



Target 6.3. By 2030, improve water quality by reducing pollution, eliminating dumping and minimizing release of hazardous chemicals and materials, halving the proportion of untreated wastewater and substantially increasing recycling and safe reuse globally.

Target 6.4. By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity and substantially reduce the number of people suffering from water scarcity.

Target 6.5. By 2030, implement integrated water resources management at all levels, including through transboundary cooperation as appropriate.

Water consumption

Despite the wide availability of water in Russia³ and the less pronounced impact of the oil and gas industry on the consumption of fresh water than other sectors of the economy⁴, improving the efficiency of water use and maintaining clean surface water and groundwater are very important objectives of the Company.

The HSE Policy³ of PJSC LUKOIL in the 21st Century contains obligations on the efficient use of natural resources, including water, and is aimed at:

- minimizing the consequences of business activity, including a reduction in the use of water resources
- reducing production dependence on possible adverse external factors, including natural ones (droughts, the drying up of surface water bodies, pollution of groundwater sources)

The bulk of LUKOIL Group’s production activity in Russia is performed in regions



The full text of the document can be found on the Company’s website



that do not now experience fresh water shortages. However, in other countries we factor in such potential risks as a shortage of drinking water, as well as possible droughts or floods, which could lead to water supply interruptions, a breakdown in the supply chain, and increased operating costs.

Prompt risk identification enables us to take corresponding measures (to install modern equipment, including that which reduces water use) to facilitate more efficient water use. Our basic approach to resolving the issue of sustainable water use is to introduce systems for reverse water supply and the reuse of water at production

enterprises and make the optimal utilization of water intake, including oil field water. New production facilities are equipped in all cases with systems for reverse water supply and the reuse of water and treatment facilities.

A wastewater and oil field water treatment facility was built at the Yaregskoye field (Komi Republic) in 2017. The facility will be used to generate steam required to extract high-viscosity oil. The amount of water taken from surface sources will be reduced due to the introduction of a closed water-use cycle at the field.

VOLUMES OF REVERSE WATER SUPPLY AND REUSED WATER AT LUKOIL GROUP SUBSIDIARIES IN RUSSIA, million cubic meters

	2015	2016	2017
Volume of reverse water supply	2,287.8	2,371.9	2,253.1
Volume of reused water	908	930.6	875.5

Comment. The fall in the volume of formation water produced with oil is due to a decline in oil production in Russia as a result of external limitations imposed under an agreement with OPEC.

Projects to provide local communities with drinking water are implemented as part of our social partnerships with the southern regions of Russia and in foreign countries with a hot climate.

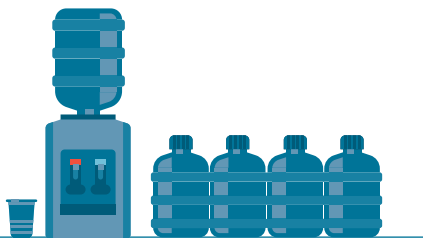
Through the implementation of the LUKOIL Environmental Safety Program we significantly reduced water consumption from natural sources: this indicator fell by 7.5% from 2015 to 2017.

Low levels of fresh water consumption are maintained by subsidiaries in all main production lines of business. In these conditions, general indicators of water withdrawal and water consumption are significantly influenced by electric power engineering subsidiaries, which are large consumers of water (used for steam generation and cooling equipment in central heating and power plants). The availability of these assets is a special

feature of the LUKOIL business model in comparison with other oil and gas companies. In 2017 the volume of water used for its own needs by electric power engineering subsidiaries amounted to 65.1% of the water consumption used for its own needs by Russian subsidiaries of LUKOIL Group.

³ See World Resource Institute <http://www.wri.org/resources/maps/aqueduct-water-risk-atlas>

⁴ See Water in the Energy Industry (BP International, 2013).



PROJECTS TO PROVIDE FRESH WATER IN IRAQ AND UZBEKISTAN

Our largest project for local residents in Iraq in 2017 entailed providing permanent access to water to residents of the Beit Zamel and Turaba villages.

The residents of the Beit Zamel village did not have full access to water for basic daily needs. Water had to be brought in by tanker truck, which was inconvenient and expensive. The village only recently became inhabited, and people were reluctant to move to it because of the issues with the water supply. With LUKOIL's support, all homes in the village were connected to the water supply. According to forecasts from the regional administration, a further 100 homes are earmarked to be built there in the near future.

In Turaba, which has 150 households, the water supply pump station did not have sufficient capacity to permanently supply all houses with water. This issue was resolved by installing a new electric pump.

LUKOIL supplies bottled water to 10 orphanages and boarding schools, where over 2,000 children and teenagers study in the cities of Bukhara and Qarshi in Uzbekistan.

TOTAL WATER WITHDRAWAL AND WATER CONSUMPTION FOR ITS OWN NEEDS BY LUKOIL GROUP SUBSIDIARIES IN RUSSIA, million cubic meters

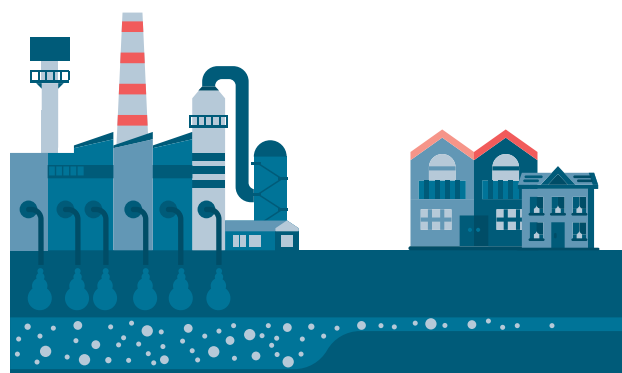
	2015	2016	2017
Total water withdrawal by LUKOIL Group subsidiaries in Russia, including:	526.8	522.2	511.1
a) by types of business activities			
Electric Power Engineering	350.1	345.1	331.9
Oil and Gas Production	112.4	112.3	109.5
Oil Refining, Gas Processing, Petrochemicals	62.9	63.3	68.5
Others	1.4	1.5	1.2
b) by source of water withdrawal			
from surface water bodies	305.9	297.4	279.7
from groundwater sources	78.7	77.1	76.1
from other sources (central water supply networks, etc.)	142.2	147.6	155.3
Water consumption for its own needs of LUKOIL Group subsidiaries, including:	413.1	415.9	376.4
a) by types of business activities			
Electric Power Engineering	276.1	275.0	245.0
Oil and Gas Production	101.1	100.3	96.6
Oil Refining, Gas Processing, Petrochemicals	34.5	39.1	33.5
Others	1.4	1.5	1.3
a) by purpose			
production needs (excluding consumption to maintain formation pressure)	304.8	307.4	278.2
formation pressure maintenance	79.2	76.4	74.0
others	29.1	32.1	24.2

Note. The water intakes of LUKOIL Group subsidiaries are also used to supply nearby enterprises.

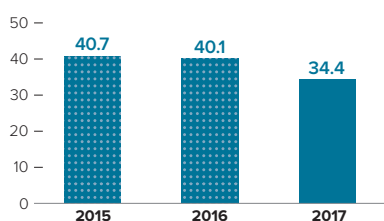
SPECIFIC WATER CONSUMPTION FOR ITS OWN NEEDS BY LUKOIL GROUP SUBSIDIARIES IN RUSSIA, WITH A BREAKDOWN BY MAIN BUSINESS ACTIVITIES

	2015	2016	2017
Oil and Gas Production, cubic meters/tonnes of reference fuel of produced hydrocarbons	1.0	1.0	0.95
Oil Refining, cubic meters/tonnes of refined oil	0.5	0.6	0.5
Petrochemicals, kg/tonnes of processed raw stock	12.8	6.2	7.3
Product Marketing and Distribution, cubic meters/tonnes of sold petroleum products	0.047	0.055	0.065
Midstream, cubic meters/tonnes of transported oil and petroleum products	0.045	0.039	0.017

Thanks to measures to decommission central heating and power plants equipment, the specific water consumption indicator at electric power engineering subsidiaries is falling. For example, in 2016-2017 a large unblocked section of the Krasnodar CHPP (LUKOIL-Kubanenergo) was decommissioned.



SPECIFIC WATER CONSUMPTION FOR ITS OWN NEEDS BY LUKOIL GROUP ELECTRIC POWER ENGINEERING SUBSIDIARIES IN RUSSIA,
cubic meters/tonnes of reference fuel consumed



DISPOSAL OF FORMATION WATER IN UZBEKISTAN

LUKOIL Uzbekistan Operating Company LLC adopted a strategy for the disposal of formation water at all gas production sites, by pumping it back into the formation. The company was the first in Uzbekistan to be issued a license to use subsoil to pump field wastewater into absorbing wells at fields. Under the terms of the licenses, field infrastructure for the complex of injection and monitoring wells must be developed at producing fields.

In 2016-2017 four injection wells were built at the Northern Shady, Kuvachi-Alat, and Kandym fields, as well as two monitoring wells in each area. The wells were successfully commissioned at Northern Shady and Kuvachi-Alat, and at Kandym the wells will begin to operate in conjunction with a gas refinery.

These projects allowed LUKOIL to move away from the surface disposal of field wastewater, significantly reduce emissions of pollutants into the atmosphere, improve air quality in the working areas of the treatment facilities, and minimize risks of environmental pollution during the discharge of industrial effluent.