

# Air quality

**GRI 3-3** Reduction of pollutant emissions into the atmosphere is an integral part of the strategy for sustainable development and combating climate change. Effective management and implementation of emission reduction measures play an important role in the sustainable development of the Fund and improvement of the environmental situation in Kazakhstan.

We are systematically working to reduce emissions of pollutants into the atmospheric air. Support to portfolio companies aims at implementing technical and organisational measures to ensure sustainable emission reductions.

In particular, the following measures are being implemented:

- modernisation of equipment and introduction of environmentally efficient equipment;
- reconstruction of power units at industrial and energy facilities;
- introduction of cleaner coal technologies, including flue gas cleaning systems;
- switching to natural gas as a less carbon-intensive fuel;
- introduction of automatic emission monitoring systems.

**GRI 3-3** The portfolio companies manage and control pollutant emissions at their level within the framework of approved environmental policies. All emissions of pollutants are strictly regulated by environmental legislation and regulatory and permissive documentation, and air emissions are calculated in accordance with the methods approved by governmental authorities. Emission reductions are carried out in accordance with developed programmes and plans agreed with state authorities.

**GRI 3-3** We regularly monitor the quality of atmospheric air in the areas of our environmental impact. As part of industrial environmental control, accredited laboratories conduct quarterly monitoring in accordance with programmes approved by the authorised bodies, taking measurements at the border of sanitary protection zones and at emission sources.

**GRI 3-3** Calculation of pollutant emissions into the atmosphere is carried out in accordance with the methods approved by state authorities:

**GRI 305-7**

- Methodology for calculation of gross emissions of harmful substances into the atmosphere for enterprises of oil refining and petrochemical industry;
- Methodology for determining pollutant emissions into the atmosphere for thermal power plants and boiler houses;
- Methodology for calculation of pollutant emissions into the atmosphere at gas transmission and storage facilities;
- Methodology for calculating air pollutant emissions from facilities of the 4th category;
- Methodology for calculating emission standards from non-organised sources;
- Methodology for calculating concentrations of harmful substances in the atmospheric air from emissions of enterprises;
- Methodology for determining the norms of emissions into the environment, etc.

**GRI 3-3** We continue to implement a programme to install automated monitoring systems (AMS) in sectors such as power generation, oil and gas production, oil and gas refining, gas chemicals and mining and metallurgy. As of the end of 2024, 12 AMS have been installed in enterprises belonging to the first category of hazard. Of these, 9 enterprises are connected to the state information system and transmit data to the National Data Bank on the state of the environment and natural resources of the Republic of Kazakhstan automatically every 20 minutes.

## EMISSIONS OF POLLUTANTS INTO THE ATMOSPHERE

**GRI 305-7** In 2024, the total pollutant emissions for the Fund are – 488.1 thousand tonnes, a 2% decrease from 2023.

Thanks to the implementation of measures, as well as timely equipment upgrades and repairs, we have seen a systematic reduction in gross emissions of key atmospheric pollutants over four years:

- sulphur oxides (by 3.7% – from 236,400 tonnes in 2021 to 227,700 tonnes in 2024);
- nitrogen oxides (by 3.5% – from 104,200 tonnes to 100,500 tonnes);
- particulate matter (by 2.4%, from 54,900 tonnes to 53,600 tonnes).

The energy sector accounts for the largest amount of pollutant emissions. The main sources of emissions are thermal power plants that use fossil fuels for energy production. In 2024, emissions from the energy sector amounted to 345,000 tonnes (71% of the total emissions in the Fund). Overall, emissions reductions in the energy sector were achieved through repairs to electrostatic precipitators, aspiration systems used in fuel supply and repairs to dust collection systems on drilling rigs.

**GRI 305-7** The oil and gas sector accounts for 28% of emissions (136.1 thousand tonnes). The share of the transport and logistics sector in total emissions for 2024 made up 1% (4.7 thousand tonnes).

Air emissions, '000 tonnes

	2021	2022	2023	2024
Nitrogen oxides (NO <sub>x</sub> )	104.19	105.08	102.01	100.49
Sulphur dioxide (SO <sub>x</sub> )	236.41	235.60	233.952	227.73
Volatile organic compounds (VOCs)	0.392	0.90	0.66	0.61
Carbon monoxide (CO)	29.24	30.34	40.84	39.69
Particulate matter (PM)	54.880	51.24	53.05	53.65
Others	72.51	80.61	69.34	65.89
Total	497.62	503.77	499.87	488.06

