

C0. Introduction

C0.1

(C0.1) Give a general description and introduction to your organization.

LUKOIL Group is one of the largest publicly traded, vertically integrated oil and gas companies in the world in terms of proved hydrocarbon reserves and production, accounting for 1% of global proved oil reserves and 2% of global oil production. It is also the second-largest crude oil producer in Russia. The company was founded in 1991 and currently works in over 30 countries with core assets located in Russia. The full production cycle includes oil and gas exploration, production and refining; petrochemicals and lubricants production; power generation (including renewable energy generation); marketing and distribution. The company recognizes the need to mitigate climate change impacts and persistently pursues a policy of reducing greenhouse gas emissions (GHG). The activity to reduce GHG emissions started in 2003 when the Company implemented its efficient APG use program. Afterwards LUKOIL participated in joint implementation projects under Article 6 of the Kyoto Protocol. A total of 9 projects were implemented, which allowed for reducing 6.3 million tons of CO₂-eq GHG emissions per year, as monitoring data showed. In 2016 our company set the first target to reduce Scope 1 greenhouse gas emissions for Russian organizations of the Group by 1.2% by 2020 against 2016. As of the end of 2020, actual reduction was 8.8% against 2016, and methane emissions decreased by 44.4%. In 2021, we set a new target to reduce GHG emissions by 2030. We plan to reduce controlled emissions (Scope 1 + Scope 2) by 20% compared to 2017 levels. In 2017, LUKOIL was the first Russian oil company to join the World Bank's initiative *Zero Routine Flaring by 2030*. In 2020, LUKOIL Group achieved the efficient APG use level of 97.8%. The Group has been developing its own energy generation from renewable sources for over 10 years. As of 2020, our total installed power generating capacity from renewable energy sources amounted to 395 MW, including four hydropower plants in Russia with a total capacity of 291 MW, three solar power plants in Russia, Romania and Bulgaria with a total capacity of 20 MW, and a wind farm in Romania with a capacity of 84 MW. Renewable power generation helps prevent GHG emissions up to 600 thousand tons of CO₂-eq. annually. Our company has an Energy Saving Program in place. In 2020, energy saving measures saved 146 thousand MWh of electricity, 204 thousand MWh of heat and 448 MWh of fuel which helped reduce GHG emissions by 121 thousand tons of CO₂-eq. LUKOIL Group's Russia-based organizations implemented the ISO 50001 compliant energy management system. As of 31 December 2020, 25 organizations employing 69% of employees of LUKOIL Group's payroll were certified to the ISO 50001. The results of quantifying GHG emissions for the reporting year 2020 were verified by KPMG.

C0.2

(C0.2) State the start and end date of the year for which you are reporting data.

	Start date	End date	Indicate if you are providing emissions data for past reporting years	Select the number of past reporting years you will be providing emissions data for
Reporting year	January 1 2021	December 31 2021	No	<Not Applicable>

C0.3

(C0.3) Select the countries/areas in which you operate.

- Azerbaijan
- Belarus
- Belgium
- Bulgaria
- Croatia
- Finland
- Georgia
- Italy
- Montenegro
- Netherlands
- North Macedonia
- Republic of Moldova
- Romania
- Russian Federation
- Serbia
- Turkey
- Uzbekistan

C0.4

(C0.4) Select the currency used for all financial information disclosed throughout your response.

RUB

C0.5

(C0.5) Select the option that describes the reporting boundary for which climate-related impacts on your business are being reported. Note that this option should align with your chosen approach for consolidating your GHG inventory.

Operational control

C-OG0.7

(C-OG0.7) Which part of the oil and gas value chain and other areas does your organization operate in?

Row 1

Oil and gas value chain

- Upstream
- Midstream
- Downstream
- Chemicals

Other divisions

- Grid electricity supply from gas
- Grid electricity supply from renewables

C0.8

(C0.8) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?

Indicate whether you are able to provide a unique identifier for your organization	Provide your unique identifier
Yes, an ISIN code	RU0009024277

C1. Governance

C1.1

(C1.1) Is there board-level oversight of climate-related issues within your organization?

Yes

C1.1a

(C1.1a) Identify the position(s) (do not include any names) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Other, please specify (Vice President for Strategic Development, Member of the Board of Directors)	The Vice President for Strategic Development and member of the Strategy, Investment, Sustainability and Climate Adaptation Committee of PJSC LUKOIL has been appointed a responsible member of the Board of Directors for the Company's activities in the field of climate change. Under his leadership and with his direct involvement, the Company plans and implements steps to adapt to climate change. Its functions include: - Preparing recommendations on strategic goals and measures to reduce GHG emissions; - Developing a unified corporate position on various issues and aspects of climate change and climate change adaptation; - Proposals on the size of the domestic price of carbon; - Interaction with industry associations on climate issues.
Board-level committee	The Company has a Committee for Strategy, Investment and Sustainable Development and Climate Adaptation (CSIURCA). The Committee's responsibilities include, but are not limited to: - Preparing recommendations to the Board of Directors on identifying the Company's priorities and formulating its development strategy, including in the area of climate adaptation; - Analyzing the risks associated with climate change and climate change adaptation; - Recommendations to the Board of Directors regarding the assessment of the Company's interaction with stakeholders regarding climate change adaptation; - Review of sustainability reporting, including the Sustainability Report of the LUKOIL Group Organizations
President	The President of LUKOIL chairs the Working Group on Decarbonization and Adaptation to Climate Change, which meets quarterly.

C1.1b

(C1.1b) Provide further details on the board's oversight of climate-related issues.

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Scope of board-level oversight	Please explain
Scheduled – some meetings	<p>Reviewing and guiding strategy</p> <p>Reviewing and guiding major plans of action</p> <p>Reviewing and guiding risk management policies</p> <p>Reviewing and guiding annual budgets</p> <p>Reviewing and guiding business plans</p> <p>Monitoring and overseeing progress against goals and targets for addressing climate-related issues</p>	<Not Applicable>	<p>The Board of Directors plays a leading role in defining and overseeing implementation of the Group's climate strategy, which is preliminarily elaborated by the CSIURCA. The Board of Directors reviews and approves LUKOIL Group's strategic development program, which includes strategic goals for decarbonization and climate adaptation. The functions of the CSIURCA are expanded, and a director responsible for climate issues is appointed. He is the Vice President for Strategic Development and a member of the CSIURCA. In 2021, the Board of Directors and its committees held 19 meetings, at which 63 issues were considered, including 20 sustainability-related issues. The following issues related to climate change were considered at the Board of Directors meetings: - Analytical reports on changes in energy markets related to the climate agenda. - on investor and shareholder relations. This issue included a review of the main requests from the investment community on the topic of climate. The issue of investor and shareholder relations is reviewed annually by the Board of Directors. - On comparative data on the Company's performance in recent years. A comparison of decarbonization strategies of oil and gas companies was presented as part of this question. The issue of comparative data on the Company's performance is considered by the Board of Directors on an annual basis. - On the LUKOIL Group Sustainability Report for 2021. The issue includes, among other things, disclosure of information on the climate topic. The issue of the Sustainability Report is considered by the Board of Directors on an annual basis. - on the progress of LUKOIL Group's strategic development program. This issue considers the implementation of the key strategic performance indicators. This issue is reviewed by the Board of Directors annually. The Board of Directors has set mid-term objectives, the implementation of which will contribute to the achievement of the UN Sustainable Development Goal No. 13 and the Paris Agreement goals. The tasks set include: - Determining the projected level of GHG emission reductions, the scope and content of possible compensatory measures; - Assessing the impacts of climate change on production facilities and lifesupport infrastructure, particularly those located in vulnerable areas (the Arctic, permafrost) and compiling a list of facilities and areas for which such an assessment is mandatory; - introduction of internal mechanisms to reduce the negative climate impacts of the Company's operations, and stress testing of investment projects with regard to external GHG emission control measures. In the reporting year, the performance of the Board of Directors was evaluated for the first time by an external consultant and a conclusion was made about the high professionalism, diversity of competencies and skills of its members. The involvement of the Board of Directors in the consideration of sustainable development and climate issues was noted.</p>

C1.1d

(C1.1d) Does your organization have at least one board member with competence on climate-related issues?

	Board member(s) have competence on climate-related issues	Criteria used to assess competence of board member(s) on climate-related issues	Primary reason for no board-level competence on climate-related issues	Explain why your organization does not have at least one board member with competence on climate-related issues and any plans to address board-level competence in the future
Row 1	Yes	<p>Elected to the LUKOIL Group Board of Directors in 2021, member of the Presidium of the Russian Academy of Sciences, author of a number of scientific publications in the field of climate and climate risks. He was also appointed Chairman of the Committee on Strategy, Investment, Sustainable Development and Climate Adaptation. The Committee prepares recommendations for the Board of Directors on climate policy issues.</p>	<Not Applicable>	<Not Applicable>

C1.2

(C1.2) Provide the highest management-level position(s) or committee(s) with responsibility for climate-related issues.

Name of the position(s) and/or committee(s)	Reporting line	Responsibility	Coverage of responsibility	Frequency of reporting to the board on climate-related issues
Other, please specify (Vice President for Strategic Development, Member of the Board of Directors)	<Not Applicable>	Other, please specify (Decarbonization strategy of the Company and long-term goals)	<Not Applicable>	Quarterly
Other, please specify (Committee on Strategy, Investment, Sustainable Development and Climate Adaptation)	<Not Applicable>	Managing climate-related risks and opportunities	<Not Applicable>	Annually
Other, please specify (Working Group on Decarbonization and Adaptation to Climate Change)	<Not Applicable>	Assessing climate-related risks and opportunities	<Not Applicable>	Not reported to the board
Other, please specify (Department of Environmental Safety and Decarbonization)	<Not Applicable>	Other, please specify (Operational management of climate activities)	<Not Applicable>	Not reported to the board

C1.2a

(C1.2a) Describe where in the organizational structure this/these position(s) and/or committees lie, what their associated responsibilities are, and how climate-related issues are monitored (do not include the names of individuals).

Vice President for Strategic Development:

The Vice President for Strategic Development, a member of the Committee for Strategy, Investments, Sustainable Development and Climate Adaptation of PJSC LUKOIL has been appointed a responsible member of the Board of Directors for the Company's activities in the area of climate change. The planning and implementation of steps to adapt the Company to climate change is carried out under his management and with his direct participation. His functions include:

- Preparation of recommendations on strategic goals and activities in the area of reducing GHG emissions
- Formation of a unified corporate position on various issues and aspects in the area of climate change and climate adaptation
- Proposals for the size of the domestic carbon price
- Interaction with industry associations on climate issues

Committee for Strategy, Investment, Sustainable Development and Climate Adaptation:

The Company has a Committee for Strategy, Investment, Sustainable Development and Climate Adaptation. The responsibilities of the Committee include, among other things: preparing recommendations to the Board of Directors on determining priority areas of activity and formulation of the development strategy for the Company, including in the area of climate adaptation; analysis of risks associated with climate change and climate adaptation; preparation of recommendations to the Board of Directors on the assessment of the Company's interaction with stakeholders on climate adaptation issues; consideration of reporting in the area of sustainable development, including LUKOIL Group's sustainability report.

Working Group on Decarbonization and Adaptation to Climate Change:

A Working Group was created under the leadership of the First Executive Vice President of PJSC LUKOIL. It includes vice presidents of PJSC LUKOIL responsible for all areas of the Company's operations, finance, strategy, economics and planning, sustainable development, as well as heads of key specialized departments. The main functions of the Working Group include:

- regular assessments of climate risks and opportunities;
- formation and monitoring of the implementation of the LUKOIL Group decarbonization program;
- formation of criteria for evaluating the effectiveness of investment projects aimed at reducing GHG emissions;
- improvement of the business process "Decarbonization and adaptation to climate change".

The first meeting of the Working Group was held in December 2020, at which the STO LUKOIL standard "Regulations for inventory of greenhouse gas emissions" was approved, instructions were given to develop a new business process "Decarbonization and adaptation to climate change"

Department of Environmental Safety and Decarbonization:

Department of Environmental Safety and Decarbonization is the center of competence and coordinator of the activities of PJSC LUKOIL and the Group's organizations for the operational management of GHG emissions, including regulation, monitoring, implementation of the decarbonization program and reporting

C1.3

(C1.3) Do you provide incentives for the management of climate-related issues, including the attainment of targets?

	Provide incentives for the management of climate-related issues	Comment
Row 1	Yes	Minutes No.4 of the working group's meeting of PJSC LUKOIL's on Decarbonization and Adaptation to Climate Change dated October 8, 2021 contain an instruction to calculate the planned value of the GHG emissions indicator (Scope 1 and Scope 2) for the long-term and medium-term perspective, which in turn lays the foundation for the execution of the instruction to develop KPIs for greenhouse gas emissions.

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues (do not include the names of individuals).

Entitled to incentive	Type of incentive	Activity incentivized	Comment
Other, please specify (Board of Directors and President)	Monetary reward	Emissions reduction target Energy reduction target Company performance against a climate-related sustainability index	Regulations on the Committee for Strategy, Investment, Sustainable Development and Climate Adaptation.
Other, please specify (First Executive Vice President and Vice President of Strategic Development (Climate Representative on the Board of Directors))	Monetary reward	Emissions reduction target	Evaluation of activities in terms of the indicator "Ensuring the required level of industrial safety, labor and environmental protection in the organizations of the LUKOIL Group for the reporting period
Other, please specify (Head of the Department of Environmental Safety and Decarbonization)	Monetary reward	Emissions reduction target	Evaluation of activities in terms of the indicator "Ensuring the required level of industrial safety, labor and environmental protection in the organizations of the LUKOIL Group for the reporting period
Other, please specify (Head of the Department of Environmental Safety and Decarbonization)	Non-monetary reward	Emissions reduction target	Along with monetary incentives, non-monetary incentives are provided (awarding diplomas of PJSC LUKOIL and the Trade Union Organization) within the framework of participation in the Environmental Protection review competition, in the nominations "Best Eco-Project of the Year" and "Best Work Practice" of LUKOIL Group organizations.
Other, please specify (Production Facility Manager)	Monetary reward	Emissions reduction project Emissions reduction target Energy reduction target	The set of key indicators of the LUKOIL Group includes the following indicators: 1. Evaluation of performance according to the indicator "Ensuring the required level of industrial safety, labor and environmental protection in the organizations of the LUKOIL Group for the reporting period for all business sectors. 2. "Energy intensity index EII", "Specific power consumption per 1 ton of produced liquid"; "Electricity of processing of 1 ton of basic raw materials"; "Implementation of the approved energy saving program" - for different business sectors.
Other, please specify (Production Facility Manager)	Non-monetary reward	Emissions reduction target	Along with monetary incentives, non-monetary incentives are provided (awarding diplomas of PJSC LUKOIL and the Trade Union Organization) within the framework of participation in the Environmental Protection review competition, in the nominations "Best Eco-Project of the Year" and "Best Work Practice" of LUKOIL Group organizations.
Other, please specify (Employees of the HSE department and other departments)	Monetary reward	Emissions reduction target Energy reduction target	The set of key indicators of the LUKOIL Group includes the following indicators: 1. Evaluation of performance according to the indicator "Ensuring the required level of industrial safety, labor and environmental protection in the organizations of the LUKOIL Group for the reporting period for all business sectors. 2. "Energy intensity index EII", "Specific power consumption per 1 ton of produced liquid"; "Electricity of processing of 1 ton of basic raw materials"; "Implementation of the approved energy saving program" - for different business sectors.
Other, please specify (Employees of the HSE department and other departments)	Non-monetary reward	Emissions reduction target Energy reduction target	Along with monetary incentives, non-monetary incentives are provided (awarding diplomas of PJSC LUKOIL and the Trade Union Organization) within the framework of participation in the Environmental Protection review competition, in the nominations "Best Eco-Project of the Year" and "Best Work Practice" of LUKOIL Group organizations.

C2. Risks and opportunities

C2.1

(C2.1) Does your organization have a process for identifying, assessing, and responding to climate-related risks and opportunities?

Yes

C2.1a

(C2.1a) How does your organization define short-, medium- and long-term time horizons?

	From (years)	To (years)	Comment
Short-term	0	3	The time horizons for climate risks are viewed in a wider time perspective than those for normal business operation.
Medium-term	3	10	The time horizons for climate risks are viewed in a wider time perspective than those for normal business operation.
Long-term	10	30	The time horizons for climate risks are viewed in a wider time perspective than those for normal business operation.

C2.1b

(C2.1b) How does your organization define substantive financial or strategic impact on your business?

To assess and rank climate risks in terms of financial impact, the risk management system of the LUKOIL Group uses a risk assessment matrix that includes two main parameters: the degree of financial impact and the likelihood of risk.

The degree of financial impact of risk is subdivided into five levels (the higher the level, the higher the impact) and is defined as the deviation from the planned value of the net profit indicator:

Level 1 (the consequences of the risk are insignificant) - damage up to 90 million rubles.

Level 2 (the consequences are permissible) - damage from 90 million to 3 billion rubles.

Level 3 (significant consequences) - damage from 3 billion to 14 billion rubles.

Level 4 (consequences are critical) - damage from 14 billion to 900 billion rubles.

Level 5 (catastrophic consequences) - damage over 900 billion rubles.

The likelihood of risk realization is also subdivided into five levels:

1. Very low - up to 15%;
2. Low - from 15.1 to 40.0%;
3. Average - from 40.1 to 60%;
4. High - up to 60.1-85.0%;
5. Very high - from 85.1 to 100%

The interaction of two main parameters, each of which changes at 5 levels, gives a 5 × 5 risk matrix. The risk that has the first level of financial influence and the first level of probability is considered insignificant. The risk that has the fifth levels in terms of financial impact and probability is recognized as extremely significant and requires immediate response.

To rank risks in terms of materiality for the business and take measures to manage them, the matrix is divided into three zones: red (high risks), yellow (medium risks) and green (low risks).

C2.2

(C2.2) Describe your process(es) for identifying, assessing and responding to climate-related risks and opportunities.

Value chain stage(s) covered

Direct operations
Upstream
Downstream

Risk management process

Integrated into multi-disciplinary company-wide risk management process

Frequency of assessment

Annually

Time horizon(s) covered

Short-term
Medium-term
Long-term

Description of process

To identify climate risks, a "long list" is drawn up, including up to 50 different risks. Further, these risks are analyzed and assessed according to two main parameters: the probability of occurrence and the degree of financial impact. Based on these assessments, a risk matrix is built, in which three zones are distinguished: red (high risk), yellow (medium risk) and green (low risk). Risks in the green zone do not require further analysis and special measures to reduce them. However, it is necessary to maintain these risks at the current level through the implementation and control of existing risk management measures. The introduction of additional measures in relation to such risks is possible if they allow to reduce risks without significant material costs or organizational efforts. Risks that fall into the yellow zone are subjected to further qualitative (using the Bow Tie Analysis method or others) or quantitative analysis. Based on the results of this analysis, the following decisions can be made: - if it is advisable to implement additional measures to reduce risks, such measures are included in the relevant plans and programs; - in the absence of the feasibility of introducing additional measures, the risks are maintained at the existing level through the implementation and control of existing measures. For risks that are in the red zone, further qualitative (using the Bow Tie Analysis method or others) or quantitative analysis is performed. Based on the results of this analysis, methods of response are determined and measures are planned to eliminate risks or reduce them to an average level at least. The following methods are used in response to climate risks: 1. Risk avoidance - elimination of hazards as sources of risk; 2. Reducing risk - replacing hazards with others with a lower level of risk; isolation of hazards and application of engineering solutions; organizational arrangements; 3. Risk transfer - transfer of part of the risk or the entire risk in whole to other persons who will be able to provide the most effective and efficient measures for influencing the risk, for example: - risk insurance; - the use of interim measures, penalties, etc. 4. Tanking risk, i. e. refusal from special actions aimed at reducing risks, because: - the size of the risk, taking into account the existing measures of influence, does not exceed the acceptable level of risks (risk appetite); - the risk does not bear unacceptable negative consequences for the company; - additional efforts and costs for risk reduction are not economically feasible.

C2.2a

(C2.2a) Which risk types are considered in your organization's climate-related risk assessments?

	Relevance & Inclusion	Please explain
Current regulation	Relevant, always included	The company considers it its primary duty to respect and strictly comply with the requirements of national legislation (laws and other regulations) in all countries of its presence. We understand that ignoring current laws, regulations and rules in the climate field can lead to aggravation of problems related to climate change, delays or cancellations of projects, lawsuits, penalties, and reduced profits. We constantly monitor climate legislation in all countries and jurisdictions in which our businesses operate, and take all necessary measures to comply with it. Our organizations in the EU are subject to GHG emissions regulation and are covered by the EU Emissions Trading Scheme (ETS). The potential increase in the prices of emission permits under the EU ETS poses certain risks to our operations in the EU. We are also heavily affected by the regulation of GHG emissions throughout the supply chain, especially down the chain, where new, much more stringent standards and requirements for cars and vans have recently been introduced in terms of CO2 emissions per km. Similar regulation occurs for heavy duty trucks. The above measures, as well as new GHG initiatives at the level of the EU member states, are leading to a massive shift from internal combustion engines to electric motors and, consequently, to a decrease in demand for our products. In Russia, methane and some other greenhouse gases are classified as pollutants, and the Russian legislation establishes rather stringent requirements for them. In particular, the Decree of the Government of Russia dated November 8, 2012 No. 1148 establishes requirements for the utilization of associated petroleum gas (APG), consisting mainly of methane, during oil production. According to this document, the share of APG dispersed into the atmosphere or flared in flares should not exceed 5% of its production. LUKOIL Group's oil producing companies comply with this requirement. At the end of 2021, the useful use of APG at the LUKOIL Group's oil fields averaged 97.5%.
Emerging regulation	Relevant, always included	Business development is impossible without taking into account the risks of introducing new climate regulations and requirements at the national or international levels. LUKOIL constantly monitors changes in climate legislation and participates in the discussion of draft regulations affecting the climate agenda in order to clarify in detail the Company's position on these issues, risks and uncertainties that new legislative initiatives entail. The most relevant regulatory risk for us at the moment is the norms being developed to increase the cost of emission certificates and the cancellation of free certificates in the EU, where our company has production facilities for oil refining. In 2021, as part of the mechanisms for public discussion of regulatory legal acts, the Company participated in the formation of Russian legislation in connection with the adoption of the Federal Law "On Limiting Greenhouse Gas Emissions". As a follow-up to this law, subordinate legislation is being developed that will define departmental powers, the procedure for implementing climate projects and the circulation of carbon units, the content of climate reporting and other aspects. In a dialogue with the authorities, the Company draws attention to the issues, the solution of which will help to improve the effectiveness of climate policy in the interests of national economic development, such as the clarity of criteria, methodologies and procedures, the digitalization and consolidation of climate data, the definition of the legal status of carbon units, new obligations of regulated organizations.
Technology	Relevant, always included	The transition to low-carbon development involves the introduction of new energy-efficient technologies and the phasing out of fossil fuels in favor of renewable energy sources. For LUKOIL Group, one of the significant risks is the electrification of road transport with the transition from an internal combustion engine to an electric motor powered by a rechargeable battery or a hydrogen fuel cell. We estimate this risk may be significant in the long term. With this in mind, the company is considering and already implementing various measures to reduce the negative impact of this risk, including equipping its filling stations in various countries with electric chargers, including those powered by solar panels. In 2021, an agreement was signed with the State Atomic Energy Corporation Rosatom on cooperation in a number of areas, including the implementation of joint projects for the use of renewable energy sources. In particular, in 2021 an agreement was reached to implement wind energy projects together with "NovaWind", one of the leaders in wind turbine production. one of the leaders in wind turbine production and construction of wind power plants in Russia.
Legal	Relevant, always included	It is an increasingly common practice to sue oil and gas companies on various grounds for their contribution to GHG emissions and global climate change. As one of the largest oil and gas companies with operations around the world, LUKOIL Group takes an open and honest position on its climate agenda. We record and publish our GHG emissions annually in an effort to reduce emissions throughout our value chain.
Market	Relevant, always included	Market changes follow the development and diffusion of low-carbon technologies and the measures that are being taken around the world to support them. The accelerating electrification of vehicles with the replacement of internal combustion engines by an electric motor will help to shrink the market for traditional motor fuels, creating additional risks for LUKOIL Group. The Company uses a scenario approach to forecasting macroeconomic indicators, including various climatic scenarios.
Reputation	Relevant, always included	Reputational risks are usually associated with distortion or lack of information about the company in the public space. Therefore, LUKOIL Group pays great attention to information disclosure. The company regularly discloses information on climate management and GHG emissions, taking into account the request of stakeholders in annual reports, sustainability reports, releases, messages, on the website. When disclosing information, LUKOIL adheres to the best international practice: Sustainability reports are prepared in accordance with the GRI standards, taking into account the guidelines for disclosing information on the contribution to the achievement of the UN SDGs and other international standards, and also undergo an independent audit. For the reporting year, an inventory of GHG emission sources and calculation of emissions (Scope 1, 2, 3) were carried out according to the international standard GHG Protocol. The results of the quantitative determination of GHG emissions were verified by the international audit company KPMG. LUKOIL is also taking part in the international CDP project for the disclosure of information on GHG emissions. By the results of its participation in 2021, PJSC LUKOIL raised its climate rating to "B -" level. The company maintains an active dialogue with representatives of the global climate investment initiative Climate Action 100+.
Acute physical	Relevant, always included	Operating in several countries on 4 continents, LUKOIL Group is exposed to various physical risks associated with global climate change, including risks caused by extreme weather and climate events (droughts, floods, hurricanes, etc.). To mitigate potential damage, LUKOIL evaluates the impact of climate change during the design and construction of facilities, including the most vulnerable areas (the Arctic zone, low-water regions and offshore facilities), and monitors the state of the environment for a relevant range of parameters, which allows taking the necessary measures in a timely manner.
Chronic physical	Relevant, always included	Various weather and climatic factors of constant action have a significant impact on the company's activities. One of the most significant is the state of frozen soils in those regions in the Far North of Russia where LUKOIL Group enterprises produce and process oil and gas. Global warming is causing the permafrost to melt. Recently, this process has been accelerating and is beginning to threaten capital facilities located on the permafrost. These risks are taken into account in the design, construction and operation of facilities in these regions. The state of soils is systematically monitored by geological methods, which include, among other things, regular measurements of soil temperature at a depth of 1 to 35 m. With the involvement of the best Russian specialists, an in-depth study and analysis of the risks associated with an increase in temperature, changes in precipitation, snow regime and river runoff, melting of permafrost under the influence of global climate change was carried out under various scenarios of anthropogenic impact on the climate system using an ensemble climate models. The analysis was carried out for the Russian regions located in the north (in the arctic and subarctic zone) and in the south.

C2.3

(C2.3) Have you identified any inherent climate-related risks with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.3a

(C2.3a) Provide details of risks identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Risk 1

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
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Primary potential financial impact

Other, please specify (Decrease in income due to changes in the number of free quotas)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Since 2021, Phase IV of the EU ETS has begun, which provides for a reduction of 2.2% of the free allocation of quotas each year. The European Commission is currently proposing a revision of the EU ETS. As part of the Fit for 55 legislative package, it is envisaged to reduce EU emissions by at least 55% by 2030 compared to 1990 levels. In addition, the European Commission is proposing a new target to reduce emissions in EU ETS sectors by 61% by 2030 compared to 2005 levels. This represents an increase of 18 percentage points compared to the target under current legislation (minus 43%). Seeking to increase ambition compared to the European Commission proposal, the European Parliament proposed an increase in the emission reduction target for the ETS sectors from 61% to 63% by 2030 compared to 2005 and, consequently, an even more rapid reduction in the number of free allowances issued, viz: 4.4% by the end of 2025, 4.5% from 2026, and 4.6% from 2029

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

The indicator of potential financial impact is an estimate of the annual payment for exceeding the established quota for carbon dioxide emissions in a number of EU countries from the production activities of LUKOIL Group enterprises under various combinations of internal and external factors.

Cost of response to risk**Description of response and explanation of cost calculation**

The main measure to reduce the financial impact of this risk is the decarbonization of production. The main direction in this area is to increase the efficiency of fuel use and reduce the energy intensity of production. The LUKOIL Group is implementing an Energy Saving Program aimed at improving the efficiency of energy and fuel use and reducing losses. The program includes activities that are implemented in organizations of each business sector. A group of projects has been identified that have the highest potential for economic efficiency. Such projects are included in roadmaps. The cost of responding to risk represents the investments of LUKOIL Group in industrial safety, labor protection and environment and energy efficiency in the EU until 2030.

Comment

LUKOIL's risk management and strategic planning focuses on carbon pricing mechanisms.

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Downstream

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
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Primary potential financial impact

Other, please specify (Decrease in income due to changes in the carbon price)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Since the end of 2020, the price of carbon units has shown steady growth. Given the policy pursued by the European Union to increase the ambition of the goal to reduce greenhouse gas emissions, as well as the influence of some other factors, a number of analysts agree that the price of carbon credits in the EU will continue to grow (for example, Reuters predicts that the price of carbon in the EU will be on average 85.22 euros per tonne in 2022 and 94.23 euros in 2023).

Time horizon

Short-term

Likelihood

Likely

Magnitude of impact

Medium-high

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure**

The indicator of potential financial impact is an estimate of the annual payment for carbon dioxide emissions in a number of EU countries from the production activities of LUKOIL Group enterprises under various scenarios of growth in the cost of emission certificates.

Cost of response to risk

Description of response and explanation of cost calculation

The main measure to reduce the financial impact of this risk is the decarbonization of production. The main focus area in this area is improving fuel efficiency and reducing the energy intensity of production. LUKOIL Group is implementing an Energy Saving Program aimed at improving energy and fuel efficiency and reducing losses. The program includes measures that are implemented in the organizations of each business sector. A group of projects has been identified that have the highest potential for economic efficiency. Such projects are included in the road maps.

Comment

LUKOIL's risk management and strategic planning focuses on carbon pricing mechanisms.

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Direct operations

Risk type & Primary climate-related risk driver

Emerging regulation	Carbon pricing mechanisms
---------------------	---------------------------

Primary potential financial impact

Other, please specify (Decrease in income due to the introduction of fees for GHG emissions)

Climate risk type mapped to traditional financial services industry risk classification

<Not Applicable>

Company-specific description

Federal Law No. 296-FL dated July 2, 2021 "On Limiting Greenhouse Gas Emissions" does not provide for a fee for greenhouse gas emissions, however, the risk of introducing a fee for emissions in the Russian Federation remains and is becoming increasingly relevant due to the intention of the European carbon tax. The introduction of a national emissions pricing system may be one of the possible responses to the introduction of a carbon border tax in the EU. On the other hand, in accordance with the adopted Federal Law No. 34-FL dated March 6, 2022 "On Conducting an Experiment to Limit Greenhouse Gas Emissions in Certain Subjects of the Russian Federation", greenhouse gas emission quotas are provided for regional regulated organizations located on the territory of the subjects, included in the experiment, and a fee for exceeding quotas, set at 1,000 rubles per ton of CO2. At the moment, only the Sakhalin Region is participating in the experiment, however, based on the results of this experiment, a decision can be made to conduct similar experiments in other subjects of the Russian Federation. In the future, such a mechanism can be extended to the entire territory of the Russian Federation. We monitor the risk of introducing GHG emission charges in the Russian Federation, as the majority of LUKOIL Group's enterprises are located in Russia. At the same time, we note that payment for methane emissions has been carried out within the framework of environmental protection legislation for more than 25 years.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

The financial impact is determined on the basis of scenarios that include setting limits on direct GHG emissions for Russian organizations in the amount of up to half of existing emissions. The financial impact indicators are numerically estimated by multiplying the paid share of existing annual emissions by the forecast cost rates for 1 ton of GHG emissions.

Cost of response to risk

Description of response and explanation of cost calculation

The main measure to mitigate the financial impact of this risk in LUKOIL until 2030 is decarbonization of production. The most effective focus area in this area is improvement of fuel efficiency and reduction of energy intensity of production, contributing to efficient reduction of direct greenhouse gas emissions. LUKOIL Group is implementing an Energy Saving Program aimed at improving energy and fuel efficiency and reducing losses. The program includes measures that are implemented in organizations of each business sector. A group of projects has been identified that have the highest potential for economic efficiency. Such projects are included in the road maps.

Comment

LUKOIL's risk management and strategic planning focuses on carbon pricing mechanisms.

C2.4

(C2.4) Have you identified any climate-related opportunities with the potential to have a substantive financial or strategic impact on your business?

Yes

C2.4a

(C2.4a) Provide details of opportunities identified with the potential to have a substantive financial or strategic impact on your business.

Identifier

Opp1

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Use of more efficient production and distribution processes

Primary potential financial impact

Reduced indirect (operating) costs

Company-specific description

We consider improving energy efficiency as one of the main factors affecting the energy intensity of products and LUKOIL's ability to adapt to global climate change. Rational use of energy resources contributes to the reduction of GHG emissions. Improving energy efficiency is a key tool for reducing controlled GHG emissions.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

Long-term energy efficiency goals are an integral part of the LUKOIL Group's Strategic Development Program and the climate strategy. Our energy efficiency goals include: • ensuring the efficiency of technological processes and operation of technological equipment; • Ensuring the rational use of fuel and energy resources; • effective development and modernization of energy assets; • reduction of indirect GHG emissions. As part of the energy management system, mid-term and short-term planning is carried out in the form of setting quantitative goals in relation to energy saving volumes. During the year, monitoring of activities aimed at achieving the goal is carried out. Annually, the achievement of the goal is assessed at the end of the year and the planned indicators for the next three years are adjusted. To motivate the Group's organizations to achieve their goals, the KPI "Implementation of the Energy Saving Program" was introduced. At refineries and petrochemical plants, as part of a system of continuous improvements, the strategic project 'Energoproryv' is being implemented, the purpose of which is to significantly increase energy efficiency. At the first stage, a portfolio of measures aimed at reducing CO2 emissions, eliminating liquid fuel consumption, increasing heat transfer efficiency and reducing the EII Solomon Energy Intensity Index was formed. The expected target effect for the period 2020-2030 includes a reduction in the EII Solomon Refinery Energy Intensity Index by an average of 13% compared to 2018 levels.

Comment

We view our efforts to improve energy efficiency as an important tool for changing the energy intensity of our products and making the LUKOIL Group more resilient to tightening climate regulation.

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues resulting from increased demand for products and services

Company-specific description

Natural gas has the lowest specific emissions among fossil fuels. For comparison: GHG emissions from natural gas combustion are 1.7 times lower than those from coal combustion and 1.4 times lower than GHG emissions from fuel oil combustion.

Time horizon

Medium-term

Likelihood

Very likely

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure****Cost to realize opportunity****Strategy to realize opportunity and explanation of cost calculation**

LUKOIL's strategy provides for the development of natural gas production and sales both in Russia and abroad. In particular, the Company is considering the implementation of gas projects in the Bolshekhetskaya Depression and the Caspian region. As a result of the implementation of new projects, it is expected that the share of gas in the Company's production structure will increase in a ten-year perspective

Comment

LUKOIL Group possesses large reserves of natural gas, which implies significant potential for increasing gas production, in particular in Russia. The company understands that global gas demand will grow rapidly. Therefore, the Company expects the share of gas in the volume of hydrocarbon production to grow.

Identifier

Opp3

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Energy source

Primary climate-related opportunity driver

Use of lower-emission sources of energy

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

LUKOIL Group considers the development of RES for its own needs as one of the tools to reduce controlled GHG emissions. The Company also considers the possibility of building commercial RES if economically feasible, given its solid track record of RES development. The Company currently operates a fleet of four hydro power plants in Southern Russia, as well as solar and wind power facilities in Russia, Romania, Bulgaria and Austria. The total installed capacity of renewable power generation at the end of 2021 was 416 MW. LUKOIL Group continues implementing green energy projects.

Time horizon

Long-term

Likelihood

Likely

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)**Potential financial impact figure – maximum (currency)****Explanation of financial impact figure****Cost to realize opportunity****Strategy to realize opportunity and explanation of cost calculation**

Key renewable energy objectives include: • reduction/prevention of GHG emissions; • obtaining a synergistic effect from the construction of renewable energy facilities at existing oil and gas production and processing enterprises; • implementation of commercial renewable energy projects, including through the use of state support mechanisms. The company is considering the construction of solar and wind power plants both in Russia and abroad in the regions where the LUKOIL Group operates.

Comment

Our renewable energy goal is to improve the competitiveness of LUKOIL Group and its contribution to the SDGs through the implementation of renewable energy projects for the production of green energy.

Identifier

Opp4

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Returns on investment in low-emission technology

Company-specific description

Carbon dioxide capture and storage (CCS) is currently the most technologically advanced way to reduce greenhouse gas emissions from process facilities. PJSC "LUKOIL"

is evaluating the possibility of implementing such projects at both foreign and Russian production sites. First of all, capture projects for hydrogen production units are considered, which are one of the main sources of emissions at refineries. The vertically integrated business model allows considering the possibility of synergy between production and processing assets to improve the efficiency of such projects.

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

High

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

The Company considers pilot projects for hydrogen production units at its refineries with further assessment of potential scaling of this technology.

Comment

For the purpose of solving the problems of reducing GHG emissions Scope 1 and Scope 2, carbon capture and storage projects are envisaged.

Identifier

Opp5

Where in the value chain does the opportunity occur?

Downstream

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Primary potential financial impact

Increased revenues through access to new and emerging markets

Company-specific description

PJSC LUKOIL produces and sells petroleum products in the EU countries, and we see the need to supply the market with fuels that will reduce the negative impact on the environment. Since the EU's strategy for the transition to a carbon-neutral economy implies the increasing involvement of biocomponents in fuels, we are working on possible options for implementing a project to obtain biofuels at the Company's production sites. In 2022, the ISAB refinery complex in Sicily, owned by LUKOIL, began production of biodiesel fuel with the addition of by-products of palm oil (palm oil mill effluent, POME).

Time horizon

Long-term

Likelihood

About as likely as not

Magnitude of impact

Medium

Are you able to provide a potential financial impact figure?

Yes, an estimated range

Potential financial impact figure (currency)

<Not Applicable>

Potential financial impact figure – minimum (currency)

Potential financial impact figure – maximum (currency)

Explanation of financial impact figure

Cost to realize opportunity

Strategy to realize opportunity and explanation of cost calculation

The Company's development strategy provides for considering the possibility of selling the produced biofuel through its own network of filling stations in the EU, as well as to third parties.

Comment

For the purpose of solving the problems of participation in climate initiatives and the development of climate capabilities, it is envisaged to study the production of low-carbon energy resources, including biofuels.

C3.1

(C3.1) Does your organization’s strategy include a transition plan that aligns with a 1.5°C world?

Row 1

Transition plan

No, our strategy has been influenced by climate-related risks and opportunities, but we do not plan to develop a transition plan within two years

Publicly available transition plan

<Not Applicable>

Mechanism by which feedback is collected from shareholders on your transition plan

<Not Applicable>

Description of feedback mechanism

<Not Applicable>

Frequency of feedback collection

<Not Applicable>

Attach any relevant documents which detail your transition plan (optional)

<Not Applicable>

Explain why your organization does not have a transition plan that aligns with a 1.5°C world and any plans to develop one in the future

At the moment, PJSC LUKOIL does not have a transition plan that corresponds to the indicators of an increase in global temperature no higher than 1.5 °C. This is a very ambitious goal and requires an in-depth analysis of the technical feasibility and economic viability of its adoption. Our company is implementing a wide range of measures to manage climate risks and identify opportunities, including risks and opportunities associated with the transition plan, which corresponds to the restriction of the temperature rise of 1.5 °C.

Explain why climate-related risks and opportunities have not influenced your strategy

<Not Applicable>

C3.2

(C3.2) Does your organization use climate-related scenario analysis to inform its strategy?

	Use of climate-related scenario analysis to inform strategy	Primary reason why your organization does not use climate-related scenario analysis to inform its strategy	Explain why your organization does not use climate-related scenario analysis to inform its strategy and any plans to use it in the future
Row 1	Yes, qualitative and quantitative	<Not Applicable>	<Not Applicable>

C3.2a

(C3.2a) Provide details of your organization’s use of climate-related scenario analysis.

Climate-related scenario	Scenario analysis coverage	Temperature alignment of scenario	Parameters, assumptions, analytical choices
Transition scenarios IEA 2DS	Company-wide	<Not Applicable>	In 2020, new targets for reducing GHG emissions for the period up to 2031 were calculated in accordance with the Recommendations of the Intergovernmental Panel on Climate Change (IPCC) and with the goals of the Paris Agreement based on 1.5°C and 2°C scenarios. In addition to the previously presented scenario "Evolution" (corresponds to a trajectory of 2.6°C), we have worked out the scenarios "Equilibrium" (corresponds to a trajectory of 1.8°C), "Transformation" (corresponds to a trajectory of 1.5°C) and "Two degrees Celsius". All these scenarios assume a significant increase in the share of renewable energy sources, recycled plastic and accelerated electrification of transport. When developing our own scenarios, we considered in detail the scenarios of international institutions such as the IPCC, IEA and IRENA.
Transition scenarios IEA SDS	Company-wide	<Not Applicable>	In 2020, new targets for reducing GHG emissions for the period up to 2031 were calculated in accordance with the Recommendations of the Intergovernmental Panel on Climate Change (IPCC) and with the goals of the Paris Agreement based on 1.5°C and 2°C scenarios. In addition to the previously presented scenario "Evolution" (corresponds to a trajectory of 2.6°C), we have worked out the scenarios "Equilibrium" (corresponds to a trajectory of 1.8°C), "Transformation" (corresponds to a trajectory of 1.5°C) and "Two degrees Celsius". All these scenarios assume a significant increase in the share of renewable energy sources, recycled plastic and accelerated electrification of transport. When developing our own scenarios, we considered in detail the scenarios of international institutions such as the IPCC, IEA and IRENA.
Transition scenarios IRENA	Company-wide	<Not Applicable>	In 2020, new targets for reducing GHG emissions for the period up to 2031 were calculated in accordance with the Recommendations of the Intergovernmental Panel on Climate Change (IPCC) and with the goals of the Paris Agreement based on 1.5°C and 2°C scenarios. In addition to the previously presented scenario "Evolution" (corresponds to a trajectory of 2.6°C), we have worked out the scenarios "Equilibrium" (corresponds to a trajectory of 1.8°C), "Transformation" (corresponds to a trajectory of 1.5°C) and "Two degrees Celsius". All these scenarios assume a significant increase in the share of renewable energy sources, recycled plastic and accelerated electrification of transport. When developing our own scenarios, we considered in detail the scenarios of international institutions such as the IPCC, IEA and IRENA.
Physical climate scenarios RCP 2.6	Company-wide	<Not Applicable>	In 2020, new targets for reducing GHG emissions for the period up to 2031 were calculated in accordance with the Recommendations of the Intergovernmental Panel on Climate Change (IPCC) and with the goals of the Paris Agreement based on 1.5°C and 2°C scenarios. In addition to the previously presented scenario "Evolution" (corresponds to a trajectory of 2.6°C), we have worked out the scenarios "Equilibrium" (corresponds to a trajectory of 1.8°C), "Transformation" (corresponds to a trajectory of 1.5°C) and "Two degrees Celsius". All these scenarios assume a significant increase in the share of renewable energy sources, recycled plastic and accelerated electrification of transport. When developing our own scenarios, we considered in detail the scenarios of international institutions such as the IPCC, IEA and IRENA.

C3.2b

(C3.2b) Provide details of the focal questions your organization seeks to address by using climate-related scenario analysis, and summarize the results with respect to these questions.

Row 1

Focal questions

Energy transformation, phasing out fossil fuels in favor of renewable energy sources

Results of the climate-related scenario analysis with respect to the focal questions

We believe that every scenario involving a significant reduction in greenhouse gas emissions is a difficult challenge for the world community. There are a large number of tasks to be solved that cannot be completed quickly. In addition, it is very important that energy transformation does not conflict with other SDGs, such as the eradication of poverty and the reduction of inequality. Progress towards achieving all the Sustainable Development Goals will be possible if alternative energy is affordable and sufficient to not only gradually replace fossil fuels, but also provide additional amounts of energy for the growing global economy. Therefore, none of the scenarios we have developed involves the complete abandonment of fossil fuels. Despite the fact that we expect a gradual reduction in the consumption of fossil fuels in road transport, we assume that oil will be in demand for a long time in such sectors as petrochemicals, lubricants and air transportation. Scenario analysis included all the main business sectors of our company: oil and gas production, oil and gas processing, petrochemicals, sales, electric power. Taking into account the scenarios worked out, we have set a new goal to reduce GHG emissions by 2030. We plan to reduce emissions (Scope 1 + Scope 2) by 20% relative to the level of 2017.

C3.3

(C3.3) Describe where and how climate-related risks and opportunities have influenced your strategy.

	Have climate-related risks and opportunities influenced your strategy in this area?	Description of influence
Products and services	Yes	Traditionally, we strive to manufacture products that meet the strictest environmental requirements and quality standards. All our motor fuels comply with the Euro-5 standard, and in 2017, our Nizhny Novgorod refinery began producing innovative ECTO 100 gasoline with improved operational and environmental performance, allowing for less gasoline consumption per 100 km of vehicle mileage. However, global decarbonization and related technological (transition from ICE cars to electric vehicles powered by electric batteries and / or hydrogen) and market (decrease in global demand and, accordingly, prices for fossil hydrocarbon fuels) risks create new challenges for our company and require diversification of the product line by mastering the production of low-carbon products. As part of the development of a new long-term strategy, a long list of possible products and services was compiled, which included green hydrogen, biofuels based on wood waste processing, other low-carbon fuels and energy (development of renewable energy), as well as services for charging electric vehicles at the existing filling stations of the company in Russia and in other countries. The Company has created specialized working groups, which included the heads of the relevant units. The main task of such working groups is to develop options for the production of new low-carbon products, taking into account the existing production base of the Company. When developing a new strategy, the Company pays significant attention to decarbonization of its own business in order to mitigate these risks and maximize the use of emerging new opportunities. For this purpose, the company has established a Center for the Development of New Activities.
Supply chain and/or value chain	Yes	Risks of price (tariff) growth for fossil fuels and electric power received from the outside, including under the influence of various mechanisms of GHG emissions regulation based on the payment principle, serve as one of the drivers of the company's activities to improve energy efficiency and develop its own generation on the basis of RES. LUKOIL Group organizations have introduced an energy management system based on the ISO 50001 international standard. As of December 31, 2021, 25 organizations had ISO 50001 compliance certificates, covering 68% of LUKOIL Group's headcount. All LUKOIL Group organizations develop and implement measures to improve energy efficiency and energy saving. LUKOIL has a large portfolio of energy facilities powered by renewable energy sources. The Company owns 4 hydro power plants with a total capacity of 291 MW in the south of Russia, a wind farm with 84 MW in Romania, and 7 solar power plants in Romania, Bulgaria, Austria and Russia with a total capacity of 41 MW. In 2021, these facilities generated a total of 1,025 million MW ^h of electricity. The company continues to develop this area. In May 2021, a second solar power plant was launched at the Volgograd Refinery, with a capacity of 20 MW. From September 1, 2021, electricity generated by the first stage of the Volgograd solar power plant, with installed capacity of 10 MW, will be supplied to the Stavrolen petrochemical complex, which will reduce the carbon footprint of products and indirect GHG energy emissions. In 2021, construction of another SPP with installed capacity of 2.35 MW began at the Krasnodar CHPP. The project is a participant of the state support program for RES in the retail electricity market. In 2022 the SPP is put into operation.
Investment in R&D	Yes	The Scientific and Technical Center of the LUKOIL Group develops new technologies to improve the energy efficiency of production processes and utilize APG and CO ₂ . Among the promising technologies are the processing of APG into a carbon nanostructured material by catalytic pyrolysis and cyclic injection of CO ₂ into production wells, which results in a multiple decrease in oil viscosity, an increase in the volume of reservoir oil and well production rates. Gas enhanced oil recovery (EOR) methods using APG and CO ₂ as injection agents are actively developed. Along with this, we are considering the possibility of diversifying R&D by including in the work programs new areas related to the production and supply of low-carbon products, including green hydrogen, to world markets.
Operations	Yes	Climate change creates significant physical risks for the LUKOIL Group, especially in oil production regions in the northern regions of Russia (Yamal-Nenets Autonomous Okrug, Nenets Autonomous Okrug), as well as in southern Russia, where the company has its main processing and generating capacities. The main risks for the company's production assets in the northern regions of Russia are associated with the thawing of permafrost, forest fires and prolonged periods of abnormally high temperatures. In the south, droughts and floods are a threat, as well as heat waves, which can adversely affect the health of workers, equipment and operations in general. LUKOIL evaluates the impact of climate change in the design and construction of facilities, including the most vulnerable areas (the Arctic zone, low-water regions and offshore facilities). In 2020, a special study was carried out on the climatic risks associated with permafrost melting in order to avoid adverse effects.

C3.4

(C3.4) Describe where and how climate-related risks and opportunities have influenced your financial planning.

	Financial planning elements that have been influenced	Description of influence
Row 1	Direct costs Capital expenditures	Capital expenditures: Our company uses the internal carbon price to make investment decisions and approve capital expenditures. We apply differentiated prices depending on the region of presence and year for the period up to 2031 on an annual basis. It should also be noted that the introduction of an internal carbon price led to the abandonment of a number of investment projects that imply a significant increase in greenhouse gas emissions from the company's activities. Using an internal carbon price shifts investments towards low-carbon technologies and renewable energies in our operations and supply chain and contributes to our strategic climate goals. The use of an internal carbon price is a long-term measure, and the carbon price is reviewed and updated annually. Direct costs: We understand that climate risks can negatively affect our revenues and costs, and we are trying to use existing opportunities to diversify production and expand new areas of low-carbon business. For example, to assess physical and transitional risks, in 2020 we funded a special scientific study for the period up to 2030 and 2050 with the participation of climate scientists and experts in the field of climate risks

C4. Targets and performance

C4.1

(C4.1) Did you have an emissions target that was active in the reporting year?

Absolute target

C4.1a

(C4.1a) Provide details of your absolute emissions target(s) and progress made against those targets.

Target reference number

Abs 1

Year target was set

2021

Target coverage

Country/region

Scope(s)

Scope 1

Scope 2

Scope 2 accounting method

Location-based

Scope 3 category(ies)

<Not Applicable>

Base year

2017

Base year Scope 1 emissions covered by target (metric tons CO2e)

40447715

Base year Scope 2 emissions covered by target (metric tons CO2e)

10449514

Base year Scope 3 emissions covered by target (metric tons CO2e)

<Not Applicable>

Total base year emissions covered by target in all selected Scopes (metric tons CO2e)

50897228

Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1

100

Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2

100

Base year Scope 3 emissions covered by target as % of total base year emissions in Scope 3 (in all Scope 3 categories)

<Not Applicable>

Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes

100

Target year

2030

Targeted reduction from base year (%)

20

Total emissions in target year covered by target in all selected Scopes (metric tons CO2e) [auto-calculated]

40717782.4

Scope 1 emissions in reporting year covered by target (metric tons CO2e)

36388283

Scope 2 emissions in reporting year covered by target (metric tons CO2e)

5102576

Scope 3 emissions in reporting year covered by target (metric tons CO2e)

<Not Applicable>

Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

41490859

% of target achieved relative to base year [auto-calculated]

92.4055137148137

Target status in reporting year

Underway

Is this a science-based target?

No, but we anticipate setting one in the next 2 years

Target ambition

<Not Applicable>

Please explain target coverage and identify any exclusions

The regions included in the emissions reduction target in 2021 are represented by the following countries: Azerbaijan, Belgium, Bulgaria, Croatia, Finland, Georgia, Italy, Netherlands, Romania, Russia, Serbia, Turkey, Uzbekistan, Republic of Moldova, Belarus, North Macedonia, Montenegro.

Plan for achieving target, and progress made to the end of the reporting year

The target indicator includes the reduction of Scope 1 and Scope 2 emissions from LUKOIL Group enterprises located in Russia and abroad. In 2021, a target was set to reduce emissions by 20% by 2030 relative to 2017. Among the main initiatives of the company to reduce greenhouse gas emissions, the following areas can be distinguished: - Improving energy efficiency Improving energy efficiency is one of the strategic directions within the framework of reducing GHG emissions. The Company implements an Energy Saving Program (in Russian organizations), as well as investment projects at foreign refineries for the construction, technical re-equipment and modernization of equipment - APG utilization: The Company has achieved a high level of rational use of APG (more than 97% over the past four years). Further work in this direction continues at new fields, projects are being implemented within the framework of the World Bank initiative "Zero routine flaring of associated petroleum gas by 2030" - Renewable energy: We consider the expansion of the use of renewable energy to be an important area of the LUKOIL Group's climate strategy. Low-carbon energy is supplied to consumers and is also used for the Group's own production needs. The company increases the consumption of electricity generated from its own generation facilities operating on the basis of the use of renewable energy sources. In 2021, the reduction of emissions relative to the base year was 18.5% (the goal is minus 20% by 2030). Reduction of GHG emissions was achieved thanks to implemented measures to improve energy efficiency and optimize the operation of equipment

List the emissions reduction initiatives which contributed most to achieving this target

<Not Applicable>

C4.2

(C4.2) Did you have any other climate-related targets that were active in the reporting year?

Other climate-related target(s)

C4.2b

(C4.2b) Provide details of any other climate-related targets, including methane reduction targets.

Target reference number

Oth 1

Year target was set

2017

Target coverage

Company-wide

Target type: absolute or intensity

Absolute

Target type: category & Metric (target numerator if reporting an intensity target)

Resource consumption or efficiency	Other, please specify (Percentage of rational use of APG)
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Target denominator (intensity targets only)

<Not Applicable>

Base year

2017

Figure or percentage in base year

95.6

Target year

2030

Figure or percentage in target year

100

Figure or percentage in reporting year

97.5

% of target achieved relative to base year [auto-calculated]

43.1818181818183

Target status in reporting year

Underway

Is this target part of an emissions target?

This goal to increase the rational use of APG and stop flaring is part of the absolute goal to reduce GHG emissions by 2030.

Is this target part of an overarching initiative?

Other, please specify (The World Bank Initiative "Zero Routine burning of Associated Petroleum Gas by 2030")

Please explain target coverage and identify any exclusions

LUKOIL was the first Russian oil company to join the World Bank's Zero Routine Flaring of Associated Petroleum Gas by 2030 initiative, which was announced in 2015 to unite the efforts of governments, oil companies and public organizations to increase the usefulness of APG. Rational use of APG and reduction of its flaring (up to the cessation) allows to reduce emissions of methane, carbon dioxide and nitrous oxide and contributes to the achievement of the established targets for reducing GHG emissions for the period up to 2030.

Plan for achieving target, and progress made to the end of the reporting year

In order to keep methane emissions into the atmosphere at a low level, regular activities are continuing to pump APG into the reservoir to maintain reservoir pressure, as well as to reduce gas leaks during transportation and repairs and maintenance of equipment. Since 2003, the Russian organizations of the LUKOIL Group have been implementing a program for the rational use of APG, which includes measures for the construction of new and reconstruction of long-in-operation facilities for the preparation, transportation and processing of APG. The program is developed for a three-year period, reviewed annually and approved by the management of PJSC LUKOIL. The program for 2020-2022 was approved in 2019. In 2021, the level of rational use of APG was reached at 97.5% within the limits of accounting for GHG emissions of the LUKOIL Group.

List the actions which contributed most to achieving this target

<Not Applicable>

C-OG4.2d

(C-OG4.2d) Indicate which targets reported in C4.1a/b incorporate methane emissions, or if you do not have a methane-specific emissions reduction target for your oil and gas activities, please explain why not and forecast how your methane emissions will change over the next five years.

The absolute goal of reducing GHG emissions for Russian companies includes reducing the amount of GHG emissions (including methane) by 1.2% compared to the base year 2016. The majority of methane emissions are generated as a result of oil and gas production (during the extraction and flaring of APG, with leaks, during scheduled maintenance of equipment and in case of malfunctions). By 2020, thanks to the implementation of projects for the rational use of APG, methane emissions in Russian companies decreased by 44.4% compared to the base year 2016.

In 2017, LUKOIL joined the World Bank's Zero Routine Flaring of Associated Petroleum Gas by 2030 initiative, which was announced in 2015 to unite the efforts of governments, oil companies and public organizations to increase the useful use of APG. By 2030, we plan to completely eliminate methane emissions from APG flaring and reduce methane leaks as much as possible.

C4.3

(C4.3) Did you have emissions reduction initiatives that were active within the reporting year? Note that this can include those in the planning and/or implementation phases.

Yes

C4.3a

(C4.3a) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*		
Implemented*		
Not to be implemented		

C4.3b

(C4.3b) Provide details on the initiatives implemented in the reporting year in the table below.

Initiative category & Initiative type

Energy efficiency in production processes	Machine/equipment replacement
---	-------------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

5000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

500000000

Investment required (unit currency – as specified in C0.4)

Payback period

4-10 years

Estimated lifetime of the initiative

21-30 years

Comment

The initiative includes the introduction of energy-efficient pumps for reservoir pressure maintenance. In 2021, we completed a targeted program to introduce energy-efficient pumps made by Sulzer. This has reduced energy consumption by 14% compared with conventional pumps. As of the end of 2021, the number of energy-efficient pumps commissioned was 243, which amounts to virtually 100% of the operating stock involved in reservoir pressure maintenance (RPM).

Initiative category & Initiative type

Please select

Estimated annual CO2e savings (metric tonnes CO2e)

15700

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

1200000000

Investment required (unit currency – as specified in C0.4)

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

The initiative includes the introduction of submersible valve electric motors of own production. During the reporting year, 2.5 thousand valve engines were installed, As of the end of 2021, the share of wells equipped with valve motors amounted to 74% of the total fund of wells equipped with pumps.

Initiative category & Initiative type

Energy efficiency in production processes	Process optimization
---	----------------------

Estimated annual CO2e savings (metric tonnes CO2e)

67800

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1
Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

380000000

Investment required (unit currency – as specified in C0.4)

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

In 2021, as part of the implementation of efficiency improvement roadmaps in the business segment "Processing, trade and sales", a number of measures aimed at improving energy efficiency were carried out. The key areas in this segment were thermal integration, increasing the efficiency of furnaces, as well as maximizing the use of factory gases.

Initiative category & Initiative type

Waste reduction and material circularity	Product/component/material recycling
--	--------------------------------------

Estimated annual CO2e savings (metric tonnes CO2e)

40000

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

16-20 years

Comment

In 2021, construction and reconstruction of facilities for the rational use of APG and reduction of its flaring in the Perm Region, the Komi Republic, and Western Siberia were implemented. Reducing the flaring of APG is one of LUKOIL's goals to reduce the negative impact on the climate. LUKOIL was the first among Russian oil companies to join the World Bank's initiative "Zero routine burning of associated petroleum gas by 2030", announced in 2015 to unite the efforts of states, oil companies and public organizations in order to increase the useful use of APG.

Initiative category & Initiative type

Other, please specify	Other, please specify (Optimization of the green energy supply scheme)
-----------------------	---

Estimated annual CO2e savings (metric tonnes CO2e)

4125

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

Payback period

No payback

Estimated lifetime of the initiative

21-30 years

Comment

In 2021 the first stage of the SPP at the Volgograd refinery with a capacity of 10 MW began supplying electricity for the own needs of LUKOIL Group enterprises.

Initiative category & Initiative type

Low-carbon energy generation	Solar PV
------------------------------	----------

Estimated annual CO2e savings (metric tonnes CO2e)

8245

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)**Payback period**

No payback

Estimated lifetime of the initiative

21-30 years

Comment

In 2021, construction of the 20 MW Neftezavodskaya solar power plant was completed in order to supply power for the own needs of LUKOIL Group organizations.

Initiative category & Initiative type

Low-carbon energy consumption	Solar PV
-------------------------------	----------

Estimated annual CO2e savings (metric tonnes CO2e)

412

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

21-30 years

Comment

In 2021, a 1.008 MW SPP was commissioned by LLK-International LLC (LUKOIL Lubricants Europe GmbH Austria)

Initiative category & Initiative type

Low-carbon energy consumption	Solar PV
-------------------------------	----------

Estimated annual CO2e savings (metric tonnes CO2e)

8.2

Scope(s) or Scope 3 category(ies) where emissions savings occur

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in C0.4)

0

Investment required (unit currency – as specified in C0.4)

0

Payback period

No payback

Estimated lifetime of the initiative

16-20 years

Comment

In 2021, a 20 kW SPP was commissioned at filling station No. 23170 of LUKOIL Yugnefteprodukt LLC

C4.3c

(C4.3c) What methods do you use to drive investment in emissions reduction activities?

Method	Comment
Compliance with regulatory requirements/standards	The costs of environmental protection measures in all areas in 2021 amounted to 21,38 billion rubles, of which 4,12 billion rubles were spent on measures for utilization of associated petroleum gas. PJSC LUKOIL closely monitors changes in legal requirements and regulations affecting the entire range of issues related to the functioning of fuel and energy companies in each country of presence. With the help of qualitative analysis, modeling and forecasting of the situation, the prerequisites for the emergence of regulatory risks are timely identified; measures are being taken to adequately and timely respond to cross-functional regulatory risks. To direct investments in activities to reduce greenhouse gas emissions, the Company uses: • compliance with legal requirements and standards; • planning and financing of internal corporate Programs that contribute to the reduction of greenhouse gas emissions (Environmental Safety Program for 2019-2021; Program for the Rational Use of Associated Petroleum Gas for 2019-2021).
Dedicated budget for energy efficiency	To implement the Energy Saving Program for Russian organizations of the LUKOIL Group for the period up to 2024, financing is provided.
Employee engagement	Personnel involvement through participation in the Environmental Protection review competition among LUKOIL Group employees and organizations, as well as in competitions and promotions organized by municipalities and territorial supervisory authorities and public environmental organizations.
Please select	

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products.

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Low-Carbon Investment (LCI) Registry Taxonomy

Type of product(s) or service(s)

Power	Solar PV
-------	----------

Description of product(s) or service(s)

We supply part of the low-carbon electricity generated on the basis of water, solar and wind to the national energy systems, thus replacing the grid energy generated on a mixture of fuels, mainly fossil fuels. In this way, emissions are prevented from network sources running on fossil fuels.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Other, please specify (Other: calculation of avoided emissions due to substitution of electricity generated from renewable energy sources)

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Cradle-to-gate

Functional unit used

Power generation

Reference product/service or baseline scenario used

Electricity generation by burning natural gas is considered to be the baseline scenario.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Cradle-to-gate

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

436435

Explain your calculation of avoided emissions, including any assumptions

Avoided emissions are generated by replacing electricity generated by burning fossil fuels (natural gas) with electricity generated by renewable energy sources. In 2021, 974,010 MWh was substituted. Following the principle of conservatism, natural gas as the most climate friendly of fossil fuels (coal and petroleum products) was taken for the calculation. Emissions from electricity generated on the basis of RES and natural gas were calculated in the boundaries Cradle-to-gate. Carbon dioxide, methane, and nitrous oxide emission factors for natural gas were determined in accordance with IPCC 2006. Global warming potentials were determined according to the IPCC 4th Assessment Report. For methane, GWP=25 t CO2-eq/t; for nitrous oxide, GWP=298 t CO2-eq/t. General calculation formula: Avoided emissions = Emissions from gas-fired power plants - Emissions from RE power plants.

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

13.8

Level of aggregation

Product or service

Taxonomy used to classify product(s) or service(s) as low-carbon

Other, please specify (ISO 14040, life cycle assessment)

Type of product(s) or service(s)

Other	Other, please specify (ECTO Fuel)
-------	-----------------------------------

Description of product(s) or service(s)

ECTO gasoline provides end-users with gasoline savings of 4%, and ECTO-100 gasoline provides gasoline savings of 6%.

Have you estimated the avoided emissions of this low-carbon product(s) or service(s)

Yes

Methodology used to calculate avoided emissions

Addressing the Avoided Emissions Challenge- Chemicals sector

Life cycle stage(s) covered for the low-carbon product(s) or services(s)

Use stage

Functional unit used

Fuel consumption

Reference product/service or baseline scenario used

As a basic scenario, the use of conventional automobile gasoline, which does not have the properties of ECTO gasoline, is considered.

Life cycle stage(s) covered for the reference product/service or baseline scenario

Use stage

Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario

641007

Explain your calculation of avoided emissions, including any assumptions

Prevented emissions are generated by replacing conventional gasoline with ECTO gasoline. The ECTO gasoline provides gasoline savings of an average of 4%, which translates into GHG emissions avoidance by the same amount. In 2021 the consumers were supplied 4 846 523 tons of ECTO gasoline and 208 451 tons of ECTO-100 gasoline. This allowed the reduction of ordinary gasoline consumption by $4\,846\,523 \cdot 0,04 + 208\,451 \cdot 0,06 = 206\,368$ tons, which means a corresponding decrease of 641 007 tons of CO2-eq emissions. Carbon dioxide, methane and nitrous oxide emission factors for motor gasoline were determined in accordance with IPCC 2006. Global warming potentials were determined according to the IPCC 4th Assessment Report. For methane GWP=25 t CO2-eq/t, for nitrous oxide GWP=298 t CO2-eq/t

Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

60

C-OG4.6**(C-OG4.6) Describe your organization's efforts to reduce methane emissions from your activities.**

Almost the entire volume of methane emissions is generated as a result of oil and gas production (in the process of extracting associated petroleum gas (APG) and flaring it, during routine maintenance of equipment and in case of malfunctions), with leaks.

The main measures taken at the enterprises of the LUKOIL Group to reduce methane emissions:

1. Increasing the degree of rational use of APG and reducing the volume of its flaring;
2. Reduction of methane leaks through leaks in pipelines and fittings;
3. Improving the reliability of equipment and reducing methane emissions during accidents and repair work.

For example, in 2020, twelve projects were completed for the construction and reconstruction of facilities for the rational use of APG in the Perm Territory, the Komi Republic, and Western Siberia.

The total cost of APG projects and modernization of flare systems in 2020 amounted to RUB 4.8 billion.

At the end of 2020, methane emissions at LUKOIL Group enterprises, thanks to the measures taken, decreased by 40.7% compared to the base year 2016.

C-OG4.7**(C-OG4.7) Does your organization conduct leak detection and repair (LDAR) or use other methods to find and fix fugitive methane emissions from oil and gas production activities?**

Yes

C-OG4.7a

(C-OG4.7a) Describe the protocol through which methane leak detection and repair or other leak detection methods, are conducted for oil and gas production activities, including predominant frequency of inspections, estimates of assets covered, and methodologies employed.

The Group's organizations regularly take measures to reduce gas leaks into the atmosphere associated with scheduled repairs and equipment failures. Monitoring of the technical condition of main and interfield gas pipelines is carried out once a year during a helicopter survey using a laser locator of gas leaks. Gas pipelines bypasses / detours are carried out on a monthly basis to maintain equipment and eliminate violations of its tightness. As part of the audit, the corrosion rate and residual life, service life, specific failure rate and other parameters are assessed. In 2020, diagnostics of gas pipelines in the Perm Territory and the Volgograd Region with a total length of 45 km was carried out. Based on the results of audits and diagnostics, the action plans of the Industrial Safety Program (PPB) include work on the repair of gas pipelines and gas collection and compression facilities.

Industrial safety expertise and technical inspection of gas equipment and pipelines are annually carried out by independent certified organizations, based on the result of which a conclusion is issued on the possibility of their further operation. The results of the examinations are used to make decisions on the timely re-equipment (replacement) of equipment.

An important tool for maintaining a high level of safety in connection with gas leaks is the control of the work of service organizations. Their responsibilities include monitoring emissions using gas analyzers installed at the wellhead of each well. If the sensor gives a signal that an explosive concentration is approaching, the contractor is obliged to immediately close the wellhead and call representatives of the LUKOIL organization.

LUKOIL Group enterprises in the Exploration and Production segment are guided by the following regulatory documents in their activities to detect gas leaks: Federal Law No. 116 "On Industrial Safety of Hazardous Production Facilities", Federal Law No. 22 "On Amendments to the Federal Law" On Industrial Safety of Hazardous Production Facilities " facilities ", Federal norms and rules in the oil and gas industry, STO " LUKOIL "1.19.1-2012, Federal norms and rules" Rules for the safe operation of infield pipelines ".

C-OG4.8

(C-OG4.8) If flaring is relevant to your oil and gas production activities, describe your organization's efforts to reduce flaring, including any flaring reduction targets.

LUKOIL was the first Russian oil company to join the World Bank's Zero Routine Flaring of Associated Petroleum Gas by 2030 initiative, which was announced in 2015 to unite the efforts of governments, oil companies and public organizations to increase the useful use of APG. In 2020, the useful use of APG across the LUKOIL Group amounted to 97.8%, in the base year 2016 this value was 92.1%, thus the% of achievement of the goal was 72.2%.

In 2019, we approved a program for the rational use of APG for 2019–2021 to further reduce flaring.

At present, APG is used for injection into the reservoir in order to maintain reservoir pressure, is sent to gas processing plants and is used at gas power plants being built near the fields, which reduces the cost of electricity and oil production. Thanks to the consistently implemented program to increase the rational use of APG, the Company provides an annual increase in the level of its use.

In 2020, the useful use of APG at Russian enterprises amounted to 97.7%, at foreign ones - 99.4%.

The actual total volume of associated gas flared in 2020 was 276 million m³, which is 11% lower than in the previous year 2019.

C5. Emissions methodology

C5.1

(C5.1) Is this your first year of reporting emissions data to CDP?

No

C5.1a

(C5.1a) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?

Row 1

Has there been a structural change?

No

Name of organization(s) acquired, divested from, or merged with

<Not Applicable>

Details of structural change(s), including completion dates

<Not Applicable>

C5.1b

(C5.1b) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?

	Change(s) in methodology, boundary, and/or reporting year definition?	Details of methodology, boundary, and/or reporting year definition change(s)
Row 1	No	<Not Applicable>

C5.2

(C5.2) Provide your base year and base year emissions.

Scope 1

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

40447715

Comment

Scope 2 (location-based)

Base year start

January 1 2017

Base year end

December 31 2017

Base year emissions (metric tons CO2e)

10449514

Comment

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 1: Purchased goods and services

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 2: Capital goods

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 4: Upstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 5: Waste generated in operations

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 6: Business travel

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 7: Employee commuting

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 8: Upstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 9: Downstream transportation and distribution

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 10: Processing of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 11: Use of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 12: End of life treatment of sold products

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 13: Downstream leased assets

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 14: Franchises

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3 category 15: Investments

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (upstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

Scope 3: Other (downstream)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.3

(C5.3) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate emissions.

- IPCC Guidelines for National Greenhouse Gas Inventories, 2006
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
- The Greenhouse Gas Protocol: Scope 2 Guidance

C6. Emissions data

C6.1

(C6.1) What were your organization's gross global Scope 1 emissions in metric tons CO2e?

Reporting year

Gross global Scope 1 emissions (metric tons CO2e)

36388283

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.2

(C6.2) Describe your organization's approach to reporting Scope 2 emissions.

Row 1

Scope 2, location-based

We are reporting a Scope 2, location-based figure

Scope 2, market-based

We have no operations where we are able to access electricity supplier emission factors or residual emissions factors and are unable to report a Scope 2, market-based figure

Comment

C6.3

(C6.3) What were your organization's gross global Scope 2 emissions in metric tons CO2e?

Reporting year

Scope 2, location-based

5102576

Scope 2, market-based (if applicable)

<Not Applicable>

Start date

<Not Applicable>

End date

<Not Applicable>

Comment

C6.4

(C6.4) Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

Yes

C6.4a

(C6.4a) Provide details of the sources of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure.

Source

We have excluded the emissions of Scope 1 (stationary and mobile fuel combustion) in petroleum product supply organizations

Relevance of Scope 1 emissions from this source

Emissions are not relevant

Relevance of location-based Scope 2 emissions from this source

No emissions excluded

Relevance of market-based Scope 2 emissions from this source (if applicable)

Please select

Explain why this source is excluded

Scope 1 sources were excluded as their emissions are extremely insignificant (less than 0.1% of the total Scope 1 emissions). The verification confirmed the validity of excluding GHG emission sources

Estimated percentage of total Scope 1+2 emissions this excluded source represents

0

Explain how you estimated the percentage of emissions this excluded source represents

Emissions were calculated for the oil products supply organizations of PJSC Lukoil Scope 1 and Scope 2. The resulting value was divided by the total Scope 1 emissions.

C6.5

(C6.5) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

Purchased goods and services

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The share of GHG emissions associated with the purchase of goods and services is insignificant and is less than 0,5% of emissions down the supply chain (from the use of sold products and transportation down the supply chain)

Capital goods

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

If we consider the total accumulated investment shown in our balance sheet at the end of the year as investments in capital goods, the GHG emissions associated with them can be estimated at approximately 15 Mt CO2e. This should be divided by at least 15 years of expected life, which gives 1 Mt CO2e per year. This is not a very large number (0.3% of emissions down the supply chain) and is not worth the time and effort required to gather detailed information and perform careful calculations to obtain a more accurate number for this emission category.

Fuel-and-energy-related activities (not included in Scope 1 or 2)

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The share of GHG emissions associated with fuels and energy is negligible and amounts to less than 1% of the total emissions associated with the use of products sold and transportation down the supply chain.

Upstream transportation and distribution

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The share of GHG emissions associated with transportation up the supply chain is insignificant and is less than 1% of emissions down the supply chain (from the use of products sold and transportation down the supply chain)

Waste generated in operations

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Since the LUKOIL Group and its enterprises around the world do not generate a significant amount of waste to be processed or used, the GHG emissions associated with waste are not taken into account.

Business travel

Evaluation status

Not evaluated

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

We do not currently calculate GHG emissions from business trips, but we do not exclude such a possibility in the future.

Employee commuting

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The LUKOIL Group employs an average of 100.8 thousand people. Average individual GHG emissions are estimated at about 5 t CO2e per year. Suburban transportation accounts for only a part of these emissions. This means that travel-related emissions are hardly more than 0.5 Mt CO2e per year. This does not exceed 0.15% of emissions down the supply chain.

Upstream leased assets

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The share of GHG emissions associated with leased assets is insignificant and is less than 1% of emissions down the supply chain (from the use of sold products and transportation down the supply chain)

Downstream transportation and distribution

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

4671517

Emissions calculation methodology

Other, please specify (The calculations were performed in accordance with the GHG Protocol. In this category we accounted for emissions associated with transportation of production resources from suppliers to the gates of LUKOIL Group organizations.)

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Emissions calculations were made in accordance with the GHG Protocol. In this category, we took into account emissions associated with the transportation of production resources (oil, oil products, gas). Emissions from rail, water and pipeline transport were included. The calculation formula included data on the amount of product, the distance and the emission factor for the corresponding transport.

Processing of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Most of the LUKOIL Group's products are fuels that disappear when used (burned)

Use of sold products

Evaluation status

Relevant, calculated

Emissions in reporting year (metric tons CO2e)

346869871

Emissions calculation methodology

Other, please specify (Emissions calculations were made in accordance with the GHG Protocol and IPCC 2006.)

Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

Please explain

Emissions calculations were made in accordance with the GHG Protocol and IPCC 2006. The calculation took into account that all oil, oil products and gas sold are burned by consumers. Sales of own products were included in the emissions calculations. Emissions were calculated as the sold product amount multiplied by the emission factor.

End of life treatment of sold products

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Most of the products supplied by LUKOIL Group are fuels that disappear when used (burned)

Downstream leased assets

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The share of GHG emissions associated with Downstream leased assets is insignificant and is less than 1% of emissions down the supply chain (from the use of sold products and transportation down the supply chain)

Franchises

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

The share of GHG emissions associated with franchises is insignificant and is less than 0,5% of emissions down the supply chain (from the use of sold products and transportation down the supply chain)

Investments

Evaluation status

Not relevant, explanation provided

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Equipment purchases and general construction works are not a major source of greenhouse gas emissions in the LUKOIL Group.

Other (upstream)

Evaluation status

Please select

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

Other (downstream)

Evaluation status

Please select

Emissions in reporting year (metric tons CO2e)

<Not Applicable>

Emissions calculation methodology

<Not Applicable>

Percentage of emissions calculated using data obtained from suppliers or value chain partners

<Not Applicable>

Please explain

C6.7

(C6.7) Are carbon dioxide emissions from biogenic carbon relevant to your organization?

No

C6.10

(C6.10) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.

Intensity figure

0.0000044

Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

41490859

Metric denominator

unit total revenue

Metric denominator: Unit total

9435000000000

Scope 2 figure used

Location-based

% change from previous year

43

Direction of change

Decreased

Reason for change

The decrease in intensity is explained by a 67 % increase in revenue and a 5 % decrease in emissions .

C-OG6.12

(C-OG6.12) Provide the intensity figures for Scope 1 emissions (metric tons CO2e) per unit of hydrocarbon category.

Unit of hydrocarbon category (denominator)

Other, please specify (thousand barrels of produced hydrocarbons (oil and gas))

Metric tons CO2e from hydrocarbon category per unit specified

19.3

% change from previous year

11

Direction of change

Decreased

Reason for change

The decrease in specific emissions was due to the implementation of measures to improve energy efficiency and optimization of equipment operation

Comment

Unit of hydrocarbon category (denominator)

Other, please specify (tons of refined feedstock in refining and petrochemicals)

Metric tons CO2e from hydrocarbon category per unit specified

0.28

% change from previous year

10

Direction of change

Decreased

Reason for change

The decrease in specific emissions was due to the implementation of measures to improve energy efficiency and optimization of equipment operation

Comment

C-OG6.13

(C-OG6.13) Report your methane emissions as percentages of natural gas and hydrocarbon production or throughput.

Oil and gas business division

Upstream

Estimated total methane emitted expressed as % of natural gas production or throughput at given division

0.2

Estimated total methane emitted expressed as % of total hydrocarbon production or throughput at given division

0.05

Comment

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization break down its Scope 1 emissions by greenhouse gas type?

Yes

C7.1a

(C7.1a) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used greenhouse warming potential (GWP).

Greenhouse gas	Scope 1 emissions (metric tons of CO2e)	GWP Reference
CO2	35160240	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	1193390	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	34653	IPCC Fourth Assessment Report (AR4 - 100 year)

C-OG7.1b

(C-OG7.1b) Break down your total gross global Scope 1 emissions from oil and gas value chain production activities by greenhouse gas type.

Emissions category

Combustion (excluding flaring)

Value chain

Upstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

8453647

Gross Scope 1 methane emissions (metric tons CH4)

151

Total gross Scope 1 emissions (metric tons CO2e)

8474111

Comment

Oil and gas production. Stationary combustion of fuel for energy and technological purposes, mobile combustion and incineration of waste.

Emissions category

Flaring

Value chain

Upstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

1214006

Gross Scope 1 methane emissions (metric tons CH4)

7284

Total gross Scope 1 emissions (metric tons CO2e)

1400266

Comment

Oil and gas production

Emissions category

Venting

Fugitives

Value chain

Upstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

6606

Gross Scope 1 methane emissions (metric tons CH4)

38204

Total gross Scope 1 emissions (metric tons CO2e)

961710

Comment

Oil and gas production

Emissions category

Combustion (excluding flaring)

Value chain

Midstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

92925

Gross Scope 1 methane emissions (metric tons CH4)

1973

Total gross Scope 1 emissions (metric tons CO2e)

202511

Comment

Transportation. Stationary combustion of fuel for energy and technological purposes, mobile combustion and incineration of waste.

Emissions category

Combustion (excluding flaring)

Value chain

Downstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

11841116

Gross Scope 1 methane emissions (metric tons CH4)

70

Total gross Scope 1 emissions (metric tons CO2e)

11853710

Comment

Oil and gas processing and petrochemistry, oil production. Stationary combustion of fuel for energy and technological purposes, mobile combustion and incineration of waste.

Emissions category

Flaring

Value chain

Downstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

172240

Gross Scope 1 methane emissions (metric tons CH4)

1033

Total gross Scope 1 emissions (metric tons CO2e)

198666

Comment

Oil and gas processing and petrochemistry, oil production

Emissions category

Fugitives

Process (feedstock) emissions

Value chain

Downstream

Product

Unable to disaggregate

Gross Scope 1 CO2 emissions (metric tons CO2)

4041239

Gross Scope 1 methane emissions (metric tons CH4)

667

Total gross Scope 1 emissions (metric tons CO2e)

4057918

Comment

Oil and gas processing and petrochemistry, oil production

C7.2

(C7.2) Break down your total gross global Scope 1 emissions by country/region.

Country/Region	Scope 1 emissions (metric tons CO2e)
Russian Federation	31786087
Italy	1891738
Bulgaria	1633820
Romania	682494
Uzbekistan	394144

C7.3

(C7.3) Indicate which gross global Scope 1 emissions breakdowns you are able to provide.

By business division

By activity

C7.3a

(C7.3a) Break down your total gross global Scope 1 emissions by business division.

Business division	Scope 1 emissions (metric ton CO2e)
Oil and gas production in Russia	10441943
Oil and gas production abroad	394144
Oil refining in Russia	11161112
Oil refining abroad	4208052
Petrochemistry	736069
Transportation	202511
Power Generation	9239391
Others	5061

C7.3c

(C7.3c) Break down your total gross global Scope 1 emissions by business activity.

Activity	Scope 1 emissions (metric tons CO2e)
Stationary fuel combustion	29459972
Mobile fuel combustion	250240
Industrial processes	6326746
Leakages	351325

C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4

(C-CE7.4/C-CH7.4/C-CO7.4/C-EU7.4/C-MM7.4/C-OG7.4/C-ST7.4/C-TO7.4/C-TS7.4) Break down your organization's total gross global Scope 1 emissions by sector production activity in metric tons CO2e.

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	10836087	<Not Applicable>	Oil and gas production
Oil and gas production activities (midstream)	202511	<Not Applicable>	Transportation
Oil and gas production activities (downstream)	16110294	<Not Applicable>	Oil and gas refining and petrochemicals
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.5

(C7.5) Break down your total gross global Scope 2 emissions by country/region.

Country/Region	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Russian Federation	4474365	
Italy	231049	
Georgia	10564	
Bulgaria	194284	
Romania	37813	
Serbia	7145	
Azerbaijan	877	
Belgium	2164	
Netherlands	5576	
Croatia	610	
Turkey	530	
Finland	1653	
Uzbekistan	127227	
Republic of Moldova	3318	
Montenegro	555	
North Macedonia	2275	
Belarus	2571	

C7.6

(C7.6) Indicate which gross global Scope 2 emissions breakdowns you are able to provide.

By business division

By activity

C7.6a

(C7.6a) Break down your total gross global Scope 2 emissions by business division.

Business division	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Oil and gas production in Russia	3177331	
Oil and gas production abroad	127227	
Oil refining in Russia	769303	
Oil refining abroad	440548	
Oil products supply in Russia	97800	
Oil products supply abroad	60436	
Petrochemistry	211676	
Transportation	25564	
Power Generation	182332	
Others	10359	

C7.6c

(C7.6c) Break down your total gross global Scope 2 emissions by business activity.

Activity	Scope 2, location-based (metric tons CO2e)	Scope 2, market-based (metric tons CO2e)
Purchasing electricity	4442896	
Purchasing heat and steam	659680	
Purchasing cooling		

C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7

(C-CE7.7/C-CH7.7/C-CO7.7/C-MM7.7/C-OG7.7/C-ST7.7/C-TO7.7/C-TS7.7) Break down your organization's total gross global Scope 2 emissions by sector production activity in metric tons CO2e.

	Scope 2, location-based, metric tons CO2e	Scope 2, market-based (if applicable), metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	3304558		Oil and gas production
Oil and gas production activities (midstream)	25564		Transportation
Oil and gas production activities (downstream)	1590122		Oil and gas refining and petrochemicals, oil products supply
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

C7.9

(C7.9) How do your gross global emissions (Scope 1 and 2 combined) for the reporting year compare to those of the previous reporting year?

Decreased

C7.9a

(C7.9a) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in renewable energy consumption		<Not Applicable>		
Other emissions reduction activities	2160633	Increased	4.95	The main factor influencing the reduction of Scope 1 and Scope 2 emissions are measures to improve energy efficiency, more rational consumption of fuel resources, and optimization of equipment operation. In 2020, Scope 1+2 emissions were 43651492 t CO2-eq, and in 2021 they were 41490859 t CO2-eq. The reduction was $(41490859/43651492-1)*100=4.95\%$.
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output		<Not Applicable>		
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

C7.9b

(C7.9b) Are your emissions performance calculations in C7.9 and C7.9a based on a location-based Scope 2 emissions figure or a market-based Scope 2 emissions figure?

Location-based

C8. Energy

C8.1

(C8.1) What percentage of your total operational spend in the reporting year was on energy?

More than 10% but less than or equal to 15%

C8.2

(C8.2) Select which energy-related activities your organization has undertaken.

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Yes
Consumption of purchased or acquired electricity	Yes
Consumption of purchased or acquired heat	Yes
Consumption of purchased or acquired steam	Yes
Consumption of purchased or acquired cooling	No
Generation of electricity, heat, steam, or cooling	Yes

C8.2a

(C8.2a) Report your organization's energy consumption totals (excluding feedstocks) in MWh.

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total (renewable and non-renewable) MWh
Consumption of fuel (excluding feedstock)	LHV (lower heating value)	0	141532960	141532960
Consumption of purchased or acquired electricity	<Not Applicable>	0	13288020	13288020
Consumption of purchased or acquired heat	<Not Applicable>	0	772415	772415
Consumption of purchased or acquired steam	<Not Applicable>	0	1801770	1801770
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	12733	<Not Applicable>	12733
Total energy consumption	<Not Applicable>	12733	157395165	157407898

C8.2b

(C8.2b) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Yes
Consumption of fuel for the generation of heat	Yes
Consumption of fuel for the generation of steam	Yes
Consumption of fuel for the generation of cooling	No
Consumption of fuel for co-generation or tri-generation	Yes

C8.2c

(C8.2c) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

Sustainable biomass

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other biomass

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Other renewable fuels (e.g. renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

0

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

0

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

Coal

Heating value

LHV

Total fuel MWh consumed by the organization

724233

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

0

MWh fuel consumed for self-generation of steam

724233

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

0

Comment

The consumption of coke and coal in the organizations of PJSC Lukoil belongs to this category

Oil

Heating value

LHV

Total fuel MWh consumed by the organization

2205301

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

1561849

MWh fuel consumed for self-generation of steam

566109

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

77343

Comment

This category includes the consumption of oil and fuel oil

Gas

Heating value

LHV

Total fuel MWh consumed by the organization

137738117

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

5337897

MWh fuel consumed for self-generation of steam

40396646

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

44003574

Comment

The category "gas" includes all gaseous fuels used in the organizations of PJSC Lukoil

Other non-renewable fuels (e.g. non-renewable hydrogen)

Heating value

LHV

Total fuel MWh consumed by the organization

865310

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

580688

MWh fuel consumed for self-generation of steam

284315

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

307

Comment

This category includes gasoline, diesel fuel, propane-butane automobile, motor fuel for marine diesel engines

Total fuel

Heating value

LHV

Total fuel MWh consumed by the organization

141532961

MWh fuel consumed for self-generation of electricity

0

MWh fuel consumed for self-generation of heat

55480434

MWh fuel consumed for self-generation of steam

41971303

MWh fuel consumed for self-generation of cooling

<Not Applicable>

MWh fuel consumed for self- cogeneration or self-trigeneration

44081224

Comment

C8.2d

(C8.2d) Provide details on the electricity, heat, steam, and cooling your organization has generated and consumed in the reporting year.

	Total Gross generation (MWh)	Generation that is consumed by the organization (MWh)	Gross generation from renewable sources (MWh)	Generation from renewable sources that is consumed by the organization (MWh)
Electricity	22768494	7231277	1025128	12733
Heat	44185803	33512764		
Steam				
Cooling				

C8.2g

(C8.2g) Provide a breakdown of your non-fuel energy consumption by country.

Country/area

Azerbaijan

Consumption of electricity (MWh)

2285

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

2285

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Belgium

Consumption of electricity (MWh)

13367

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

13367

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Bulgaria

Consumption of electricity (MWh)

736536

Consumption of heat, steam, and cooling (MWh)

1635878

Total non-fuel energy consumption (MWh) [Auto-calculated]

2372414

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Croatia

Consumption of electricity (MWh)

2688

Consumption of heat, steam, and cooling (MWh)

34

Total non-fuel energy consumption (MWh) [Auto-calculated]

2722

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Finland

Consumption of electricity (MWh)

17346

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

17346

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Georgia

Consumption of electricity (MWh)

2173

Consumption of heat, steam, and cooling (MWh)

40090

Total non-fuel energy consumption (MWh) [Auto-calculated]

42263

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Italy

Consumption of electricity (MWh)

615163

Consumption of heat, steam, and cooling (MWh)

2343241

Total non-fuel energy consumption (MWh) [Auto-calculated]

2958404

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Netherlands

Consumption of electricity (MWh)

5576

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

5576

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Romania

Consumption of electricity (MWh)

274224

Consumption of heat, steam, and cooling (MWh)

790362

Total non-fuel energy consumption (MWh) [Auto-calculated]

1064586

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Russian Federation

Consumption of electricity (MWh)

19094016

Consumption of heat, steam, and cooling (MWh)

28798153

Total non-fuel energy consumption (MWh) [Auto-calculated]

47892169

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Serbia

Consumption of electricity (MWh)

9050

Consumption of heat, steam, and cooling (MWh)

452

Total non-fuel energy consumption (MWh) [Auto-calculated]

9502

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Turkey

Consumption of electricity (MWh)

1413

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

1413

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Uzbekistan

Consumption of electricity (MWh)

272434

Consumption of heat, steam, and cooling (MWh)

1047759

Total non-fuel energy consumption (MWh) [Auto-calculated]

1320193

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Republic of Moldova

Consumption of electricity (MWh)

8316

Consumption of heat, steam, and cooling (MWh)

3269

Total non-fuel energy consumption (MWh) [Auto-calculated]

11585

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Belarus

Consumption of electricity (MWh)

8080

Consumption of heat, steam, and cooling (MWh)

827

Total non-fuel energy consumption (MWh) [Auto-calculated]

8907

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

North Macedonia

Consumption of electricity (MWh)

4040

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

4040

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

Country/area

Montenegro

Consumption of electricity (MWh)

1179

Consumption of heat, steam, and cooling (MWh)

0

Total non-fuel energy consumption (MWh) [Auto-calculated]

1179

Is this consumption excluded from your RE100 commitment?

<Not Applicable>

C9. Additional metrics

C9.1

(C9.1) Provide any additional climate-related metrics relevant to your business.

Description

Other, please specify (Air pollution emissions)

Metric value

425

Metric numerator

thousand tonnes

Metric denominator (intensity metric only)

% change from previous year

7.59

Direction of change

Increased

Please explain

The increase in pollutant emissions is due to an increase in hydrocarbon production due to an increase in the quota under the OPEC+ agreement.

Description

Other, please specify (Water consumption for own needs (Russian organisations))

Metric value

369

Metric numerator

million cubic meters

Metric denominator (intensity metric only)**% change from previous year**

12.16

Direction of change

Increased

Please explain

The increase in water consumption for own needs in 2021 is due to an increase in condensation power generation at the Kuban CHPP due to an increase in demand and electricity production (water is used mainly for cooling generating equipment).

Description

Other, please specify (Water consumption for own needs (Foreign organisations))

Metric value

219

Metric numerator

million cubic meters

Metric denominator (intensity metric only)**% change from previous year**

2.05

Direction of change

Increased

Please explain

The increase in water consumption for own needs is associated with an increase in production volumes in 2021.

Description

Other, please specify (Water disposal (Russian organizations))

Metric value

325.3

Metric numerator

million cubic meters

Metric denominator (intensity metric only)**% change from previous year**

9.34

Direction of change

Increased

Please explain

The increase in water consumption for own needs is associated with an increase in production volumes in 2021.

Description

Other, please specify (Water disposal (Foreign organizations))

Metric value

204.3

Metric numerator

million cubic meters

Metric denominator (intensity metric only)**% change from previous year**

8.79

Direction of change

Increased

Please explain

The increase in water consumption for own needs is associated with an increase in production volumes in 2021.

C-OG9.2a

(C-OG9.2a) Disclose your net liquid and gas hydrocarbon production (total of subsidiaries and equity-accounted entities).

	In-year net production	Comment
Crude oil and condensate, million barrels	561.1	
Natural gas liquids, million barrels	4.28	Data for 2021 within the limits of greenhouse gas reporting.
Oil sands, million barrels (includes bitumen and synthetic crude)	0	
Natural gas, billion cubic feet	1023	

C-OG9.2b

(C-OG9.2b) Explain which listing requirements or other methodologies you use to report reserves data. If your organization cannot provide data due to legal restrictions on reporting reserves figures in certain countries, please explain this.

The Company reports its reserves according to the SEC (U.S. Securities and Exchange Commission) standards. The independent audit of the Company's proved reserves was performed by Miller and Lents US consulting firm based on the commercial life-of-field approach.

C-OG9.2c

(C-OG9.2c) Disclose your estimated total net reserves and resource base (million boe), including the total associated with subsidiaries and equity-accounted entities.

	Estimated total net proved + probable reserves (2P) (million BOE)	Estimated total net proved + probable + possible reserves (3P) (million BOE)	Estimated net total resource base (million BOE)	Comment
Row 1	21325	24176	36289	

C-OG9.2d

(C-OG9.2d) Provide an indicative percentage split for 2P, 3P reserves, and total resource base by hydrocarbon categories.

	Net proved + probable reserves (2P) (%)	Net proved + probable + possible reserves (3P) (%)	Net total resource base (%)	Comment
Crude oil/ condensate/ natural gas liquids	76	77	68	
Natural gas	24	23	32	Natural and associated gas
Oil sands (includes bitumen and synthetic crude)	0	0	0	

C-OG9.2e

(C-OG9.2e) Provide an indicative percentage split for production, 1P, 2P, 3P reserves, and total resource base by development types.

Development type

Onshore

In-year net production (%)

85

Net proved reserves (1P) (%)

86

Net proved + probable reserves (2P) (%)

86

Net proved + probable + possible reserves (3P) (%)

86

Net total resource base (%)

82

Comment

Data on stocks are given in the boundaries used for international financial reporting (IFRS), that is, the principle of financial management is used.

Development type

Shallow-water

In-year net production (%)

9

Net proved reserves (1P) (%)

6

Net proved + probable reserves (2P) (%)

8

Net proved + probable + possible reserves (3P) (%)

8

Net total resource base (%)

13

Comment

Data on stocks are given in the boundaries used for international financial reporting (IFRS), that is, the principle of financial management is used.

Development type

Deepwater

In-year net production (%)

1

Net proved reserves (1P) (%)

1

Net proved + probable reserves (2P) (%)

1

Net proved + probable + possible reserves (3P) (%)

1

Net total resource base (%)

2

Comment

Data on stocks are given in the boundaries used for international financial reporting (IFRS), that is, the principle of financial management is used.

Development type

Oil sand/extra heavy oil

In-year net production (%)

5

Net proved reserves (1P) (%)

7

Net proved + probable reserves (2P) (%)

5

Net proved + probable + possible reserves (3P) (%)

5

Net total resource base (%)

3

Comment

Data on stocks are given in the boundaries used for international financial reporting (IFRS), that is, the principle of financial management is used.

C-OG9.3a

(C-OG9.3a) Disclose your total refinery throughput capacity in the reporting year in thousand barrels per day.

	Total refinery throughput capacity (Thousand barrels per day)
Capacity	1525.4

C-OG9.3b

(C-OG9.3b) Disclose feedstocks processed in the reporting year in million barrels per year.

	Throughput (Million barrels)	Comment
Oil	461.5	Primary refining of crude oil at own refineries
Other feedstocks	27	Petroleum, wet, natural gas
Total	488.5	

C-OG9.3c

(C-OG9.3c) Are you able to break down your refinery products and net production?

Yes

C-OG9.3d

(C-OG9.3d) Disclose your refinery products and net production in the reporting year in million barrels per year.

Product produced	Refinery net production (Million barrels) *not including products used/consumed on site
Gasolines	86.78
Diesel fuels	189.5
Fuel oils	32.41
Lubricants	6.27
Other, please specify (straight-run gasoline)	34.19
Other, please specify (Vacuum gasoil)	7.23
Asphalt and tar	7.92
Petroleum coke	8.77
Other, please specify (marine fuel)	27.93
Other, please specify (Gas Products)	5.75
Other, please specify (Petrochemicals)	3.01
Other, please specify (Othep products)	5.91

C-OG9.3e

(C-OG9.3e) Please disclose your chemicals production in the reporting year in thousand metric tons.

Product	Production, Thousand metric tons	Capacity, Thousand metric tons
Other, please specify (Polymers (polyethylene, polypropylene))	455	501
Other, please specify (Organic synthesis products (acrylic acid nitrile, acetonitrile, sodium cyanide, vinyl acetate, cumene))	439	567

C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6

(C-CE9.6/C-CG9.6/C-CH9.6/C-CN9.6/C-CO9.6/C-EU9.6/C-MM9.6/C-OG9.6/C-RE9.6/C-ST9.6/C-TO9.6/C-TS9.6) Does your organization invest in research and development (R&D) of low-carbon products or services related to your sector activities?

	Investment in low-carbon R&D	Comment
Row 1	Yes	PJSC LUKOIL is working towards the installation of filtration and capture technologies at its refineries and the subsequent disposal of CO2. LUKOIL is also developing green energy, already having power plants powered by RES with a capacity of 416 megawatts, a project has been implemented to capture and liquefy CO2 at the Korobkovsky Gas Processing Plant to reduce the viscosity of the oil, and the same project is also planned at a refinery in Perm. LUKOIL Group signed cooperation agreements with a number of companies on projects aimed at expanding the use of renewable energy and the production of low-carbon energy products

C-CO9.6a/C-EU9.6a/C-OG9.6a

(C-CO9.6a/C-EU9.6a/C-OG9.6a) Provide details of your organization's investments in low-carbon R&D for your sector activities over the last three years.

Technology area	Stage of development in the reporting year	Average % of total R&D investment over the last 3 years	R&D investment figure in the reporting year (optional)	Comment
Enhanced Oil Recovery (EOR) techniques	Applied research and development	≤20%		Improvement of technology for development of high-viscosity oil reservoirs using CO2. R&D includes the development of technology for combined injection of carbon dioxide (CO2) and coolants and to improve oil recovery. Expected results: Increased oil recovery of the field, reduced field development time while reducing the negative environmental impact.
Enhanced Oil Recovery (EOR) techniques	Applied research and development	≤20%		R&D includes modernization of a multifunctional reagent for enhanced oil recovery. Expected results: Increased oil recovery in the field, reduced field development period while reducing the negative environmental impact.
Enhanced Oil Recovery (EOR) techniques	Applied research and development	≤20%		Development of a technology to improve oil recovery in fields of high-viscosity oils using aquathermolysis catalysts. Expected results: Increase of oil recovery in the field, reduction of the field development period while reducing the negative impact on the environment.
Please select	<Not Applicable>	Please select		

C-OG9.7

(C-OG9.7) Disclose the breakeven price (US\$/BOE) required for cash neutrality during the reporting year, i.e. where cash flow from operations covers CAPEX and dividends paid/ share buybacks.

C10. Verification

C10.1

(C10.1) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Third-party verification or assurance process in place
Scope 3	Third-party verification or assurance process in place

C10.1a

(C10.1a) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Page/ section reference

4

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1b

(C10.1b) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.

Scope 2 approach

Scope 2 location-based

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Page/ section reference

4

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.1c

(C10.1c) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

Scope 3 category

Scope 3: Downstream transportation and distribution

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Page/section reference

5

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

Scope 3 category

Scope 3: Use of sold products

Verification or assurance cycle in place

Annual process

Status in the current reporting year

Complete

Type of verification or assurance

Limited assurance

Attach the statement

Page/section reference

5

Relevant standard

ISAE 3410

Proportion of reported emissions verified (%)

100

C10.2

(C10.2) Do you verify any climate-related information reported in your CDP disclosure other than the emissions figures reported in C6.1, C6.3, and C6.5?

Yes

C10.2a

(C10.2a) Which data points within your CDP disclosure have been verified, and which verification standards were used?

Disclosure module verification relates to	Data verified	Verification standard	Please explain
C7. Emissions breakdown	Other, please specify (Breakdown of global Scope 1 and Scope 2 emissions by business divisions.)	ISAE 3410	We decided to verify the distribution of GHG emissions for the LUCOIL Group as a whole, as well as separately for its business divisions. This allows us to identify the most carbon-intensive business areas, make strategic decisions to reduce their carbon footprint and analyze the effectiveness of the measures taken.

C11. Carbon pricing

C11.1

(C11.1) Are any of your operations or activities regulated by a carbon pricing system (i.e. ETS, Cap & Trade or Carbon Tax)?

Yes

C11.1a

(C11.1a) Select the carbon pricing regulation(s) which impacts your operations.
EU ETS

C11.1b

(C11.1b) Complete the following table for each of the emissions trading schemes you are regulated by.

EU ETS

% of Scope 1 emissions covered by the ETS
11

% of Scope 2 emissions covered by the ETS
0

Period start date
January 1 2021

Period end date
December 31 2021

Allowances allocated
3288319

Allowances purchased
3607676

Verified Scope 1 emissions in metric tons CO2e
3997659

Verified Scope 2 emissions in metric tons CO2e
0

Details of ownership
Facilities we own and operate

Comment
The European emissions trading system applies to our refineries located in Italy, Bulgaria and Romania.

C11.1d

(C11.1d) What is your strategy for complying with the systems you are regulated by or anticipate being regulated by?

The main strategy in relation to compliance with the European emissions trading system is to carry out an inventory and verification of GHG emissions, in the adoption of technical and organizational measures that contribute to the reduction of GHG emissions. The main measures are: increasing the efficiency of the use of raw materials and materials, energy saving, the use of renewable energy sources. For example, the company is implementing several projects in the field of solar energy. The largest are solar power plants with a capacity of 9 MW in Romania and 1.25 MW in Bulgaria.

C11.2

(C11.2) Has your organization originated or purchased any project-based carbon credits within the reporting period?
No

C11.3

(C11.3) Does your organization use an internal price on carbon?
Yes

C11.3a

(C11.3a) Provide details of how your organization uses an internal price on carbon.

Objective for implementing an internal carbon price

Navigate GHG regulations
Stakeholder expectations
Change internal behavior
Drive energy efficiency
Drive low-carbon investment
Stress test investments
Identify and seize low-carbon opportunities

GHG Scope

Scope 1
Scope 2

Application

The internal carbon price is used to evaluate investment projects and approve capital expenditures for the period up to 2031.

Actual price(s) used (Currency /metric ton)

6711

Variance of price(s) used

We use differentiated prices depending on the region of presence and year.

Type of internal carbon price

Shadow price

Impact & implication

The introduction of an internal carbon price led to the abandonment of a number of investment projects that imply a significant increase in greenhouse gas emissions from the company's activities. In addition, the domestic price of CO2 contributes to an increase in investment in projects aimed at reducing greenhouse gas emissions and achieving the set climate targets.

C12. Engagement

C12.1

(C12.1) Do you engage with your value chain on climate-related issues?

Yes, our customers/clients
Yes, other partners in the value chain

C12.1b

(C12.1b) Give details of your climate-related engagement strategy with your customers.

Type of engagement & Details of engagement

Collaboration & innovation	Other, please specify (Reorienting our customers toward less carbon-intensive energy sources)
----------------------------	---

% of customers by number

87

% of customer - related Scope 3 emissions as reported in C6.5

4.82

Please explain the rationale for selecting this group of customers and scope of engagement

GHG emissions from the use of products we sell are the most significant in our company's carbon footprint. In this regard, helping customers shift their preferences towards using fuels with lower GHG emissions is one of the most effective ways of reducing our company's carbon footprint. LUKOIL Group organizations produce a wide range of products used in various industries as well as by vehicle owners in Russia, Europe, Asia and America. In particular, in order to expand the range of fuels and promote more climate-friendly motor fuels, we carry out projects to sell liquefied petroleum gas (LPG), compressed natural gas, as well as innovative gasoline ECTO and ECTO 100, which have lower GHG emissions during their combustion as compared to conventional motor fuels. To promote less carbon-intensive motor fuels among its customers, LUKOIL regularly holds promotional events and informs about the characteristics and advantages of the fuel in the mass media, on the company's website. We have made certain progress in this area and intend to continue increasing the volume of interaction. At the end of 2021, we sold 550 157 tons of LPG for a total of 33 444,1 mln rubles. In 2021 gas was available at 1 066 LUKOIL Group filling stations, and ECTO and ECTO 100 gasoline was available at 2 200 filling stations in Russia. Sales of ECTO and ECTO 100 brands gasoline in Russia and abroad rose by 11% to 5 055 tonnes in 2021.

Impact of engagement, including measures of success

In view of the development of a comprehensive approach to LPG sales at filling stations (including the involvement of co-investors), a number of projects for 2022 were postponed to subsequent periods. NGOs will actually implement 1 project in 2022 (installation of LPG module at filling station №02098 in Ufa) with the planned increase in sales of 1 300 tons per year. In 2023 the Company will continue to develop LPG sales through the existing retail network. Our priority will be the implementation of projects in partnership with professional LPG market players and the provision of free space at our filling stations for partners to install gas modules. Currently, the projects are at different stages of preparation, with an estimated capacity of up to 21 sites, with an annual increase of up to 13,500 tons. Sales of 5 054,9 thousand tons of EKTO and EKTO100 gasoline in 2021 prevented GHG emissions by 641 007 tons of CO2-eq. The sale of 550 157 tons of LPG in 2021 prevented GHG emissions by 161 182 tons of CO2-eq. The total amount of prevented emissions was 802 189 t CO2-eq.

C12.1d

(C12.1d) Give details of your climate-related engagement strategy with other partners in the value chain.

One of our areas of interaction with our supply chain partners is informing them about LUKOIL Group's activities related to climate change and training. In 2021, as part of the Year of Service, we conducted training programs for managers and station employees aimed at improving the quality of interaction with customers, and e-learning courses for filling station personnel. The training and motivational programs include all the employees of filling stations. An internal rating is compiled for filling stations, area managers, regional managers and the Group's organisations in terms of "Level of Service". As a result of the implemented improvements the number of complaints to the hotline decreased by 42%, the share of negative assessments in the LUKOIL filling stations mobile application halved (down to 1,3%), and the average score at the end of 2021 was 4,95 out of five possible points. Every autumn, a seminar-meeting of the heads of environmental services of LUKOIL Group organizations is held every year as part of a training seminar on climate change, adaptation to climate change, and regulation of GHG emissions with project institutes performing project work in the Company's interests. In 2021 such a seminar was held in the online format in October. The next seminar is scheduled for October 2022 in Volgograd.

C12.2

(C12.2) Do your suppliers have to meet climate-related requirements as part of your organization's purchasing process?

No, but we plan to introduce climate-related requirements within the next two years

C12.3

(C12.3) Does your organization engage in activities that could either directly or indirectly influence policy, law, or regulation that may impact the climate?

Row 1

Direct or indirect engagement that could influence policy, law, or regulation that may impact the climate

Yes, we engage indirectly through trade associations

Does your organization have a public commitment or position statement to conduct your engagement activities in line with the goals of the Paris Agreement?

Yes

Attach commitment or position statement(s)

LUKOIL Group Sustainability Report 2021(p. 15) "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." "In 2021, the Board of Directors of PJSC LUKOIL approved the Program of Strategic Development of the LUKOIL Group for 2022-2031." "The strategy has been formed taking into account the increased requirements for the climate responsibility of energy companies. The Group's climate strategy is integrated into the Strategic Development Program."

Describe the process(es) your organization has in place to ensure that your engagement activities are consistent with your overall climate change strategy

1. PJSC LUKOIL's Decarbonization and Climate Change Adaptation Working Group, chaired by PJSC LUKOIL's President, was established and operates on a quarterly basis in 2020. 2. The target to reduce controlled GHG emissions (Scope1+ Scope2) by 20% vs. the 2017 level was set.3. PJSC LUKOIL's Management Committee approved LUKOIL Group's Technical Policy on Energy Efficiency and Greenhouse Gas Emissions Reduction in Russia. 4. The Company created a new business process called Decarbonization and Adaptation to Climate Change; 5. The Concept for Financial Assessment of Climate Risks and the Decarbonization Program for the LUKOIL Group for 2022-2024 were developed.

Primary reason for not engaging in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

Explain why your organization does not engage in activities that could directly or indirectly influence policy, law, or regulation that may impact the climate

<Not Applicable>

C12.3b

(C12.3b) Provide details of the trade associations your organization engages with which are likely to take a position on any policy, law or regulation that may impact the climate.

Trade association

Other, please specify (Membership in the Russian Union of Industrialists and Entrepreneurs (RSPP))

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

Company representatives take part in the work of the RUIE Committee on Climate Policy and Carbon Regulation. The Company's representatives take part in the work of the Russian Union of Industrialists and Entrepreneurs (RUIE) Committee on Energy Policy and Energy Efficiency. As part of its interaction with the Committee on Climate Policy, LUKOIL is actively involved in the formation of the best industry practices of target-setting, assessment of industry risks and opportunities, as well as implementation of projects aimed at decarbonization of the oil business in Russia. In 2021, LUKOIL was among the industry leaders in formation of the carbon management system and expansion of non-financial reporting, as well as achievement of climate targets. The Company's representatives are directly involved in formulating proposals on the key issues on the agenda of the Conference of the Parties to the UN Framework Convention on Climate Change, which will be held from November 6 to 18, 2022 in Sharm el-Sheikh

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Membership in the Chamber of Commerce and Industry of the Russian Federation (CCI RF))

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

Joint meetings, participation in roundtables on the problems of reducing greenhouse gas emissions as part of the work of the Committee on Energy Strategy and Development of the Fuel and Energy Complex. Development of common approaches to the voluntary and mandatory state system of accounting and regulation (rationing) of greenhouse gas emissions. Development of targets for reducing greenhouse gas emissions.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Membership in the Association "Council of Power Producers and Strategic Investors in the Electric Power Industry")

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

Joint meetings, participation in roundtables on energy development and energy transition

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

Trade association

Other, please specify (Membership in the Union of Oil and Gas Producers of Russia)

Is your organization's position on climate change consistent with theirs?

Consistent

Has your organization influenced, or is your organization attempting to influence their position?

We publicly promote their current position

State the trade association's position on climate change, explain where your organization's position differs, and how you are attempting to influence their position (if applicable)

Representatives of the Company take part in the formation of the regulatory framework of carbon regulation in the Russian Federation.

Funding figure your organization provided to this trade association in the reporting year, if applicable (currency as selected in C0.4) (optional)

Describe the aim of your organization's funding

<Not Applicable>

Have you evaluated whether your organization's engagement with this trade association is aligned with the goals of the Paris Agreement?

Yes, we have evaluated, and it is aligned

C12.4

(C12.4) Have you published information about your organization's response to climate change and GHG emissions performance for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Publication

In mainstream reports

Status

Complete

Attach the document

Page/Section reference

Page 26 - 30

Content elements

- Governance
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

Comment

Publication

In voluntary sustainability report

Status

Complete

Attach the document

Page/Section reference

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Content elements

- Governance
- Strategy
- Risks & opportunities
- Emissions figures
- Emission targets
- Other metrics

Comment

C15. Biodiversity

C15.1

(C15.1) Is there board-level oversight and/or executive management-level responsibility for biodiversity-related issues within your organization?

	Board-level oversight and/or executive management-level responsibility for biodiversity-related issues	Description of oversight and objectives relating to biodiversity	Scope of board-level oversight
Row 1	Yes, both board-level oversight and executive management-level responsibility	PJSC LUKOIL's biodiversity conservation activities are based on the "prevent - reduce - restore - compensate" principle. Taking into account the importance of preserving the diversity of species inhabiting the Earth, especially high value ecosystems, the Company has committed itself not to carry out operations in World Heritage areas and Category I-IV protected areas of the International Union for Conservation of Nature. At each stage of project implementation we try to balance the impact our production activities may have, and implement a variety of projects and activities to preserve ecosystems. The company seeks to avoid work in the habitats of valuable and specially protected species of plants and animals, in particularly sensitive ecological zones, in the periods of vegetation of plants, breeding and migration of wild animals or minimizes the impact when it is impossible to avoid work in certain areas and in certain seasons; seeks to prevent the creation of permanent and insuperable obstacles to the migration of wild animals in the form of linear structures. Translated with www.DeepL.com/Translator (free version)	<Not Applicable>

C15.2

(C15.2) Has your organization made a public commitment and/or endorsed any initiatives related to biodiversity?

	Indicate whether your organization made a public commitment or endorsed any initiatives related to biodiversity	Biodiversity-related public commitments	Initiatives endorsed
Row 1	Yes, we have made public commitments and publicly endorsed initiatives related to biodiversity	Other, please specify (Plan and implement a set of biodiversity conservation measures (Source: Biodiversity Conservation Brochure))	SDG

C15.3

(C15.3) Does your organization assess the impact of its value chain on biodiversity?

	Does your organization assess the impact of its value chain on biodiversity?	Portfolio
Row 1	Yes, we assess impacts on biodiversity in our downstream value chain only	<Not Applicable>

C15.4

(C15.4) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?

	Have you taken any actions in the reporting period to progress your biodiversity-related commitments?	Type of action taken to progress biodiversity- related commitments
Row 1	Yes, we are taking actions to progress our biodiversity-related commitments	Land/water protection Land/water management Species management Education & awareness Law & policy Livelihood, economic & other incentives

C15.5

(C15.5) Does your organization use biodiversity indicators to monitor performance across its activities?

	Does your organization use indicators to monitor biodiversity performance?	Indicators used to monitor biodiversity performance
Row 1	Yes, we use indicators	Other, please specify (Indicator animal species are used, which are characteristic species of a particular ecosystem, the observation and accounting of which makes it possible to assess the effectiveness of the Company's activities in terms of biodiversity conservation.)

C15.6

(C15.6) Have you published information about your organization's response to biodiversity-related issues for this reporting year in places other than in your CDP response? If so, please attach the publication(s).

Report type	Content elements	Attach the document and indicate where in the document the relevant biodiversity information is located
In voluntary sustainability report or other voluntary communications	Content of biodiversity-related policies or commitments Impacts on biodiversity Risks and opportunities Biodiversity strategy	Conserving Biodiversity.pdf. Page 6, 8-18

C16. Signoff

C-FI

(C-FI) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.

C16.1

(C16.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Head of the Department of Environmental Safety and Decarbonization	Environment/Sustainability manager

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	I understand that my response will be shared with all requesting stakeholders	Response permission
Please select your submission options	Yes	Public

Please confirm below

I have read and accept the applicable Terms