

Improving the efficiency of heat and water supply

To advance its strategic objectives, improve energy efficiency, and mitigate environmental impact, the Company carries out annual upgrades of its heat and water supply infrastructure.



2023 highlights:



- two advanced gas-fired boiler houses were constructed at the Agryz and Balezino stations, replacing the previous fuel oil-fired units, and a mobile cogeneration unit using old wooden sleepers as fuel was introduced at the Kanash station;
- two boiler houses at the Bryansk-Lgovsky and Sukhinichi-Glavnye stations were converted from fuel oil to gas;
- automated state-of-the-art coal-fired boiler houses were commissioned at the Uzhur and Karasuk stations;
- small modular coal-fired boiler houses designed for remote unmanned operation were successfully introduced across the Sverdlovskaya, West-Siberian, Krasnoyarskaya, Far Eastern, and Trans-Baikal railways.

As part of its Heat and Water Supply Digitalisation Programme, the Company implemented the following initiatives in 2023:

- advancing the Automated Accounting and Billing System for Housing and Utility Services, which reduced the volume of manual data entry;
- developing the Unified Automated Infrastructure Management System by introducing a Unified Database of Heat and Water Supply Facilities;
- launching a data visualisation and real-time monitoring service for the Russian Railways heat and water supply facility operations.

Air protection



GRI 3-3

In its operations, Russian Railways seeks to minimise air pollutant emissions from stationary and mobile sources. The Company conducts regular internal checks of mainline and shunting diesel locomotives and track maintenance equipment for compliance with technical standards for air pollutant emissions through the use of environmental monitoring points furnished with diagnostics facilities. Emissions are also measured following diesel locomotive rheostat testing.



Emissions by category, kt

GRI 305-7

Parameter	2019	2020	2021	2022	2023
Stationary sources					
Solids	11.8	10	9.3	8.2	7.7
Carbon monoxide (CO)	20.8	18.5	17.4	16.9	16.7
Sulphur dioxide (SO ₂)	11.9	10.5	9.5	8.8	8.1
Nitrogen oxides (N _x O _m)	6.8	5.7	4.9	4.5	4.0
Hydrocarbons (C _n H _m)	0.1	0.1	0.1	0.1	0.1
Volatile organic compounds	2.2	1.9	1.5	1.3	1.1
Other gases and liquids	0.1	0.1	0.1	0.1	0.1
Mobile sources (diesel locomotives)					
Carbon monoxide (CO)	30.7	28.7	29.4	25.6	30.1
Hydrocarbons (C _n H _m)	15.7	14.6	15.1	15.5	14.3
Nitrogen oxides (N _x O _m)	113.5	105.5	108.8	103.2	110.7
Soot	6.9	6.4	6.6	6.0	6.7