Managing environmental impacts

Target 12.4.

By 2020, achieve the environmentally sound management of chemicals and all wastes throughout their life cycle, in accordance with agreed international frameworks, and significantly reduce their release to air, water and soil in order to minimize their adverse impacts on human health and the environment.

Target 12.5.

By 2030, substantially reduce waste generation through prevention, reduction, recycling and reuse.

Air emissions

Key measures to reduce emissions of pollutants comprise:

- the renovation and construction of new generating capacities at electric power engineering subsidiaries, with improved automated systems for controlling fuel consumption processes and heat losses and minimizing emissions of pollutants
- replacing or upgrading equipment at industrial sites according to the principle of best available technology
- improving the technology used in systems to capture and treat pollutant emissions

In 2017 we achieved a reduction in emissions of pollutants, chiefly through building facilities that use APG, which effected a drop in flaring, as well as the relaunch of the Lokosovsky Gas Processing Plant after its refurbishment.

The reduction in specific emissions of pollutants by electric power engineering subsidiaries in 2017 was primarily due to a reduction in the share of fuel oil in the fuel mix at the steam and heat generation facilities of LUKOIL-Volgogradenergo. The slight increase in specific emissions in 2017 by petrochemical subsidiaries was due to a reduction in product output from Stavrolen

TOTAL AIR EMISSIONS OF POLLUTANTS BY LUKOIL GROUP SUBSIDIARIES IN RUSSIA, thousand tonnes

	2015	2016	2017
Air emissions of pollutants, total, including:	**541.9**	**627.5**	**502.5**
NOx emissions	38.9	44.0	49.6
SO_2 emissions	58.2	59.7	23.0
solid emissions	25.4	26.9	24.3
CO emissions	232.0	295.9	216.6
hydrocarbon emissions (net of methane)	184.7	199.2	187.8
other pollutants	2.7	1.8	1.2

SPECIFIC AIR EMISSIONS OF POLLUTANTS BY LUKOIL GROUP SUBSIDIARIES IN RUSSIA

	2015	2016	2017
Oil and Gas Production, kg/tonnes of reference fuel of produced hydrocarbons	4.5	5.5	4.1
Oil Refining, kg/tonnes of refined oil	0.9	0.9	0.9
Petrochemicals, kg/tonnes of processed raw stock	2.3	1.0	1.3
Product Marketing and Distribution, kg/tonnes of sold petroleum products	0.7	0.7	0.8
Midstream, kg/tonnes of transported oil and petroleum products	0.1	0.1	0.1
Electric Power Engineering, kg/tonnes of reference fuel consumed	2.9	3.7	2.6