

GHG EMISSIONS AND ENERGY EFFICIENCY

2020 highlights

Total GHG emissions

43.57 Mt CO₂e

GHG emission intensity

1.97 t CO₂e/tcs

Total energy consumption

351.81 million GJ¹

Energy intensity

23.30 GJ/tcs²

Approach

EVRAZ recognises the importance of taking action to combat climate change in order to prevent negative and irreversible impacts resulting from further rises in global average temperatures. In 2020, the Group took its first steps in assessing climate-related risks in accordance with Task Force on Climate-related Financial Disclosures (TCFD) recommendations. These include conducting a qualitative evaluation and plans to improve the analysis of these risks in the future.

EVRAZ' approach to managing climate change risks is to systematically reduce greenhouse gas emissions by implementing best practices and technologies.

A substantial part of these initiatives to lower total and specific GHG emissions relates to energy and fuel consumed at the Group's facilities. These projects are aimed at enhancing energy efficiency and boosting the use of renewable and secondary energy sources. The Group is working to reduce the carbon intensity of its energy sources and to increase its own power generation and self-sufficiency by recycling 100% of secondary energy resources generated at its metallurgical plants. In addition, in order to enhance energy efficiency, EVRAZ is working to improve energy management at its assets and to engage all employees in energy efficiency issues. EVRAZ plans to implement several related projects in the next five years. These are expected to not only lower energy costs, but also the negative impacts of accelerating climate change.

GHG emissions

Mining and metallurgical operations are energy intensive and produce a high level of carbon dioxide (CO₂) and other greenhouse gas emissions that contribute to climate change.

¹ or 97,723 million kWh.

² or 6,472 kWh/tcs

EVRAZ recognises its commitment to climate change mitigation and understands that businesses must play an active role in finding solutions. By adopting TCFD recommendations, the Group keeps stakeholders informed about the risks it faces due to climate change, as well as opportunities to manage these risks.

The Group supports global initiatives to combat climate change, as well as national climate-related strategies in the countries where it operates. As a member of organisations such as Russian Steel and the World Steel Association, EVRAZ resolutely supports efforts at climate mitigation and adaptation.

Another milestone for the Group in 2020 was joining the UN Global Compact initiative, which considers business as a force for good and will support the Group's efforts to promote the transition to a low-carbon future. As a participant in the UN Global Compact, EVRAZ promotes a preventive approach to environmental challenges and greater environmental responsibility, as well as work to develop and implement "green" technologies, such as those that lower its GHG emissions.

EVRAZ' commitment to reducing greenhouse gas emissions is reflected in its goals. The Group has set a target for the period 2018–2022 of maintaining specific Scope 1 and 2 GHG emissions from steel production (the Steel and North America segments) below 2 tonnes of carbon dioxide equivalent per tonne of crude steel (tCO₂e/tcs). This target was reached in 2019, with a level of 1.97 tCO₂e/tcs. In 2020, EVRAZ was able to meet the target, with the same value of 1.97 tCO₂e/tcs.

During 2020, the Group developed an updated Environmental strategy that sets forth new and ambitious climate-related

goals up to 2030, using 2019 as a baseline year. These steps include:

- Reducing specific Scope 1 and 2 GHG emissions from EVRAZ's Steel segments (the Steel and North America segments) by 20%, which complies with the Paris Agreement. Efforts to meet this goal will involve modernisation and energy efficiency measures, with energy efficiency projects representing a core focus for EVRAZ in lowering its level of GHG emissions. In addition to energy efficiency initiatives, during the development of the Group's Environmental strategy, EVRAZ considered several promising projects for switching to the best technologies available aimed at reducing GHG emissions, including the return of sinter gases to the sinter furnace and gas tank installation for the recovery of converter gas and heat at oxygen converter shop no. 2. It is planned to adopt these technologies in the future as part of the implementation of the Environmental strategy to 2030.
- Utilising 75% of methane (CH₄) emitted in the process of degassing carried out during coal mining.

In 2021, the Group plans to improve its approach to estimating greenhouse gas emissions, including the methodology for calculating them.

As above, EVRAZ discloses data in tCO₂e (tonnes of carbon dioxide equivalent), calculated using IPCC 2006 global warming potentials.

A comparative analysis of GHG emissions from the Group's operations, for the period 2016 to 2020, demonstrates relatively stable growth in total GHG emissions. In 2020, nearly all of EVRAZ's overall GHG emissions remained at the same level, rising by only 0.51%

Climate Change Report 2020

In October 2020, EVRAZ issued its first dedicated Climate Change Report compliant with TCFD recommendations and providing stakeholders with additional information about the Group's approach to climate change. This includes the role played by top management in this area and the organisational structure of climate-related risk management. In 2020, EVRAZ conducted its first climate scenario review, determining and analysing relevant transition

and physical climate-related risks, as well as identifying appropriate opportunities. Insights into how climate change under different scenarios will impact the Group's operations, how significant this will be, and which actions will be taken are presented in the report. The report also provides information on EVRAZ' vision for a low-carbon future for steel producers.

Discover more in the Climate Change Report: <https://www.evraz.com/en/sustainability/data-center/climate-change-reports/>

compared to 2019. There was also a 0.87% rise in the Group's direct GHG emissions.

The increase was mainly attributable to an annual increase in methane emissions (by 5.4% vs. 2019), due to higher methane concentrations in the coal seams and more intense degassing at some mines.

As methane is combustible, the Group carries out preliminary degassing to improve employee safety. To boost efficiency in this regard, it is important to increase the volume of gas captured. If generates higher methane emissions, and to reduce these, EVRAZ plans to conduct research and development projects on methane utilisation in 2021.

In 2020, EVRAZ reduced its Scope 2 emissions by 2.8%. This was due to lower steel production at the Group's North American assets, which have no integrated power plants and have to purchase electricity from the market, and a decrease in electricity purchases by Russian steel mills.

EVRAZ GHG emissions, 2016–2020, million tCO₂e

	2016	2017	2018	2019 ¹	2020
Direct (Scope 1)	35.81	36.68	34.56	39.06	39.41
Consisting of:					
– CO ₂	28.76	28.35	26.86	27.96	27.71
– CH ₄	6.99	8.26	7.64	11.04	11.64
– N ₂ O	0.07	0.06	0.06	0.06	0.06
– PFC and HFC	0.0001	0.00003	0.00009	0.00002	0.00012
– SF ₆	–	–	–	–	–
– NF ₃	–	–	–	–	–
Indirect (Scope 2)	5.02	4.97	4.23	4.28	4.16
Total GHG emissions	40.83	41.65	38.79	43.35	43.57

Note: Scope 1 data includes emissions in tonnes of carbon dioxide equivalent from the combustion of fuel and from other sources that are owned or controlled by the company.

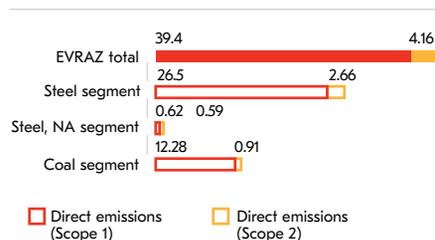
The Steel segment (incl. North America) continues to generate a significant portion of the Group's gross GHG emissions, and accounted for 70% of the total GHG level in 2020. Operations in the Coal segment accounted for 30% of overall GHG emissions

in 2020, almost all of which (94%) were methane emissions.

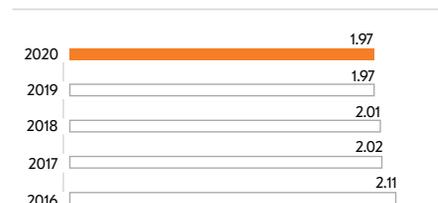
Overall emissions in the steel sector (the Steel and North America segments) were 0.5% lower than the 2019 level, mostly due

to a minor decrease in crude steel production and therefore the specific intensity of GHG emissions remains at the same level of 1.97 tCO₂e/tcs.

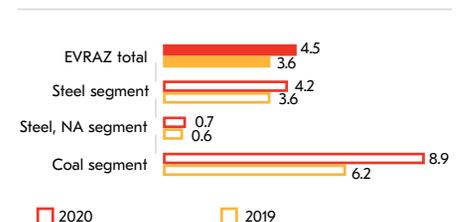
EVRAZ Scope 1 and 2 GHG emissions in 2020, million tCO₂e



Specific Scope 1 and 2 GHG emissions from steel production (the Steel and North America segments), tCO₂e/tcs



GHG emissions per consolidated revenue in 2020 vs. 2019, kgCO₂e/US\$



¹ The numbers for 2019 were recalculated, which resulted in a downward correction of 0.03 million tCO₂e for direct GHG emissions (Scope 1).

Energy efficiency

EVRAZ strives to improve the energy efficiency of all its facilities to minimise the Group's environmental impact. This helps to reduce greenhouse gas emissions, as well as energy and process fuel costs. Energy intensity is an important aspect of the energy efficiency programmes at EVRAZ.

The energy management system is the primary driver of energy efficiency transformation processes. In 2019, the Group's senior management decided to create a separate function to strengthen the energy management system at its production divisions in Russia. These efforts focused partly on production processes and the transportation of energy resources to power plants at facilities. They also sought to expand the scale of the energy efficiency management approach to include energy consumption processes at steel production workshops.

In 2020, several changes were made to the energy efficiency management function. A group of energy management system experts was created at the two most energy-intensive facilities, EVRAZ ZSMK and EVRAZ NTMK. These two enterprises account for more than 85% of the Group's energy consumption. Energy management teams were formed to monitor energy consumption, minimise energy intensity and reduce energy costs.

Results in 2020

Based on the positive lessons learned at EVRAZ ZSMK in September 2019, EVRAZ NTMK and EVRAZ KGOK held Idea Factory sessions in February 2020. Called "Growth Points. Energy Efficiency", the sessions helped to shape the energy efficiency programmes at steel production workshops.

The Group also conducted an ambitious target setting cycle covering energy efficiency. It relied on industry benchmarking and a review of best production practices in each technological segment to evaluate the potential to reduce energy intensity. It resulted in short-term and long-term targets being set, as well as further steps for reducing energy consumption being identified.

Digital transformation in power supply

In 2020, EVRAZ ZSMK's thermal power plant launched a system for modelling operating conditions, as well as calculating technical and economic metrics. The system is capable of calculating the optimal composition and load of primary and auxiliary equipment. It can also monitor power plant KPIs and predict standard specific fuel equivalent consumption.

The project helped to reduce specific fuel consumption by:

1.4% for electricity supplies
0.9% for thermal energy supplies

Based on the lessons learned from this initiative, the system will be rolled out at EVRAZ NTMK's thermal power plant in 2021.

Installation of gas top pressure recovery turbine at EVRAZ NTMK

EVRAZ NTMK is installing a gas top pressure recovery turbine to generate energy from secondary sources. This technology makes it possible to convert blast furnace gas pressure energy into electric power without the combustion of additional fuel. The facility is expected to be more advanced and powerful than its counterparts, of which there are only five in Russia.

The new turbine is scheduled to be launched in the first quarter of 2021. It will help EVRAZ NTMK to enhance its resource and energy efficiency, increase its self-sufficiency in electricity and lower the cost of its final products.

As the technology does not consume additional fuel, it will help to reduce overall CO₂ and other emissions, in proportion to the volume of electricity generated.

In 2020, EVRAZ developed a comprehensive programme aimed at creating a system to fully track the consumption of energy resources at the workshop and plant level. The process included an assessment of ways for production personnel to have an immediate impact on fuel and energy costs in the technological process. The initial phase of the programme's implementation will help to reduce unaccounted interdepartmental energy flows by 30% in 2021.

The Group's energy efficiency programmes are helping to achieve the goal of reducing the energy intensity of its production processes. The programmes include initiatives covering a five-year period.

The main aspects of the energy efficiency programmes include:

- Optimising and minimising energy consumption and losses at production sites, including electricity, thermal energy, fuel, natural gas and air gases.
- Using secondary and renewable energy sources.
- Optimising the blend of furnace charge, coking coal and process fuel.
- Automating energy-intensive equipment.
- Implementing digital transformations of energy supply systems.

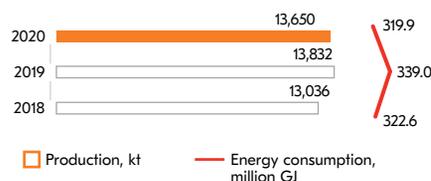
In 2020, EVRAZ NTMK continued to install a gas top pressure recovery turbine at blast furnace No. 7. This project is as part of an initiative to reduce electricity purchases by generating energy in-house.

As part of its energy efficiency efforts, the Group has begun to track energy intensity metrics at all of its production facilities. EVRAZ is using this new KPI to improve employee engagement and motivation. Success in improving energy efficiency also requires daily efforts to enhance the operational efficiency of equipment.

In 2020, the Group's total energy consumption decreased by 5.3% year on year (to 319.8 million GJ), including the energy consumption of metallurgical enterprises which decreased by 5.6% year on year (to 319.9 million GJ), consumption of iron ore and coal assets - by 2.5% (to 31.9 million GJ). It should be noted that the specific energy intensity of EVRAZ NTMK and EVRAZ ZSMK also decreased, by 9% (compared to 2018 which is a base year) due to the development of the energy management system.

The Group is working diligently to develop and improve its energy management system. In January 2021, EVRAZ NTMK recertified the compliance of its energy management system with the updated ISO 50001:2018 standard. Going forward, EVRAZ ZSMK and EVRAZ KGOK also plan to receive ISO 50001 certification.

Total energy consumption of EVRAZ' steelmaking operations and its production, 2018 - 2020¹



Note: Energy consumption in million kWh: 88,871 in 2020, 94,163 in 2019 and 89,617 in 2018.

Energy intensity of EVRAZ' steelmaking operations, 2018 - 2020, GJ/t²

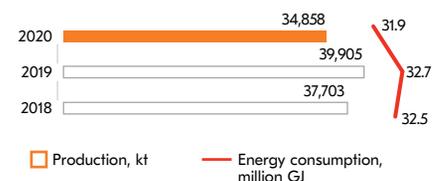


Note: EVRAZ energy intensity in kWh: 6,472 in 2020, 6,805 in 2019 and 7,027 in 2018.

Outlook for 2021

In 2021, EVRAZ will develop a comprehensive methodology for assessing the development of the energy management systems throughout the Group's facilities. This methodology will be applied during internal energy management audits at the segment and shop levels.

Total energy consumption of EVRAZ' mining operations (coal and iron ore) and its production, 2018 - 2020¹



Note: Energy consumption in million kWh: 8,852 in 2020, 9,079 in 2019 and 9,021 in 2018.

Note: EVRAZ does not have any production facilities in the UK, only the office. Data for UK office as well as data for offices located in Russia and North America were not included in the graphs, since the volumes of consumed power are not material in terms of overall energy consumption within the Group.

EVRAZ will also continue to integrate energy efficiency criteria in its procurement and investment processes. The Group is actively working to purchase energy efficient electric motors and transformers.

In addition, EVRAZ will implement measures as part of its energy efficiency programme aimed at reducing energy intensity. These measures are part of the ambitious targets that the Group has set for each of its facilities.

¹ This graph presents gross output as the sum of production volume metrics for key products (raw steel, iron ore products and unprocessed coking coal) and vanadium slag. To calculate the Group's total energy consumption, this Report takes into account all energy used at EVRAZ facilities, including for the production of coke, coke products, energy and heat. The graphic shows data for EVRAZ ZSMK (including Evrazruda), EVRAZ NTMK, EVRAZ KGOK, EVRAZ Vanady-Tula, Rospadskaya, EVRAZ Caspian Steel, EVRAZ Nickel and the Group's Steel, North America segment. To compute total energy consumption within the Group, the formula given in GRI 302-1 is used (the sum of fuel consumed, non-renewable and renewable, and electricity, heating, cooling, steam purchased for consumption and self-generated which are not consumed minus the volumes of electricity, heating, cooling, and steam sold).

² The figure includes data on the Steel segment (EVRAZ ZSMK, EVRAZ NTMK), Steel, North America segment (EVRAZ Portland, EVRAZ Pueblo, EVRAZ Regina, EVRAZ Camrose, EVRAZ Calgary, and EVRAZ Red Deer). To calculate energy intensity ratio for the Group, the formula given in GRI 302-3 is used (the volumes of energy consumed per unit produced).