link: <https://www.globalreporting.org/standards/>



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#### Management's Statement

Management states that the Report is prepared based on the "core" version of the GRI Standards and is free from material misstatement.

#### 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. Our engagement is not designed to detect all weaknesses in the internal control system over the preparation and presentation of the Report, as the engagement has not been performed continuously throughout the reporting period, and the procedures were performed on a test basis.

#### Basis for Qualified Conclusion

The Group did not disclose in the Report information on the following indicators under GRI Standards:

- GRI 102-13 Membership of associations,
- GRI 102-14 Statement from senior decision-maker.

Disclosure of such information is required by the "core" version of the GRI Standards. It is not possible for us to provide this information.

#### Qualified Conclusion

Based on the procedures performed, except for the effects of the matter described in the *Basis for Qualified Conclusion* section of our report, nothing has come to our attention that causes us to believe that Management's Statement that the Report is prepared based on the "core" version of the GRI Standards and is free from material misstatement, is not, in all material respects, fairly stated.

Klimanova L.V.

General director, JSC "KPMG"

Moscow, Russia

30 May 2022



## APPENDIX 12. Opinion of the RSPP Non-Financial Reporting Council

### Opinion of the Russian Union of Industrialists and Entrepreneurs Non-Financial Reporting, ESG indices and sustainability ratings Council on the Public Assurance Review Results of the Sustainability Report of the LUKOIL Group for 2021

The Russian Union of Industrialists and Entrepreneurs Non-Financial Reporting, ESG indices and sustainability ratings Council (RSPP) (hereinafter, the Board) has reviewed the Sustainability Report for 2021 (hereinafter, the Report) of LUKOIL Group (hereinafter, the Company, the Group, LUKOIL).

The Company requested RSPP that the Council arranges a public assurance review of the Report. Based on the expert analysis performed, 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.

From June 14 to June 25, 2022, members of the Council studied the contents of the Report submitted by the Company and prepared this Opinion in accordance with the Regulations for the Public Assurance Review of Corporate Non-Financial Reporting approved by the 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 completeness and relevance 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](http://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 by the Company of the international reporting system 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 which 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 Russian Union of Industrialists and Entrepreneurs Non-Financial Reporting, ESG indices and sustainability ratings Council confirms the following:

**The Sustainability Report of the LUKOIL Group for 2021 contains significant information on key areas of responsible business practice in accordance with the principles of the Social Charter of Russian**

**The recommendations of the RSPP Council based on the results of public assurance of the previous report for 2020 are reflected in the Report for 2021. Information on the Company's operations with respect to the climate agenda has been expanded, the opportunities and risks associated with the implementation of digital technologies into the Company's business processes have been shown more fully, and changes in the dynamics of indicators are accompanied by the necessary comments.**

The Company's report for 2021 contains relevant information on the following aspects of responsible business practices:

**Economic freedom and responsibility:** The Report presents the business model, key projects in each business segment, and the major production and financial results of the year. It is reported that in 2021, the Board of Directors of PJSC LUKOIL approved the Strategic Development Program of the LUKOIL Group for 2022–2031. Information on the implementation of the Functional Development Program for Information Technology Support and on actions to improve cyber resilience is provided. The further development of the corporate governance system through the integration of ESG factors and sustainability management objectives into business processes and strategic planning is reported, and the topics considered at meetings of the Board of Directors and its committees are disclosed. The Report provides information about the LUKOIL Group Sustainability Policy developed in the reporting year based on the Company's priority UN Sustainable Development Goals. The Company's contribution to the achievement of SDG-2030 and the goals of national projects is explained. Information on certification of the quality management, energy management, and HSE management system for compliance with the requirements of international and Russian standards is included. Sustainability risk management and integration of climate risks into the corporate risk management system is described. Mechanisms for implementing the Company's ethical principles and the corporate anti-corruption policy are presented.

**Business partnership:** The Report presents the main stakeholder groups, the formats for stakeholder engagement and the events carried out in 2021. The Code of Business Ethics is set out as the main document that defines the principles of corporate culture regulating relations with stakeholders. The mechanisms and content of communication with the investment community are described. Communications with authorities are covered, including those related to public discussion of draft regulations regarding sustainability aspects. The structure and main characteristics of personnel, the system of incentives, training and social support for employees, and interaction with employees in the HSE area are described. The coverage of employees by collective agreements is indicated. Cooperation with the International Association of Trade-Unions of PJSC LUKOIL to protect the rights of employees as part of the social partnership is reported. The actions to promote the principles of sustainable development in the supply chain, including updating the procurement regulations for the ESG principles, integration of these requirements into the supplier screening and selection tools are described. The share of local suppliers is shown. The mechanisms of interaction with clients, and measures to improve the quality of products and services are described. Interaction with the regions of presence under the agreements on socio-economic cooperation with constituent entities of the Russian Federation is presented. Information on the Company's implementation of anti-COVID-19 measures is included.

**Human rights:** The Report declares the respect for and compliance with human rights in all business segments and regions of the Company's operations. The Report reveals that human rights issues are included in the regulations of meetings of the Board of Directors, and human rights risk assessment is included in the risk management system. It provides information on human rights monitoring through HR audits. Ensuring the labor rights of employees is covered. Internal standards and training of security services regarding respect for human rights are reported. Approaches and actions aimed at ensuring the rights of indigenous minorities of the North and involving their representatives in public expert evaluations of exploration and production projects in their territories of residence are shown. Feedback mechanisms for human rights requests are presented.

**Environmental preservation and climate agenda:** The Report presents the actions and results of the LUKOIL Group Environmental Safety Program for 2021-2023. The Integrated System of Management of Industrial, Fire, Radiation Safety, Emergency Prevention, and Liquidation, the Protection of Civilians, Occupational Safety, and Environmental Protection implemented in the Company is reported. The dynamics of gross and specific indicators of the Company's environmental impact are disclosed. Environmental costs are presented. Measures to prevent oil spills and to eliminate the consequences of the incident in the Komi Republic are described. Support for biodiversity conservation projects is reported. The energy-saving program is covered, and data on electric energy consumption for production purposes, including that produced from



renewable energy sources, is disclosed. Information on the development of renewable energy projects is included. The Climate Strategy and key actions for the medium-term are presented. It is reported on the development of the “Decarbonization and adaptation to climate change” business process, the Framework for Financial Assessment of Climate-Related Risks and the Decarbonization Program of LUKOIL Group for 2022–2024. Greenhouse gas emissions reduction goals by 2030 are disclosed. Interaction with stakeholders for the development of national climate legislation is reported.

**Participation in the development of the local community:** The Report describes the Company's participation in the socio-economic development of the regions of presence as a major employer and taxpayer. The support of local business, the scope of social investments and the supported charitable projects are outlined. The priorities of external social policy and the management system for local community-related programs are highlighted. The activities of the LUKOIL Charity Fund are shown. The results of the contest of social and cultural projects aimed at supporting the initiatives of local communities and non-profit organizations to solve relevant social problems are presented. Corporate volunteering is described. The Company's participation in the implementation of the state program for the socio-economic development of indigenous minorities of the North of the Khanty-Mansi Autonomous Area is covered. Data on the support of the indigenous minorities of the North under the Company's licensing obligations and charitable projects are included. Support provided to the regions to curb the COVID-19 pandemic is shown.

### Final provisions

The Sustainability Report of the LUKOIL Group for 2021 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 (main version) 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 (2021 Bank of Russia Recommendations, IPIECA-2020 Sustainability Reporting Guidance for the Oil and Gas Industry, SASB Reporting Standards, etc.) were also used in preparing the Report, which allows consideration of the information needs of various stakeholders.

The Report for 2021 is the Company's twelfth 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 is prepared using the “hypertext” approach to the presentation of information: the Report contains references to information that supplements and clarifies the reporting information and is provided in the Appendices to the Report, the Annual Report, the data book of quantitative information 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 presents the UN Sustainable Development Goals, the corresponding areas of the Company's activities and indicators. In order to better understand the Company's contribution to the achievement of SDG-2030, it is recommended that performance indicators be aligned not only with the goals, but also with the priority tasks and that this information be included in future reports. The recommendation on disclosing target indicators on the tasks that correspond to the Company's priority SDG-2030 remains valid.

The Report contains indicators reflecting the Company's contribution to the implementation of Russian national projects. It is recommended that this practice be continued, expanding the relevant information, and that goals/target indicators of the Company's participation in national projects to be reported.

In a number of sections, the Report outlines plans for the next reporting cycle, and it is advisable to move consistently in this direction, to disclose plans for a broader range of sustainability issues, and to include targets, which will facilitate a better understanding of progress made.

The Report presents permanent areas of support for social projects and a number of examples of their implementation. It appears that this information will become more meaningful and persuasive if a uniform approach to the description of these projects is used in future reports, stipulating the disclosure of information on costs and results.

A significant part of the quantitative data is included in the Appendix (ESG Databook), which makes it possible to cover a wide range of indicators without overloading the Report. However, it is recommended that the principles for distributing data between the main text of the Report and the appendices be explained. For some data, the dynamics of the indicators contained in the ESG Databook may be worth more attention and commentary in the Report.

The Report gives priority to ESG sustainability factors. However, since all sustainability factors are interrelated, including economic aspects, it would be advisable to disclose in the next reports the key aspects of the Company's economic impact in terms of sustainable development, with references to more complete sources of information.

It is important to pay attention to the context in which the reporting information will be perceived by the stakeholders, given that during the preparation of the Report, outside the reporting period, events have occurred that significantly affect the escalation of the risks that the Company and the economy of the country as a whole will face in the near future. To meet the expectations of the stakeholders, it would be useful to identify the risks, the escalation of which may be of material importance for the Company, and its vision (intention) regarding possible actions to mitigate those risks. It is recommended that the next report pay special attention to this topic, as well as to priorities on the sustainability agenda in light of the current changes.

It would have been useful to include in reports information on the regulations, actions and results of the work of internal control and audit functions of PJSC LUKOIL and the main assets of the Group on monitoring the implementation of the internal regulations governing the socio-economic and environmental impact, aspects of sustainable development.

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 Non-Financial Reporting, ESG indices and sustainability ratings Council does hereby confirm that the Sustainability Report of the LUKOIL Group for 2021 has passed the public assurance procedure.

The Russian Union of Industrialists and Entrepreneurs Non-Financial Reporting, ESG indices and sustainability ratings Council



### Contact details

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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 indicate the forward-looking nature of the statement. Actual results may differ from the anticipated results, estimates and intentions contained in the forward-looking statements. 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 many possible outcomes only, therefore they should not be regarded as the most probable outcome.