

Wastewater discharge

The environmental aspects of the formation and discharge of effluent into surface waters and central wastewater disposal networks are constantly monitored by the respective LUKOIL department and by specialists within its subsidiaries. Key measures to minimize the negative impacts of effluents on the quality of water bodies comprise:

- ensuring in-process monitoring of the quality of effluents
- commissioning new and/or renovating existing treatment facilities
- performing diagnostics and overhauls of pipeline transport

- building systems that initially separate and utilize formation water
- treating contaminated groundwater from drainage systems

We were able to put a complete halt to the discharge of undertreated effluent into water bodies at oil refining, petrochemicals, and electric power engineering subsidiaries.

In 2017 the main measures to deal with this issue at oil and gas production subsidiaries included building effluent treatment facilities at Yareganefit and LUKOIL-Komi (the facilities are scheduled for commissioning in 2018).

The ESP for 2018-2020 includes measures to design or upgrade biological treatment facilities at oil refining and petrochemical subsidiaries in order to maintain discharge treatment quality.

In 2017 the share of undertreated discharge in total wastewater disposed by LUKOIL Group subsidiaries continued to be insignificant (0.5%).

RANGE OF WASTEWATER DISCHARGES IN SURFACE WATER BODIES BY LUKOIL GROUP SUBSIDIARIES IN RUSSIA, million cubic meters

	2015	2016	2017
Wastewater discharges into surface water bodies, including:	268.4	244.0	236.4
clean according to standards	245.2	223.7	206.2
treated according to standards	21.8	19.5	29.1
undertreated	0.7	0.7	1.1
contaminated (untreated)	0.7	0	0

SPECIFIC DISCHARGES OF UNDERTREATED WASTEWATER BY LUKOIL GROUP SUBSIDIARIES IN RUSSIA

	2015	2016	2017
Oil and Gas Production, cubic meters/ tonnes of reference fuel of produced hydrocarbons	0.005	0.005	0.008
Oil Refining, cubic meters/tonnes of refined oil	0	0	0
Petrochemicals, cubic meters/tonnes of processed raw stock	0	0	0
Product Marketing and Distribution, cubic meters/tonnes of sold petroleum products	0	0.001	0.004
Midstream, cubic meters/tonnes of transported oil and petroleum products	0.003	0.002	0.008
Electric Power Engineering, cubic meters/tonnes of reference fuel consumed	0.102	0.003	0