



Methodology of Environmental Transparency Rating of Oil and Gas Companies Operating in Russia¹

(year 2019 rating calculation based on 2018 performance indicators)

Basic Principles of the Rating

- The Rating is based on the criteria specified, first and foremost, in the Environmental Standards for Operations of Oil and Gas Companies developed by Russian Non-governmental Nature Conservation Organizations (https://wwf.ru/upload/iblock/0aa/serihblokgr_eng.pdf).
- The rating methodology is open to the public. Face-to-face and distant consultations dedicated to improving rating methodology are held annually with all interested parties.
- The rating is calculated considering all oil and gas development segments: production, processing and transportation.

¹ Changes in the 2019 methodology as compared to the 2018 one are highlighted in green

- The Rating is based on the data available in the public domain² in Russian language only.
- The rating calculation is performed by a professional rating agency.
- List of the companies for the rating is defined by the volume of production, refinery and transportation of oil, gas condensate and oil products. Volumes are derived from the Central Dispatching Department of Fuel Energy Complex (CDU TEK) database. The lower borderline is represented by the 2017 or 2018 volume of oil and gas condensate production equivalent to 1.5 mln tons per year, and the transportation volume of 30 mln tons per year, the refinery volume of oil, gas condensate and oil products of 9 mln tons per year.
- The rating is performed on the annual basis. This allows for estimation of the oil and gas companies environmental indicators dynamics.

² Availability in public domain is understood as being accessible to public in the form of annual business, socio-ecological or environmental reports (including at regional level). Also, for the purpose of this rating, any information is deemed to be publicly available if it is displayed on the official Internet sites of the relevant companies (including subsidiaries and contractors) with the necessary inclusion of references to the relevant pages in the site menu, or if it is provided through interviews of the companies' official representatives for federal or regional media.

Structure of the Rating

The Rating consists of three sections: Environmental Management, Environmental Impact, and Disclosure of Information.

Section 1: Environmental Management

assesses the quality of eco-management in the companies. The criteria included in this section are in most cases substantially more rigid compared to the Russian legislation on environmental protection. However, these criteria correspond to the best world environmental standards and practices in oil and gas business.

Section 2: Environmental Impact

evaluates the damage level for the environmental media (air, water and land) during the implementation of projects as well as the ecological performance level of the industrial companies. In most cases the criteria are based on components of state statistical reporting in the field of environmental protection. The data sources are represented by 2-TP reports (water, air, wastes, and land), 4-OS reports (costs and payments), reflecting the environmental impact from activities executed by companies at the respective licensed areas.

This Section includes quantitative values that are being transformed to qualitative scale by comparing to industry average indicators for every criterion. The industry average, when not available from official sources (Rosstat – State Statistics Service, Ministry of Nature, Ministry of Economic Development and their affiliates), is calculated as an arithmetic mean value for companies participating in the Rating. For comparative analysis across the companies, specific values are calculated by dividing gross indicators by relevant volumes of hydrocarbon production, transportation and processing.

Section 3: Disclosure of Information

evaluates the extent of companies' readiness to disclose information with respect to environmental impact of their industrial activities. Historically, Russian oil and gas business was considered as a rather non-transparent community not least because of the unwillingness to publish environmental data. The recent trend is a growing transparency of the companies.

Criteria 3.5 and 3.6 are assessed as follows. Each environmental-related conflict or an accident from the "Review of environmental-related conflicts and accidents in Russian oil and gas companies" (published quarterly by WWF Russia) is assessed according to the availability of the information about it in the public domain. If there is no information on a reviewed situation, the criterion is colored red. If a company comments on at least one of the reviewed situations, the criterion is colored yellow. If a company provides information and comments on several reviewed situations, the criterion is colored green. Also, if neither environmental-related conflicts nor accidents were found in the public domain, the criterion is also colored green.

Rating calculation

The Rating is calculated as follows.

1. **Each company is assigned color flags for each of criteria – Red, Yellow or Green.** When a criterion is not relevant for a given company (for example, the company does not process hydrocarbon), no flag is assigned. In such cases, companies are required to present proof of being irrelevant to criteria. When the information related to the criterion is not available in the public domain, red flag is assigned.

2. **At the next stage, points are assigned for every criterion and companies are rated in each section.** Red flag counts as 0 points, Yellow as 1 point, and Green as 2 points. For each section, companies are assigned an arithmetic mean of their points for criteria in the corresponding section. In this calculation, only those criteria that have been assigned color flags are taken into account, i.e. criteria that are not relevant for a given company, are not included in the calculation. **Also for those criteria which have subcriteria for hydrocarbon production, transportation and processing (criteria 2.1, 2.2, 2.4 and 2.5), the arithmetic mean for each of those criteria is calculated. Then these arithmetic means are used for the whole section results estimation.** As a result, every company is assigned final points for Environmental Management Section, Environmental Impact Section and Disclosure of Information Section. Final points vary from 0 to 2. At this stage, the leaders are chosen in each of the following areas: Management (**Environmental Management Section**), Operations (**Environmental Impact Section**), and Information (**Disclosure of Information Section**).

In order to avoid disappearance or replacement of the data, which were used for the ratings calculations of the previous years, the following motivating solution of the problem has been suggested. The retrospective evaluation of each company rated in the previous 3 years will be performed during the regular data collection. In case the data from the public domain disappeared or were replaced, the company will be asked to provide explanations on the reasons. If an adequate explanation is provided (for example, the new web site, new methodology, the data which were not considered previously), the amended data will be taken into account. If the reply is not adequate or lacking, the red levels will be assigned to the criteria where the data of the previous years had disappeared or had been replaced. Thus, total section rating (and overall rating as well) will go down for the companies which failed to explain disappearance or replacement of previously published data on their web-sites.

3. **The final Rating is then calculated for each company by averaging three values assigned in the previous stages.**

After preliminary calculation of the Rating, the company profiles are made public on WWF web-site with the status “Preliminary Results” and are sent to the companies for data correction and update. Final company profiles will become available to the public after the Rating results announcement.

The Rating organizers reserve the right to apply penalties (up to exclusion from the Rating calculations) in case of proved violations by a company in the field of human rights (e.g. negative assessment by the Human Rights Council or relevant court decisions).

Section 1. Environmental Management

	Criterion	Reflection in the Rating
1.1	<p>Presence of quantitative efficiency indicators in the environmental management system (EMS) (as per the Standard 14001/GOST R ISO and others)</p>	<p>Green - Environmental Management System is in place in the company's main production outlets and its quantitative indicators are included in the company's public documents</p> <p>Yellow - Environmental Management System is in place in the company's main production outlets or its quantitative indicators are included in the company's public documents</p> <p>Red - Environmental Management System is not in place in the company's main production outlets</p>

	Criterion	Reflection in the Rating
1.2	<p>Company’s environmental policy (or other formalized corporate documents) includes:</p> <ul style="list-style-type: none"> • requirements to additional risk assessment in environmentally valuable areas³; • commitments to reduce landscape fragmentation and disturbed land area when developing new territories; • commitments to protect animal migration routes; • requirements to assess cumulative environmental impact from several companies in major infrastructure projects, if any; • prohibited hunting and fishing by personnel, including contractors, in the company areas of operations; • requirement to perform a comprehensive assessment of environmental impact (EIA) beginning from the phase of construction and up to the phase of abandonment and cleanup within the bounds of the project and its related projects; • willingness to avoid work in specially protected natural areas (SPNAs), their buffer zones, World Natural Heritage (WNH) sites and International Wetlands (Ramsar); • commitments in respect to pipeline integrity; • commitments and/or practices of promoting/introducing “green office” principles in the company offices; • requirements of heightened environmental friendliness of the company’s means of transportation (including means of transportation operated by its contractors); • requirements to extend the company’s environmental standards onto its contractors. 	<p>Number of positive answers:</p> <p>Green - more than 80%</p> <p>Yellow - 50-80%</p> <p>Red - less than 50%</p>

³ Environmentally valuable areas include specially protected natural areas (SPNAs), their buffer zones, World Natural Heritage (WNH) sites, International Wetlands (Ramsar sites), Important Bird Areas, Arctic region, intact forests etc.

	Criterion	Reflection in the Rating
1.3	Documented information on engagement with local communities leading traditional way of life (e.g. indigenous small-numbered peoples of the North).	<p>Green - official document is in place (e.g. policy) and local communities leading traditional way of life are supported</p> <p>Yellow - official document is in place (e.g. policy) or local communities leading traditional way of life are supported</p> <p>Red - not present</p>
1.4	Energy efficiency program	<p>Green - quantitative indicators of energy efficiency (e.g. specific energy consumption) show positive dynamics compared to the previous year figures</p> <p>Yellow - quantitative indicators (e.g. specific energy consumption) showing the implementation of an energy efficiency program are available</p> <p>Red - no quantitative indicators are available to show results of energy efficiency program implementation</p>
1.5	<p>Presence of the following components in the biodiversity conservation programs in the company's areas of operation:</p> <ul style="list-style-type: none"> • fund allocations for biodiversity conservation measures; • presence of an approved list of indicative species in the areas of company's activities; • presence of study and/or monitoring programs for indicative species; • public availability of results of researches performed in the area of biodiversity conservation; • mechanisms of involvement of interested parties in discussing programs targeted at biodiversity conservation (discussing methods, approaches, results, etc.). 	<p>Number of positive answers:</p> <p>Green - more than 60%</p> <p>Yellow - 40-60%</p> <p>Red - less than 40%</p>
1.6	Wildlife rescue section in official documents on oil spill preparedness and response	<p>Green - yes</p> <p>Yellow - partially (limited to specific projects or subsidiaries)</p> <p>Red - not present</p>

	Criterion	Reflection in the Rating
1.7	Voluntary insurance of environmental risks	<p>Green - presence of a corporate system of voluntary insurance against environmental risks</p> <p>Yellow - voluntary insurance against environmental risks in respect of individual projects or individual subsidiaries</p> <p>Red - absence of voluntary insurance against environmental risks</p>
1.8	Oil recovery rate increase program	<p>Green - quantitative indicators of oil recovery rate increase program implementation demonstrate positive dynamics as compared with previous year</p> <p>Yellow - oil recovery rate increase program is in place</p> <p>Red - no oil recovery rate increase program in place</p>

Section 2. Environmental impact⁴

	Criterion	Reflection in the Rating
2.1	Emission rates of pollutants into the atmosphere	<p><i>Indicator = gross emissions of pollutants into atmosphere / hydrocarbons production, kg/t of produced hydrocarbons (tonnes of reference fuel)⁵</i></p> <p><i>Indicator = gross emissions of pollutants into atmosphere / hydrocarbons refining, kg/t of processed hydrocarbons (tonnes of reference fuel) x processing depth</i></p> <p><i>Indicator = gross emissions of pollutants into atmosphere / hydrocarbons transportation, kg/t of transported hydrocarbons (tonnes of reference fuel)</i></p>
2.2	Emission rates of greenhouse gases into the atmosphere	<p><i>Indicator = gross emissions of greenhouse gases into atmosphere / hydrocarbons production, kgCO₂-eq/t of produced hydrocarbons (tonnes of reference fuel)</i></p> <p><i>Indicator = gross emissions of greenhouse gases into atmosphere / hydrocarbons refining, kgCO₂-eq /t of processed hydrocarbons (tonnes of reference fuel) x processing depth</i></p> <p><i>Indicator = gross emissions of greenhouse gases into atmosphere / hydrocarbons transportation, kgCO₂-eq /t of transported hydrocarbons (tonnes of reference fuel)</i></p>
2.3	Associated petroleum gas utilization (APG)	%

⁴ For all criteria of the Section 2 reflections in the Rating are following:

Green - value is equal or better than industry average

Yellow - value is worse than industry average

Red - data is not publicly available

⁵ If the company-specific conversion factor is absent, the following relationship is used:

1 tonne of oil and gas condensate = 1,43 tons of reference fuel (coal equivalent)

1000 m3 of gas = 1,154 tons of reference fuel (coal equivalent)

Source: Act of the Russian Statistical Agency as of June 23 1999 NN 46 On Approval of "Methodology for Calculation of the Fuel and Energy Balance of the Russian Federation in accordance with the international practice"

	Criterion	Reflection in the Rating
2.4	Discharge rate of wastewater into surface water bodies	<p><i>Indicator = discharge of wastewater into surface water bodies / hydrocarbons production, m³/t of produced hydrocarbons (tonnes of reference fuel)</i></p> <p><i>Indicator = discharge of wastewater into surface water bodies / hydrocarbons refining, m³/t of processed hydrocarbons (tonnes of reference fuel)</i></p> <p><i>Indicator = discharge of wastewater into surface water bodies / hydrocarbons transportation, m³/t of transported hydrocarbons (tonnes of reference fuel)</i></p>
2.5	Water consumption for the company's own (industrial) needs	<p><i>Indicator = water consumption for the company's own needs / hydrocarbons production, m³/t of produced hydrocarbons (tonnes of reference fuel)</i></p> <p><i>Indicator = water consumption for the company's own needs / hydrocarbons refining, m³/t of processed hydrocarbons (tonnes of reference fuel)</i></p> <p><i>Indicator = water consumption for the company's own needs / hydrocarbons transportation, m³/t of transported hydrocarbons (tonnes of reference fuel)</i></p>
2.6	Ratio of the amount of the utilized and disposed (including by third parties) wastes to the amount of wastes being handled (amount of wastes present as of the beginning of the year + amount of wastes generated during the year + amount of wasters received from other enterprises)	<i>t/t</i>
2.7	Ratio of polluted areas as of the year's end to the year's beginning	<i>ha/ha</i>
2.8	Rate of pipeline accidents leading to spills of oil, condensate, oil products and oilfield water	<i>Indicator = number of pipeline accidents leading to spills of oil, condensate, oil products and oilfield water / total pipeline length, ea/1,000 km of pipelines</i>
2.9	Amounts of oil, condensate and oil products spilled as the result of accidents and leaks	<i>Indicator = amount of oil, condensate and oil products spilled as the result of accidents and leaks / hydrocarbon production and transport, kg/t of produced hydrocarbons (tonnes of reference fuel)</i>

	Criterion	Reflection in the Rating
2.10	The proportion of excess charges in the total payments for adverse environmental impact	<i>Indicator = charges for excess emissions, discharges, and waste disposal / total environmental charges for the reporting year, RUB/RUB</i>
2.11	Power generation from renewable energy sources (RES), including for own needs	<i>% of the total amount of power generation</i>

Section 3. Disclosure of Information

	Criterion	Reflection in the Rating
3.1	Non-financial reporting in the field of sustainable development or environmental report is in compliance with the international requirements (such as GRI or IPIECA)	<p>Green - GRI application level Comprehensive or IIRF full</p> <p>Yellow - either GRI application level Core or IIRF partial or reporting is in compliance with IPIECA/API/IOGP requirements for oil and gas sector</p> <p>Red - not present</p>
3.2	Third party confirmation (verification) of non-financial reporting	<p>Green - professional verification (based on professional standards ISAE 3000, AA1000AS) and verification based on the opinion of interested parties (including public opinion)</p> <p>Yellow - professional verification (based on professional standards ISAE 3000, AA1000AS) or verification based on the opinion of interested parties (including public opinion)</p> <p>Red - no third-party verification is available, or no reporting is available in accordance with international requirements</p>
3.3	Public access to documentation on environmental impact assessment (e.g. EIA) throughout the project's lifecycle for those active projects, which are required to pass the State Environmental Expert Review	<p>Green - for majority of projects</p> <p>Yellow - for some projects</p> <p>Red - not present</p>
3.4	Access to OSCPs and OSERP (in part of environmental impact) in the public domain	<p>Green - with feedback mechanism</p> <p>Yellow - without feedback mechanism</p> <p>Red - not present</p>
3.5	Informing the public (through the company web-site) about emergencies/accidents and mitigation measures thereof in respect of	<p>Green - reliable data at the company web-site is available or no major accidents during the reporting period</p> <p>Yellow - fragmentary data at the company web-site</p>

	accidents having significant social and environmental impact ⁶ , causing major damages and arousing loud public discussions ⁷ , including those caused by contractor activities	Red - data missing or unreliable
3.6	Informing the public (through the company web-site) of environment-related conflicts ⁸ and measures taken to resolve them within the areas of the company's operation, including its subcontractors	Green - reliable data at the company web-site is available or no environment-related conflicts during the reporting period Yellow - fragmentary data at the company web-site Red - data missing or unreliable

⁶ **Social and environmental impact** includes fatalities, injuries, significant financial loss (above 1 mln roubles), mass (more than 1000 clients) shut downs and events involving evident environmental damage. If environmental damage is evident (explosions, fires, strong smoke), the phrase "environmental damage was not registered" is not accepted (even if sourced by any official authority). From the fact that environmental damage was not registered, does not mean that it was not happening as the evidence (photo, video, smoke, fire) supports the opposite. Events lacking environmental damage (like electricity fatalities, construction failures, transport accidents etc) are not included in the Review.

⁷ **Public discussion** is defined as an event mentioned in at least 3 open sources with the mass media status or on web-sites of officially registered or influential public organizations (such as United National Front, Greenpeace, Public Chamber, WWF, Russian Bird Protection Union, All-Russia Environmental Protection Society, Green Patrol, regional environmental organizations). One publication is enough if an event is mentioned on official web-site of regulatory authorities (Public Prosecution Office, Rosprirrodnadzor, Rostekhnadzor, Rosselkhnadzor and their regional affiliates).

⁸ **Environment-related conflicts** are defined as situations with the past, present or future environmental impact which:

1. Lead to inspections from regulatory authorities (Public Prosecution Office, Rosprirrodnadzor, Rostekhnadzor, Rosselkhnadzor and their regional affiliates) and are reflected on their web sites;
2. Lead to protest movements from local communities;
3. Are discussed in mass media;
4. Are discussed by influential public organizations (such as United National Front, Greenpeace, Public Chamber, WWF, Russian Bird Protection Union, All-Russia Environmental Protection Society, Green Patrol, regional environmental organizations)

Sometimes the information becomes available after the significant amount of time after the event (for example, oil spills, illegal use of natural resources, violations of environmental safety rules etc). In this case, the event is dated according to the publication date.

Similarly, cases reviewed by the court may lead to 2-3-year-long legal proceedings. The final court decision or its execution will determine the end of the conflict. Updates on conflict development are included in the Review according to the publications dates. "Paper violations" are included in the Review if environmental risks (for example, absence of approval for pipeline exploitation, fire safety violations in forests) are present.

3.7	Established procedure in place for processing public complaints	<p>Green - with feedback mechanism and procedure</p> <p>Yellow - with either a feedback mechanism or a procedure</p> <p>Red - not present</p>
3.8	Stakeholder engagement in holding and reviewing team-headquarters emergency training exercises, comprehensive response training and other OSR exercises	<p>Green - established corporate procedures for stakeholder engagement in holding and reviewing team-headquarters emergency training exercises, comprehensive response training and other OSR exercises are in place</p> <p>Yellow - stakeholders are engaged in separate team-headquarters emergency training exercises, comprehensive response training and other OSR exercises</p> <p>Red - stakeholders are not engaged in any team-headquarters emergency training exercises, comprehensive response training and other OSR exercises</p>
3.9	Access in the public domain to quantitative results (reflecting state of the art and dynamics) of industrial environmental monitoring (information briefing paper as an option)	<p>Green - for majority of large-scale projects</p> <p>Yellow - for separate projects</p> <p>Red - no</p>

Test mode in 2019 (below criteria will not be included in Rating 2019 calculations):

Criteria added to Section 1:

	<p>Availability of plans (or similar documents) for climate change adaptation of company's activities</p>	<p>Green – yes, for the whole company</p> <p>Yellow – partially (for some projects or subsidiaries)</p> <p>Red - no</p>
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Criteria added to Section 2:

	<p>Ratio of the amount of the utilized and disposed (including by third parties) wastes to the amount of wastes generated during the year (including amount of wasters received from other enterprises)</p>	<p><i>t/t</i></p>
	<p>Ratio of remediated polluted areas to polluted areas during the reporting period</p>	<p><i>ha/ha</i></p>

Criteria added to Section 3:

	<p>Availability of information on the total length of pipelines exploited by the company beyond its service life</p>	<p>Green - information on the length of pipelines of various categories, their construction dates, approved service life lengths and its prolongation is available in the public domain for the whole company</p> <p>Yellow - information on the length of pipelines of various categories, their construction dates, approved service life lengths and its prolongation is available in the public domain for some projects</p> <p>Red - information is not present</p>
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Annex 1. List of Companies Rated in 2019

Production, transportation and processing of raw hydrocarbons per company, January-December, 2018 (data from CDU TEK)

COMPANY	OIL PRODUCTION (mln tonnes)		OIL REFINERY (mln tonnes)		OIL TRANSPORT (mln tonnes)	
	2017	2018	2017	2018	2017	2018
1. Rosneft	209,3	213,16	90,63	93,39		
2. LUKOIL	81,7	82,1	43,22	43,1		
3. Surgetneftegaz	60,54	60,89	18,19	18,18		
4. Gazprom Neft	39,5	39,49	28,95	31,5		
5. Tatneft	28,94	29,53	7,8	8,6		
6. Gazprom ⁹	17,43	17,35	12,97	12,99		
7. Slavneft	14,3	13,81	15,48	15,71		
8. Tomskneft VNK	9,16	8,61				
9. Exxon Neftegas Ltd (Sakhalin-1)	9,2	11,63				
10. Arcticgas	7,87	7,89				
11. NOVATEK	7,67	8,27	6,94	6,95		

⁹ For rating estimation Gazprom is assessed as PAO "Gazprom" plus its 100% subsidiaries, operating in geological exploration, extraction, transport, underground storage, hydrocarbon refining and maintenance of unified gas supply system.

12. Russneft	7,02	7,11				
13. Neftisa	6,77	6,79				
14. INK	6,68	6,5				
15. Salym Petroleum Development	6,14	6,14				
16. Sakhalin Energy (Sakhalin-2)	5,81	5,55				
17. Zarubezhneft	3,03	3,12				
18. NNK (Neftegazholding)	2,11	1,96	4,67	4,88		
19. Dulisma	1,63	1,26				
20. Transneft					477,5	479,8
21. New Stream			14,47	12,84		
22. KTK					55,1	61,08