

Greenhouse gas emissions report 2025

This report sets out the verified greenhouse gas emissions of Heydar Aliyev International Airport for 2022 to 2025.

30,219 t

Scope 1 and 2 emissions in 2025 (tCO₂e)

-21%

Scope 1 and 2 emissions, 2025 vs. 2022 base year

-55%

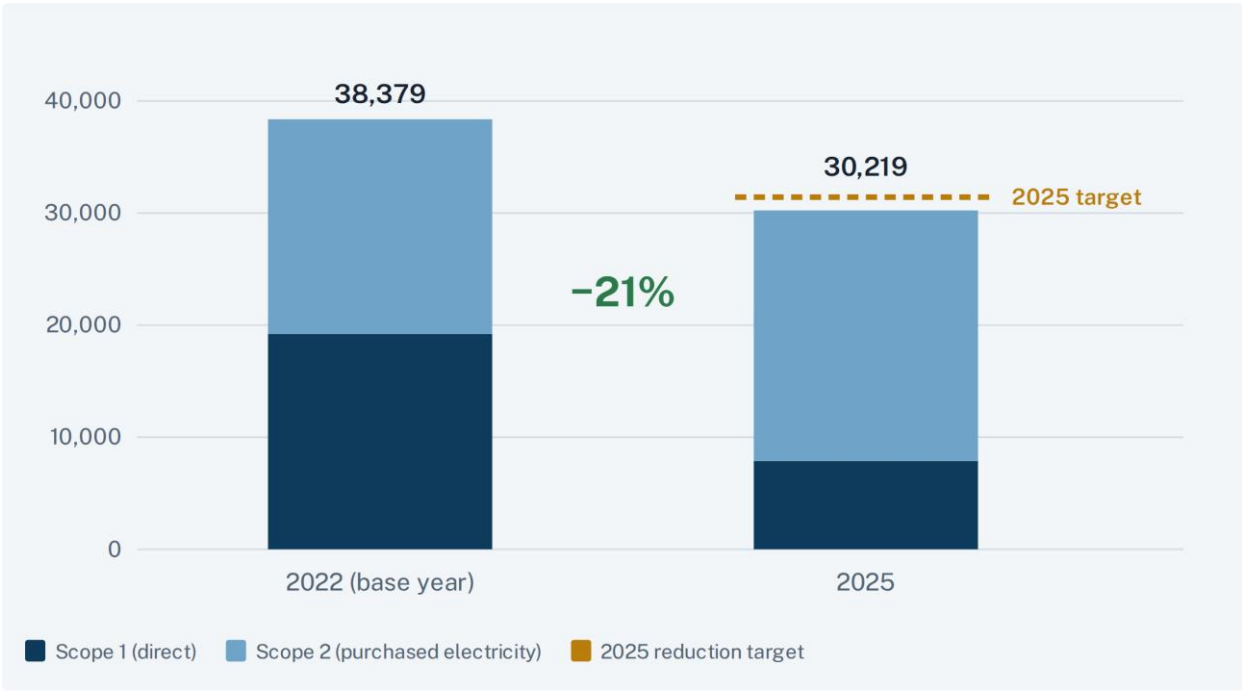
Scope 1 and 2 emissions per passenger, 2025 vs. 2022

7.63M

passengers served in 2025, up 74% on 2022

Emissions under our direct control (Scope 1 and 2)

Scope 1 covers fuel burned in the airport's own boilers, generators, vehicles and equipment, and refrigerant or fire-suppressant leakage. Scope 2 covers the electricity the airport buys from the grid, excluding electricity resold to tenants.



Scope 1 and 2 emissions, tCO₂e (2022 = base year)

Source	2022	2023	2024	2025	2025 vs. 2022
Scope 1 – direct emissions	19,207	15,132	15,724	7,875	–59%
Stationary combustion (boilers, generators)	9,717	7,972	8,443	4,766	–51%
Mobile combustion (vehicles, equipment)	5,863	3,393	2,476	1,882	–68%
Refrigerant and fire-suppressant leakage	3,626	3,767	4,804	1,228	–66%
Scope 2 – purchased electricity	19,173	19,687	23,139	22,344	+17%
Total Scope 1 and 2	38,379	34,818	38,862	30,219	–21%

Figures are rounded to the nearest tonne; totals may differ slightly from the sum of rounded components. Scope 2 is calculated using a location-based grid emission factor, which was updated for 2025 from 0.4394 to 0.5329 kg CO₂e/kWh to reflect more recent data. At the factor used in 2022, 2025 Scope 2 emissions would be 18,423 tCO₂e, 4% below the base year. The increase shown in the table therefore reflects the updated factor, not higher electricity use.

Carbon intensity**Scope 1 and 2 emissions per passenger**

Indicator	2022	2023	2024	2025
Passengers	4,384,500	5,765,000	7,537,800	7,634,991
kg CO ₂ e per passenger	8.75	6.04	5.16	3.96
Change vs. 2022	–	–31%	–41%	–55%

Wider airport emissions (Scope 3)

Scope 3 covers emissions at and around the airport that we do not own or control but can influence: aircraft operations, passenger and staff travel to the airport, fuel and electricity used by airlines, ground handlers and tenants, waste, and business travel. We have reported Scope 3 since 2024.

Scope 3 emissions, tCO₂e

Source	2024	2025
Aircraft landing and take-off cycle (below 3,000 ft)	44,780	79,661
Aircraft auxiliary power units	389	9,047
Surface access (passengers, visitors, tenant staff, cargo)	104,201	22,731
Fuel used by ground handlers, tenants and partners	4,317	6,763
Electricity used by tenants and leased assets	15,371	2,173
Airport staff commuting and business travel	13	413
Waste generated in operations	101	49
Scope 3 total (comparable basis)	169,172	120,836

In 2025 we extended the inventory to include the climb, cruise and descent phase of departing flights (509,597 tCO₂e), which was not assessed in 2024. It is shown separately below so that the two years can be compared on the same basis. Methods for aircraft, auxiliary power unit and surface-access emissions were also refined in 2025.

Total carbon footprint, tCO₂e

Scope	2024	2025
Scope 1 – direct emissions	15,724	7,875
Scope 2 – purchased electricity	23,139	22,344
Scope 3 – other indirect emissions (comparable basis)	169,172	120,836
Total (comparable basis)	208,034	151,055
Aircraft climb, cruise and descent (assessed from 2025)	–	509,597
Total including climb, cruise and descent	–	660,652

Reduction target: achieved in 2025

We aim to cut combined Scope 1 and 2 emissions by 5% each year, measured cumulatively from the 2023 reference year of 34,818 tCO₂e. In 2025 we achieved this target: emissions fell 22% from 2024 to 30,219 tCO₂e, 1,205 tCO₂e below the target level. This is a 13.2% reduction on the reference year against a required 9.75%, achieved while passenger numbers continued to grow.

2025 performance against target (Scope 1 and 2, tCO₂e)

Year	Target	Actual	Change vs. 2023	Result
2025	31,424	30,219	-13.2%	Achieved

Following the same 5% annual path, our Scope 1 and 2 targets are 29,852 tCO₂e for 2026 and 24,315 tCO₂e for 2030, a 30% reduction on 2023. Our long-term goal is net-zero emissions by 2050.

What we are doing

- Replaced more than 4,000 outdated light fittings with energy-efficient units and introduced new lighting controls, saving about 1.2 GWh of electricity and around 600 tCO₂e a year.
- Began implementing an ISO 50001:2018 energy management system in 2025.
- Upgraded the Terminal 1 Building Management System to control lighting and ventilation more efficiently, with more building systems to be connected next.
- Preparing to expand the use of renewable energy at the airport.

Reporting basis

Reporting period	Calendar years 2022–2025 (1 January to 31 December)
Base year	2022, the first year with complete data. The Scope 1 and 2 reduction target uses 2023 as its reference year.
Methodology	Airport Carbon Accreditation Application Manual (Issue 14) and IPCC 2006 Guidelines
Boundary	Operational control: all activities operated by the airport within the Heydar Aliyev International Airport site
Greenhouse gases	CO ₂ , CH ₄ , N ₂ O, HFCs, PFCs, SF ₆ and NF ₃ , expressed as CO ₂ equivalent using IPCC AR6 100-year global warming potentials
Emission factors	IPCC 2006 Guidelines, DEFRA, IEA and ACI's ACERT tool
Verification	Independently verified by an accredited third-party verifier

Heydar Aliyev International Airport, AZ1044, Baku, Azerbaijan. For questions about this report, visit www.airport.az.