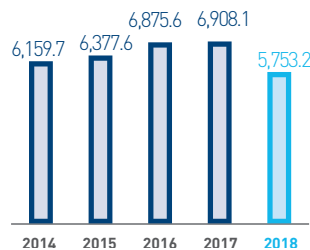


Cost of environmental services, environment safety and protection¹
(₽ m)



Gazprom Neft uses a risk-focused approach embedded in all of its business processes to ensure environmental safety. The Company ensures continuous environmental monitoring and industrial environmental control. Environmental impacts are measured at all stages of production activities and used as a mandatory input to buttress management and investment decision-making.

Gazprom Neft carefully assesses its current and expected environmental impact taking into account all factors that affect ecosystems, and specific features of such ecosystems. Based on this assessment, the Company implements the best available technologies to mitigate the adverse impact of its operations.

The Company is running a range of key strategic environmental initiatives and a number of programmes and projects dealing with current environmental issues. In 2018, investments in environmental protection totalled ₽ 19 bn.²

In 2018, excess emissions charges accounted for 57.9% of the total environmental impact fees and resulted primarily from APG flaring, with 78.4% APG utilised in 2018.

Air protection

19

₽ BN

investments in environmental protection

Reduction of air pollutant emissions is one of the Company's top environmental priorities, with Gazprom Neft putting in place a large-scale programme to upgrade and retrofit its refining facilities, a programme to cut greenhouse emissions, and other environmental initiatives covering the entire production chain.

In 2018, gross emissions totalled 427.9 kt. The y-o-y growth was due to the extensive work as part of new upstream projects, including launch of new oil wells at Gazpromneft-Yamal,

development of Gazpromneft-Vostok's group of fields, new downhole logging and pilot operation projects at GPN-Development and Gazpromneft-Angara.

That said, specific emissions remained flat y-o-y.

By upgrading the existing facilities, Gazprom Neft is able to maintain specific emissions at the 2017 level.

¹ Capital environmental investments were down due to the completion of large-scale projects at the Company's refineries in 2017.

² Net of the cost of capital construction, renovation and repair of fixed assets with a positive environmental impact.

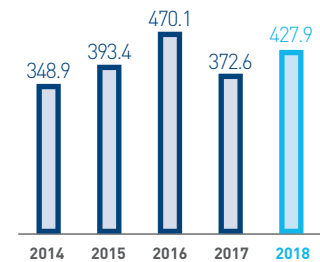
In 2018, the Company continued with the second phase of the technology and **environmental upgrades of its refineries**, introducing equipment and technologies with lower environmental impact.

The key projects to reduce gross emissions include:

- > construction of Gazpromneft Omsk Refinery's regeneration gas treatment unit for the catalytic cracker;
- > piloting of Chlorosorb, a new technology that will enable domestic refineries to recycle chloride and eliminate the use of caustic spent on gas scrubbing;

- > construction of a new automatic on-spot loading unit for light products at Omsk Refinery;
- > overhaul of the first process chain facilities at Omsk Refinery;
- > overhaul of large processing ring facilities at Moscow Refinery.

Gross emissions (kt)



Breakdown of gross emissions (kt)

	2014	2015	2016	2017	2018
Solids	13.5	13.8	18.4	10.5	18.0
Hydrocarbons (excluding volatile organic compounds)	57.6	55.8	46.2	49.4	56.7
Carbon monoxide (CO)	125.9	143.7	173.6	147.8	175.3
Nitrogen oxides (NO _x)	13.2	10.5	18.0	17.4	21.8
Sulphur dioxide (SO ₂)	46.8	96.0	124.8	64.4	71.1
Volatile organic compounds (VOC)	91.5	72.6	88.4	81.3	84.6
Other gases and liquids	0.4	1.0	0.7	1.8	0.3

Source: Company data



More details on Omsk Refinery's environmental upgrade

Moscow Refinery continued building the Euro+ oil refining unit that will enable it to decommission five small processing ring facilities launched back in 1960s and cut pollution emissions. 2018 saw the Company complete the construction of a closed cycle high-temperature gas disposal system for Euro+. The technology helps eliminate excessive process gas, if any, in a safe and reliable manner through its full incineration in a closed protected fireproof chamber, with a zero impact on atmosphere.

Advanced Biosphere treatment facilities under construction at Omsk Refinery will greatly improve wastewater treatment and cut emissions and discharges. Among other things, the project provides for off-gas treatment in cutting-edge gas convection chambers, reusability of recovered petroleum products, and the use of nitrogen pads in tanks to prevent evaporations.



Made in Russia: construction of Euro+ refining unit at Moscow Refinery (coverage by RBC TV)

Omsk Refinery completed the construction of a new automatic on-spot loading unit for light products started in 2016. The new unit virtually eliminates the risk of hydrocarbon vapours getting into atmosphere from loaded products and increases process safety. The facility replaced the open tank-car loading gallery with a leak-proof loading rack using vapour condensation technology. The project brought to a close the transformation of the loading system at Omsk Refinery that ships around 70% of petroleum products by rail.



Gazprom Neft's refineries to implement automated eco-friendly petroleum product loading systems

Ecoinform

The main webpages of Omsk and Moscow refineries display real-time air and environmental data from the facilities' sanitary protection zone. At Moscow Refinery, this information is also displayed on an outdoor LED screen installed at the request of local residents.

In 2018, Moscow and Omsk refineries became pilot platforms for developing nationwide requirements for industry-specific monitoring systems. The testing results

will serve as a basis for government regulations on implementing automated air monitoring systems at all refineries.

In March 2018, the Company donated a mobile environmental laboratory to the Omsk Region Government. The laboratory promptly analyses air quality data collected at industrial facilities and throughout a city and transmits it to supervisory bodies.