

Greenhouse Gas Emissions Report of NJSC “K.I. Satbayev Kazakh National Research Technical University” for 2024

The Greenhouse Gas (GHG) Emissions Report of NJSC “K.I. Satbayev Kazakh National Research Technical University” for 2024 has been prepared in accordance with the requirements of the Greenhouse Gas Protocol (WRI/WBCSD, *A Corporate Accounting and Reporting Standard, Revised Edition*).

About the Report:

For the purposes of preparing the greenhouse gas emissions report, Satbayev University established organizational boundaries that include greenhouse gas emission sources of Category 1, Category 2, and Category 3 that are under the operational control of Satbayev University.

As of the end of the reporting calendar year, namely as of December 31, 2024, 58 movable and immovable assets, including a compact drilling rig, were under the operational control of Satbayev University. The operational boundaries of Satbayev University include all sources of direct greenhouse gas emissions from owned stationary and mobile assets (Category 1), all sources of indirect greenhouse gas emissions from the University’s own energy-consuming equipment (Category 2), as well as indirect emissions that are not generated by Satbayev University itself and are not the result of activities of assets owned or controlled by it (Category 3).

As of the end of the reporting year (31.12.2024), Satbayev University generated greenhouse gas emissions exclusively within the territory of the Republic of Kazakhstan. For the purposes of this report, a data collection approach at the level of the entire Satbayev University structure is used, as well as direct quantitative determination of greenhouse gas emissions based on consolidated resource consumption information and the application of common national emission factors overall. This approach will make it possible, where necessary, to recalculate base-year emissions for the entire Satbayev University complex in the event of changes in the calculation methodology or changes in the operational boundaries of Satbayev University in future periods. This approach also takes into account the fact that Satbayev University is located exclusively within the Republic of Kazakhstan, which makes it possible to apply uniform national greenhouse gas emission factors. The use of such an approach, in accordance with the recommendations of ST RK ISO 14064-1-2019, reflects the existing practice used by Satbayev University in making decisions on emission reduction strategies in future business practice.

ORGANIZATIONAL BOUNDARIES

Please indicate the approach used for data consolidation (check all data consolidation approaches used for the purposes of preparing the greenhouse gas emissions report). If an organization uses several data consolidation approaches, a separate greenhouse gas emissions reporting form must be completed for each approach.

Equity share <input type="checkbox"/>	Financial control <input type="checkbox"/>	Operational control <input checked="" type="checkbox"/>
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In accordance with the rules of the Greenhouse Gas Protocol, an organization shall choose the approach for defining organizational boundaries that ensures the most complete accounting of day-to-day business operations. The approach used to define the operational boundaries of the organization shall most clearly reflect the specifics of the organization’s business activities in order

to ensure a complete accounting of greenhouse gas emissions. For the purposes of the greenhouse gas emissions report of Satbayev University, the approach based on Satbayev University's operational control over greenhouse gas emission sources is used. This approach was selected based on the specifics of Satbayev University's activities. Moreover, such an approach relies on the requirements for financial and statistical regular reporting. Operational control means the ability to make managerial decisions regarding the operational activities of an asset that may lead to changes in greenhouse gas emissions. Hereinafter, the term "asset" refers both to real estate properties and mobile assets that result in greenhouse gas emissions.

The total area of real estate properties owned by Satbayev University is 115,388.70 sq. m. Satbayev University does not have any leased real estate properties. The utilized area of the properties is 71,145.8 sq. m, of which office premises account for 69,457.8 sq. m, and storage and other auxiliary premises, including garages and warehouses, account for 1,688 sq. m. Mobile assets of Satbayev University include motor vehicles and specialized equipment. In addition, a compact drilling rig is under the operational control of Satbayev University.

For the purposes of this report, the organizational boundaries include the following greenhouse gas emission Categories:

Direct emissions (Category 1) from sources that are owned or leased include greenhouse gas emissions from fuel combustion in equipment located directly at Satbayev University facilities, as well as fugitive greenhouse gas emissions from industrial or household equipment (for example, refrigerant leakage from stationary air-conditioning systems).

Greenhouse gas emissions from mobile sources owned by Satbayev University.

Indirect emissions (Category 2) from purchased electricity and thermal energy for facilities owned and leased by Satbayev University.

Indirect emissions (Category 3) include indirect emissions resulting from employee business trips and commuting between home and office, as well as waste disposal transferred to a third-party organization, and the accounting of drinking water in the office and paper consumption.

For the purposes of the report, the organizational boundaries include the following greenhouse gases. The Satbayev University report includes the following 4 out of the 6 main greenhouse gases (at the time of preparation of this report, there was no information on sulfur hexafluoride (SF6) and PFC emissions at Satbayev University facilities):

- CO2
- CH4
- N2O4
- HFC

Reporting year

Reporting year
from 01/01/2024 to 31/12/2024

Information on greenhouse gas emissions

Information on the total volume of Category 1 emissions (direct greenhouse gas emissions) and Category 2 emissions (indirect greenhouse gas emissions from imported energy, excluding any operations involving the acquisition, sale, transfer, or storage of carbon units), as well as, optionally, Scope 3, excluding any operations involving the acquisition, sale, transfer, or storage of carbon units.

The total emissions of Category 1, Category 2, and Category 3 amount to 36,935.85 tCO₂-eq.

Information on emissions separately for each Category

Emissions	Total (tCO ₂ e)	CO ₂ (t)	CH ₄ (t)	N ₂ O (t)	HFCs (t)	PFCs (t)	SF ₆ (t)
Category 1	3710,29	34,38	0,05	0,684 3	3675,1 6	-	-
Category 2	23546,93	23546,93	-	-	-	-	-
Category 3 (optional)	9678,63	9473,74	24,66	180,2 4	-	-	-
Total	36 935, 85						

Conclusion

Total greenhouse gas emissions of the NJSC “K.I. Satbayev Kazakh National Research Technical University” for 2024 amounted to 36,935.85 tCO₂-eq.

Head of the Project Office for Sustainable Development Goals – Support and Facilitation of Inclusive Education

 2026 y.



G. Burshukova