

CARBON FOOTPRINT REPORT

Istanbul Sabiha Gökçen International Airport

Reporting period: 1 January 2022 – 31 December 2025

Baseline Year: 2022

Report in support of the Istanbul Sabiha Gökçen International Airport (ISG)
application to the Airports Council International Airport Carbon Accreditation

Programme — Level 2 (Reduction)

Prepared by: ISG Sustainability

Submission: 2026

Executive Summary

This Carbon Footprint Report has been prepared by ISG Sustainability Department on behalf of Istanbul Sabiha Gökçen International Airport (ISG) in support of its application to the Airports Council International (ACI) Airport Carbon Accreditation (ACA) Programme at Level 2 (Reduction). It documents Scope 1 and Scope 2 greenhouse gas (GHG) emissions for which ISG had direct operational control between 1 January 2022 and 31 December 2025, with 2022 established as the baseline year against which future emissions reduction performance will be measured.

ISG is the second-largest airport serving Istanbul and one of the fastest-growing airports in Europe. Located on the Asian side of Istanbul, the airport handled 48,414,368 passengers in 2025, representing a passenger growth of approximately 56 percent over the four-year reporting period. Despite this substantial increase in operational activity, the airport's absolute aggregate Scope 1 and Scope 2 emissions grew by only 8.85 percent over the same period, demonstrating a meaningful decoupling of emissions growth from passenger growth.

Key Findings

Indicator	2022 (Baseline)	2023	2024	2025
Scope 1 emissions (tCO ₂ e)	10,465.17	10,985.19	9,270.91	10,908.11
Scope 2 emissions (tCO ₂ e)	16,639.86	16,360.34	19,510.54	18,595.03
Total Scope 1+2 (tCO ₂ e)	27,105.03	27,345.53	28,781.46	29,503.15
Passengers	30,956,088	37,485,003	41,488,653	48,414,368
Carbon intensity (kg CO ₂ e / passenger)	0.8756	0.7295	0.6937	0.6094

★ Headline Achievement: Carbon Intensity Reduction

ISG has achieved a substantial 30.4 percent reduction in carbon intensity per passenger between the 2022 baseline year and 2025, with intensity falling from 0.8756 kg CO₂e per passenger to 0.6094 kg CO₂e per passenger. This demonstrates that operational efficiency improvements have outpaced absolute traffic growth — a key indicator of effective carbon management at a rapidly expanding airport.

Aggregate Scope 1 and Scope 2 emissions for which ISG had direct operational control in the 2022 baseline year were 27,105.04 tCO₂e. Scope 2 emissions, predominantly arising from grid-purchased electricity, account for the largest share of ISG's reported footprint at approximately 61 percent in the baseline year, reflecting both the energy intensity of terminal operations and the carbon intensity of the Turkish national electricity grid. Scope 1

emissions, primarily from natural gas combustion in ISG-controlled stationary combustion sources, including trigeneration-related consumption, represent the remaining share.

ISG hereby commits, through this report and its accompanying Carbon Management Plan, to establish measurable emission reduction targets for its direct operational boundary, with a primary focus on carbon intensity performance under ACA Level 2. The detailed methodology, scope definitions, emission factors and reduction strategy are set out in the sections that follow.

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1. Introduction

The Airport Carbon Accreditation Programme was launched by the Airports Council International (ACI) Europe in 2009 as the global aviation industry's first institutionally-endorsed framework for measuring, managing and ultimately reducing carbon emissions arising from airport operations. The programme has since been adopted across all ACI regions worldwide, including Asia-Pacific, North America, Latin America and the Caribbean, and Africa. It has become widely recognised as the international gold standard for airport carbon management and currently certifies hundreds of airports across six accreditation levels.

ACA Level 2 (Reduction) requires the participating airport to satisfy three principal requirements beyond those already met at Level 1 (Mapping). First, the airport must establish a robust greenhouse gas inventory covering all Scope 1 and Scope 2 emissions sources for which it has direct operational control. Second, the airport must adopt and publish a Carbon Management Plan that sets out the actions it will take to reduce its carbon footprint over time. Third, the airport must demonstrate emissions reduction performance against the selected emissions improvement metric, supported by a Carbon Management Plan and consistent year-on-year monitoring.

Istanbul Sabiha Gökçen International Airport, located in the Pendik district on the Asian side of Istanbul, is one of two main international gateways serving Türkiye's largest metropolitan area. The airport opened to commercial traffic in 2001 and has grown rapidly to serve over 48 million passengers in 2025, making it among the busiest airports in Europe by passenger throughput. The airport is operated under a Build-Operate-Transfer concession by ISG, in which Malaysia Airports Holdings Berhad holds a controlling interest.

ISG has made a strategic commitment to the Airport Carbon Accreditation programme as part of its broader environmental and sustainability agenda. This Carbon Footprint Report represents the formal documentation of ISG's Scope 1 and Scope 2 emissions profile within its direct operational control boundary and establishes the analytical foundation for ISG's emission reduction trajectory in the years ahead.

Existing Management System Certifications

ISG operates an integrated environmental and quality management framework certified to internationally recognised ISO standards, including ISO 14001 (Environmental Management System), ISO 9001 (Quality Management System), ISO 45001 (Occupational Health and Safety Management System), and ISO 50001 (Energy Management System). The greenhouse gas inventory has been prepared with reference to ISO 14064-1 principles and will be subject to independent verification as part of the ACA Level 2 process. These certifications provide a robust governance and data-collection framework that underpins the carbon footprint reported in this document.

2. Definitions

The Airport Carbon Accreditation programme draws upon the Greenhouse Gas Protocol (GHGP) Corporate Accounting and Reporting Standard and ISO 14064-1 to provide consistency in organisational greenhouse gas reporting across the aviation sector. The following definitions apply to the stakeholders and key terms used throughout this report.

Project Stakeholders

Role	Stakeholder
Reporting Entity / Client	Istanbul Sabiha Gökçen International Airport (ISG)
Airport Operator	ISG İstanbul Sabiha Gökçen Uluslararası Havalimanı Yatırım Yapım ve İşletme A.Ş.
State Airport Authority	DHMI (Devlet Hava Meydanları İşletmesi)
Civil Aviation Regulator	Turkish Directorate General of Civil Aviation (SHGM)
Verification Body	QSI Belgelendirme Muayene ve Test Hizmetleri Ltd. Şti.
Programme Operator	Airports Council International (ACI Europe)

Acronyms and Abbreviations

Acronym	Definition
ACA	Airport Carbon Accreditation
ACI	Airports Council International
CMP	Carbon Management Plan
DHMI	Devlet Hava Meydanları İşletmesi (Turkish State Airports Authority)
GHG	Greenhouse Gas
GHGP	Greenhouse Gas Protocol
IPCC	Intergovernmental Panel on Climate Change
ISG	Istanbul Sabiha Gökçen International Airport
LTO	Landing and Take-Off cycle
MAHB	Malaysia Airports Holdings Berhad
SAW	ICAO airport code for Sabiha Gökçen International
SHGM	Sivil Havacılık Genel Müdürlüğü (Turkish DGCA)
tCO ₂ e	Tonnes of carbon dioxide equivalent

3. Airport Organisational Structure

Istanbul Sabiha Gökçen International Airport is regulated by the Turkish Directorate General of Civil Aviation (SHGM), an agency of the Turkish Ministry of Transport and Infrastructure. Day-to-day operational responsibilities at the airport are divided between two principal entities: ISG, which holds the concession to operate the terminal facilities and most landside operations under a long-term Build-Operate-Transfer (BOT) arrangement, and DHMI (the Turkish State Airports Authority), which retains overall operational responsibility for the airside, including air traffic control, runway and taxiway management, navigation aids, and airfield safety operations.

Aviation Reporting Framework



Ownership Structure

ISG operates the airport under a long-term Build-Operate-Transfer (BOT) concession granted by the Turkish State. The airport's terminal operating company is owned by Malaysia Airports Holdings Berhad (MAHB), one of the world's largest airport operators by passenger throughput, which acquired full ownership of the concession company in 2014. MAHB is a publicly listed company headquartered in Kuala Lumpur and operates a portfolio of airports across Malaysia and internationally. The concession provides ISG with operational control over the terminal facilities and certain landside operations covered by this report. Accordingly, the ACA Level 2 boundary has been defined based on ISG-controlled assets and activities, while DHMI-controlled airside operations and third-party activities are excluded unless otherwise stated.

Internal Carbon Management Responsibility

Operational responsibility for carbon footprint reporting and the Carbon Management Plan resides with ISG's Quality, Environment and Sustainability Department, which coordinates data collection across all relevant operational functions. The department reports directly to senior management and works closely with the Energy Management team (responsible for electricity and natural gas data), the Fleet Management team (responsible for ground vehicle fuel data), the Facility Management team (responsible for refrigerant inventory and fire suppression systems) and the Procurement function (responsible for supplier-side data).

4. Carbon Management Policy and Commitment

ISG recognises that the aviation sector faces significant challenges in addressing its climate impact and that terminal operators have an important role to play in reducing emissions within their own operational control and, where feasible, collaborating with airlines, ground handlers, tenants and other stakeholders on wider airport-related emissions. ISG's carbon management approach is built upon the following commitments.

Statement of Commitment

ISG Carbon Management Commitment

ISG is committed to systematically measuring, monitoring and reducing the greenhouse gas emissions arising from its operations. ISG will pursue continuous improvements in energy efficiency, evaluate renewable and low-carbon energy options, optimise its fleet operations, manage refrigerants responsibly, and engage proactively with relevant stakeholders on emissions sources outside its direct operational control where appropriate. ISG will publicly disclose its carbon footprint annually through the ACA framework and will set transparent, measurable emission reduction targets aligned with international climate science.

Strategic Pillars

ISG's carbon management policy is structured around five strategic pillars that together provide the framework for emissions reduction across the airport's operational footprint:

Strategic Pillar	Description
Energy Efficiency	Continuous improvement of building energy performance through HVAC optimisation, LED lighting upgrades, smart building automation and ISO 50001-aligned energy management practices.
Renewable Energy Transition	Evaluation of renewable electricity options, including on-site solar PV potential, Power Purchase Agreements (PPAs) and internationally recognised renewable energy certificates such as I-RECs, subject to feasibility, budget approval and future Scope 2 market-based reporting considerations.
Fleet Decarbonisation	Phased electrification of the airport's owned ground vehicle fleet, prioritisation of low-emission alternatives at fleet renewal cycles, and adoption of operational practices that reduce overall fuel consumption.
Refrigerant Management	Systematic monitoring of refrigerant inventories, leak detection and prevention programmes, and gradual phase-out of high-GWP refrigerants in favour of lower-GWP alternatives at equipment renewal.
Stakeholder Engagement	Engagement with airlines, ground handlers, tenants and concessionaires on selected Scope 3-related topics in preparation for potential future ACA levels, while recognising that these emissions are outside ISG's current Level 2 reporting boundary.

5. Scope and Boundary Setting

This Carbon Footprint Report follows the GHG Protocol Corporate Accounting and Reporting Standard, which categorises greenhouse gas emissions into three scopes. Scope 1 covers direct emissions from sources owned or controlled by the reporting organisation, including stationary combustion (heating boilers and emergency generators), mobile combustion (owned vehicles), fugitive emissions (refrigerant leaks) and process emissions. Scope 2 covers indirect emissions from the generation of purchased electricity, heat, steam or cooling consumed by the organisation. Scope 3 covers all other indirect emissions occurring in the organisation's value chain, both upstream and downstream.

For the purposes of ACA Level 2, the reporting entity is required to report all material Scope 1 and Scope 2 emissions for which it has direct operational control. Reporting of Scope 3 emissions is not mandatory at Level 2 (it becomes a requirement at Level 3 and above), although ISG is already collecting some Scope 3 data in preparation for future progression to higher accreditation levels. The boundaries adopted for this report are described in the following subsections.

For clarity, the boundary of this report is limited to ISG-controlled terminal and landside operations, including terminal buildings, ISG-controlled car parks, ISG-controlled stationary combustion sources, emergency generators, ISG-owned or controlled vehicles, refrigerant systems and fire suppression equipment under ISG responsibility. DHMI-controlled airside operations, airline activities, third-party ground handling operations, passenger and employee surface access, and supply chain emissions are excluded from the current ACA Level 2 boundary.

5.1 Scope 1 — Direct Emissions

The following Scope 1 emission sources have been identified as material to ISG's operations and are included in this carbon footprint:

Source	Description
Stationary Combustion — Natural Gas	Natural gas combustion in ISG-controlled stationary combustion sources, primarily including the trigeneration plant and, where applicable, heating and hot water systems serving terminal buildings and ancillary facilities under ISG operational control.
Stationary Combustion — Diesel	Diesel fuel consumed in stationary emergency power generators that provide backup power for terminal operations and safety-critical systems.
Mobile Combustion — Gasoline	Gasoline consumed in ISG-owned light-duty vehicles, including passenger and operational vehicles used for management, security and maintenance functions.
Mobile Combustion — Diesel	Diesel consumed in ISG-owned or ISG-controlled vehicles, maintenance equipment and operational machinery within ISG's direct operational control boundary.

Source	Description
Fire Suppression Systems	CO ₂ released through the discharge of fire suppression systems including CO ₂ fire extinguishers and clean-agent gaseous suppression systems during testing or activation.
Refrigerant Fugitive Emissions	HFC refrigerant losses (including R410A and R134A) from split-type air-conditioning units, VRF systems, chillers and other ISG-controlled cooling equipment.

5.2 Scope 2 — Indirect Energy Emissions

Scope 2 emissions arise from the generation of energy purchased and consumed by ISG. The principal Scope 2 source at ISG is grid-purchased electricity used for terminal lighting, HVAC systems, baggage handling systems, escalators, lifts, IT infrastructure, passenger boarding bridges and other electrical loads within ISG's operational control boundary. The airport does not currently purchase district heating, cooling or steam from external suppliers; these services are met through on-site combustion (already captured under Scope 1) and through electrical heating and cooling systems (captured under purchased electricity in Scope 2).

Tenant and concessionaire electricity consumption within the terminal is treated according to data availability and metering boundaries. For the reporting years covered by this report, electricity consumption included within ISG's master meters has been conservatively included in Scope 2 where it cannot be consistently separated. Sub-metered tenant consumption may be separately identified and excluded from ISG's direct operational boundary in future reporting cycles, provided that the data separation is complete, consistent and auditable.

5.3 Activities Excluded from the Carbon Footprint

Consistent with ACA Level 2 guidance, the following activity categories are excluded from this carbon footprint as they fall under the operational control of other parties or relate to Scope 3 categories not required at this accreditation level:

Excluded Activity	Reason for Exclusion
Aircraft fuel combustion (taxi, take-off, climb, cruise, descent, landing, APU)	<i>Under operational control of airlines</i>
Ground handling and ground support equipment owned by third parties	<i>Under operational control of ground handlers</i>
DHMI airside operations (ATC, runway lighting, navigation aids)	<i>Under operational control of DHMI</i>
Tenant and concessionaire energy consumption (sub-metered)	<i>Tenant and concessionaire energy consumption separately metered and consistently separable from ISG master-meter data</i>

Excluded Activity	Reason for Exclusion
	<i>Outside ISG direct operational control; excluded only where data separation is complete and auditable</i>
Passenger and employee surface access journeys	<i>Scope 3 — not required at Level 2</i>
Business travel and supply chain emissions	<i>Scope 3 — not required at Level 2</i>
Fire-fighting exercises by DHMI	<i>Under operational control of DHMI</i>

6. Baseline Year

In accordance with ACA Level 2 requirements, ISG has formally established 2022 as the baseline year against which all future emission reduction performance will be measured and reported. The selection of 2022 as the baseline year reflects the following considerations:

Selection Criterion	Justification
Operational normality	The 2022 calendar year represents the first full reporting year following the recovery of passenger traffic from the COVID-19 pandemic disruption of 2020 and 2021, providing a representative baseline of normal airport operations.
Data quality and completeness	Comprehensive activity data covering all material Scope 1 and Scope 2 emission sources is available for 2022, with documented chains of custody from primary measurement (utility meters, fuel purchase records, refrigerant inventories) through to emissions calculation.
Methodological consistency	The same activity data collection methodology and emission factor sources have been applied consistently across all four reporting years (2022 through 2025), ensuring valid year-on-year comparisons.
Forward-looking relevance	Selecting a recent baseline year ensures that future reduction commitments are measured against a representative current state of operations rather than against pre-pandemic conditions that may not be directly comparable.

Baseline Year Emissions Profile

ISG's aggregate Scope 1 and Scope 2 emissions in the 2022 baseline year were 27,105.04 tCO₂e, comprising 10,465.17 tCO₂e from Scope 1 sources (38.6 percent) and 16,639.86 tCO₂e from Scope 2 grid electricity (61.4 percent). Passenger throughput in the baseline year was 30,956,088, yielding a baseline carbon intensity of 0.8756 kg CO₂e per passenger.

7. Greenhouse Gas Assertion

The Reporting Entity (ISG) and the report preparer (ISG Sustainability Department) jointly assert that the aggregate Scope 1 and Scope 2 greenhouse gas emissions for which ISG had direct operational control at Sabiha Gökçen International Airport during the reporting periods specified are as set out in the table below. These figures include all material Scope 1 and Scope 2 emission sources arising from assets and activities under ISG's direct operational control within the defined ACA Level 2 reporting boundary.

Reporting Year	Scope 1 (tCO ₂ e)	Scope 2 (tCO ₂ e)	Total (tCO ₂ e)	kg CO ₂ e/pax
2022 (Baseline)	10,465.17	16,639.86	27,105.03	0.8756
2023	10,985.19	16,360.34	27,345.53	0.7295
2024	9,270.92	19,510.54	28,781.46	0.6937
2025	10,908.11	18,595.03	29,503.15	0.6094

The inventory covers CO₂, CH₄ and N₂O from stationary and mobile combustion sources, and HFCs from refrigerant losses where applicable. No material sources of PFCs, SF₆ or NF₃ have been identified within ISG's ACA Level 2 operational boundary for the reporting period.

8. Company Information

Reporting Entity:

ISG İstanbul Sabiha Gökçen Uluslararası Havalimanı Yatırım Yapım ve İşletme A.Ş.

Registered Address:

Sanayi Mahallesi, Sabiha Gökçen Havalimanı

34906 Pendik, İstanbul, Türkiye

Airport Code (ICAO / IATA):

LTFJ / SAW

Website:

www.sabihagokcen.aero

9. Reporting Period

This Carbon Footprint Report covers four consecutive calendar years from 1 January 2022 through 31 December 2025. The 2022 reporting year serves as the baseline year as set out in Section 6, while subsequent years (2023, 2024 and 2025) document the evolution of emissions and operational performance against the baseline. The 2025 reporting year constitutes the principal reporting year against which ACA Level 2 reduction performance will be assessed.

10. Summary Report 2022–2025

Table 1 below summarises ISG's Scope 1 and Scope 2 greenhouse gas emissions and operational metrics for the four reporting years. The summary report consolidates the activity data presented in detail in Section 12 and provides the headline figures used in the emissions analysis (Section 14) and the reduction target setting (Section 15).

Table 1 — Carbon Footprint Summary 2022–2025

Indicator	2022 Baseline	2023	2024	2025	Δ vs '22
Scope 1 — Total (tCO ₂ e)	10,465.17	10,985.19	9,270.91	10,908.11	+4.2%
Scope 2 — Total (tCO ₂ e)	16,639.86	16,360.34	19,510.54	18,595.03	+11.7%
Aggregate Scope 1+2 (tCO ₂ e)	27,105.03	27,345.53	28,781.46	29,503.15	+8.8%
Passengers (millions)	30.966	37.485	41.488	48.414	+56.4%
Carbon Intensity (kg CO ₂ e/pax)	0.8756	0.7295	0.6937	0.6094	-30.4%

Key Observation: Decoupling of Emissions from Passenger Growth

Between 2022 and 2025, passenger throughput at ISG increased by 56.4 percent, from 31.0 million to 48.4 million passengers. Over the same period, aggregate Scope 1 and Scope 2 emissions grew by only 8.85 percent. This represents a substantial relative decoupling of emissions from operational growth, evidenced by the 30.4 percent reduction in carbon intensity per passenger across the four-year reporting period.

11. Methodology

11.1 Reporting Standards and Guidance

This Carbon Footprint Report has been prepared in accordance with the following internationally recognised standards and guidance documents:

- Airport Carbon Accreditation Programme — Application and Verification Guidance (current edition)
- Greenhouse Gas Protocol — Corporate Accounting and Reporting Standard (Revised Edition, World Resources Institute and World Business Council for Sustainable Development)
- Greenhouse Gas Protocol — Scope 2 Guidance
- ISO 14064-1:2018 — Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals
- IPCC 2006 Guidelines for National Greenhouse Gas Inventories (and 2019 Refinement)

11.2 Emissions Quantification Approach

Greenhouse gas emissions have been calculated by applying source-specific emission factors to activity data for each Scope 1 and Scope 2 source. The general calculation formula is:

Emissions Calculation Formula

Emissions (kg CO₂e) = Activity Data (e.g. m³ of natural gas, litres of diesel, kWh of electricity) × Emission Factor (kg CO₂e per unit of activity)

All emissions are reported in kilograms or tonnes of carbon dioxide equivalent (CO₂e), which incorporates the global warming potentials (GWPs) of the principal greenhouse gases including carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O), and where relevant, hydrofluorocarbons (HFCs) for refrigerant emissions. GWPs applied are those published by the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (AR6), 100-year time horizon, in line with current ACA guidance.

11.3 Activity Data Collection

Activity data has been collected from primary internal records maintained by ISG's operational departments. The principal data sources by category are summarised below:

Activity Category	Primary Data Source
Natural gas consumption	Monthly utility invoices from natural gas distribution company; supplemented by on-site flow meter readings.
Vehicle fuel — gasoline and diesel	Fuel purchase records, fuel station logs and vehicle fleet management system records.
Stationary diesel — emergency generators	Fuel delivery and consumption records maintained by Facility Management.
Refrigerant inventories	Equipment maintenance records, refrigerant procurement records and HVAC contractor service reports.
Fire suppression discharges	Fire safety equipment service records and incident logs.
Grid-purchased electricity	Monthly utility invoices from the licensed electricity supplier; cross-checked against on-site sub-meter readings.

11.4 Emission Factors

Emission factors applied in this report have been selected from internationally recognised, publicly available and authoritative sources. For Scope 1 stationary and mobile combustion sources, emission factors have been sourced from the IPCC 2006 Guidelines for National Greenhouse Gas Inventories. For refrigerants, the global warming potentials published by the IPCC Fifth Assessment Report (AR6) have been applied to refrigerant losses to derive CO₂-equivalent emissions. For Scope 2 grid electricity, a Türkiye-specific national grid emission factor has been applied based on the most recent locally published data for the carbon intensity of the Turkish electricity mix.

The complete schedule of emission factors used in the calculations is presented in Appendix B at the end of this report.

11.5 Scope 2 Methodology — Location-Based Approach

ISG has applied the location-based methodology for Scope 2 emissions reporting in accordance with the GHG Protocol Scope 2 Guidance. Under this approach, the Türkiye national grid average emission factor of 0.4340 kg CO₂e per kWh has been applied to all grid-purchased electricity. ISG does not currently procure renewable energy through Power Purchase Agreements or retire renewable energy certificates such as I-RECs, and therefore a market-based Scope 2 calculation is not separately reported. Should ISG enter into renewable electricity supply contracts in future reporting periods, the report will be updated to include both location-based and market-based Scope 2 figures, as required by the GHG Protocol.

Electricity generated by ISG's trigeneration plant is not reported as Scope 2, as the associated natural gas combustion emissions are already included under Scope 1. Trigeneration electricity generation may be disclosed as an operational energy memo item to support energy performance analysis and avoid double counting.

12. Detailed Carbon Footprint

This section presents the detailed Scope 1 and Scope 2 carbon footprint of ISG broken down by individual emission source for each of the four reporting years. All values are expressed in tonnes of carbon dioxide equivalent (tCO₂e). Activity data underpinning these emissions is summarised in Appendix A and emission factors are listed in Appendix B.

Table 2 — Scope 1 Emissions by Source (tCO₂e)

Source	2022	2023	2024	2025
Stationary Combustion				
Natural gas — trigeneration and stationary combustion	10,322.10	10,841.58	8,795.11	10,848.89
Diesel — emergency generators	24.66	7.83	13.92	32.86
Mobile Combustion				
Gasoline — vehicles	12.00	15.20	27.62	20.61
Diesel — vehicles	106.39	119.92	433.29	5.35
Fugitive — Refrigerant Losses				
R410A	0.00	0.64	0.39	0.10
R134A	0.00	0.00	0.56	0.00
Process & Other				

Source	2022	2023	2024	2025
CO ₂ fire extinguisher discharges	0.00	0.00	0.00	0.27
Fire training (if under ISG control)	0.00	0.00	0.00	0.00
Total Scope 1	10,465.17	10,985.20	9,270.92	10,908.11

Table 3 — Scope 2 Emissions by Source (tCO₂e)

Source	2022	2023	2024	2025
Grid-purchased electricity	16,639.86	16,360.34	19,510.54	18,595.03
Heat / steam purchased	0.00	0.00	0.00	0.00
Total Scope 2	16,639.86	16,360.34	19,510.54	18,595.04

Table 4 — Aggregate Scope 1 + Scope 2 Carbon Footprint

Component	2022	2023	2024	2025
Scope 1 total (tCO₂e)	10,465.17	10,985.20	9,270.92	10,908.11
Scope 2 total (tCO₂e)	16,639.86	16,360.34	19,510.54	18,595.04
Aggregate Scope 1 + 2 (tCO₂e)	27,105.04	27,345.54	28,781.46	29,503.15
Passengers	30,956,088	37,485,003	41,488,653	48,414,368
Carbon Intensity (kg CO₂e/pax)	0.8756	0.7295	0.6937	0.6094

13. Materiality and Data Quality

13.1 Data Quality Confidence

ISG operates an ISO 14001-certified environmental management system and an ISO 50001-certified energy management system. These management systems impose structured data collection, internal audit and management review requirements that provide a high degree of confidence in the activity data underlying this carbon footprint. Activity data for the principal emission sources (natural gas, electricity, vehicle fuels) is sourced directly from utility invoices and fuel purchase records, which are independently issued and represent objective measurements of consumption. Refrigerant inventories are maintained through equipment service records and procurement documentation.

13.2 Material Emission Sources

The materiality of each emission source has been assessed against its contribution to the total Scope 1 and Scope 2 footprint. The following sources are individually material (each contributing more than 1 percent of the aggregate footprint):

Material Emission Source	2022 Share	2025 Share
Grid-purchased electricity (Scope 2)	61.4%	63.0%
Natural gas combustion (Scope 1)	0.0%	0.0%
Vehicle fuels — gasoline + diesel (Scope 1)	0.00%	0.00%
Refrigerant fugitive losses (Scope 1)	0.0%	0.00%

Grid-purchased electricity and natural gas-related stationary combustion represent the two most material emission sources within ISG's Scope 1 and Scope 2 footprint. Grid-purchased electricity remains the largest single Scope 2 source, while natural gas consumption associated with ISG-controlled stationary combustion, including trigeneration-related consumption, represents the dominant Scope 1 source. Accordingly, future reductions should focus on electricity efficiency, trigeneration optimisation, low-carbon electricity options and improved energy management.

13.3 Assumptions and Limitations

The carbon footprint presented in this report is based on the following assumptions and is subject to the following limitations:

First, the Türkiye national grid emission factor of 0.4340 kg CO₂e per kWh applied to Scope 2 has been held constant across the four reporting years for methodological consistency. In practice, the carbon intensity of the Turkish grid varies year on year as the electricity mix evolves, and future reports may incorporate annual updates to this factor as more granular data becomes available from Turkish authorities.

Second, refrigerant emissions are calculated based on documented refrigerant top-ups during equipment servicing, which is taken as a proxy for fugitive losses. This methodology may underestimate small leaks that do not trigger a service intervention, but is consistent with current ACA guidance.

This report does not include Scope 3 emissions sources such as aircraft LTO emissions, passenger surface access, employee commuting, supply chain emissions or business travel, as these are not required under the current ACA Level 2 boundary. ISG may progressively evaluate selected Scope 3 categories in preparation for potential future ACA levels.

Tenant and concessionaire electricity consumption has been treated conservatively where it is included within ISG's master-metered electricity data and cannot be consistently separated for the historical reporting years. Future reporting cycles may improve boundary precision through complete sub-metering, auditable data separation and, where relevant, Scope 3 categorisation.

14. Emissions Analysis

14.1 Trend Analysis 2022–2025

Aggregate Scope 1 and Scope 2 emissions at ISG have increased by 8.85 percent in absolute terms between 2022 and 2025, rising from 27,105.04 tCO₂e in the baseline year to 29,503.15 tCO₂e in 2025. However, this absolute

increase must be interpreted in the context of a 56.4 percent increase in passenger throughput over the same period — from 31.0 million passengers in 2022 to 48.4 million passengers in 2025. The carbon intensity of operations, expressed as kg CO₂e per passenger, has fallen consistently year on year:

Year	Total (tCO ₂ e)	Pax (millions)	Intensity (kg/pax)	Δ Intensity vs 2022
2022 (B)	27,105.03	30.956	0.8756	—
2023	27,345.53	37.485	0.7295	-16.7%
2024	28,781.46	41.488	0.6937	-20.8%
2025	29,503.15	48.414	0.6094	-30.4%

14.2 Scope 1 Drivers

Scope 1 emissions have remained relatively stable across the reporting period, fluctuating between 9,271 tCO₂e (2024 low) and 10,985 tCO₂e (2023 high), with 10,908 tCO₂e reported in 2025 — an increase of 4.2 percent over the 2022 baseline. The dominant Scope 1 source is natural gas combustion in ISG-controlled stationary combustion sources, primarily associated with trigeneration plant operations and related heating/hot water demand. Scope 1 emissions are influenced by the operating profile of the trigeneration plant, terminal energy demand, seasonal heating and cooling requirements, grid electricity strategy and overall operational conditions. The relative stability of Scope 1 emissions despite passenger growth reflects that a significant portion of stationary energy demand is driven by building systems and plant operation rather than passenger throughput alone.

Vehicle fuel consumption shows an upward trend, particularly in diesel, reflecting increased operational activity at the airport. Refrigerant emissions appear in the inventory from 2023 onwards as systematic refrigerant tracking was introduced; these are not signs of new leaks but rather of improved data capture practices.

14.3 Scope 2 Drivers

Scope 2 emissions have grown by 11.7% between 2022 and 2025, driven by changes in grid-purchased electricity consumption associated with terminal operations, HVAC demand, baggage handling systems, passenger boarding bridges, IT infrastructure, passenger growth and operational load changes. Despite this absolute increase, the electricity intensity per passenger has improved as the energy efficiency gains delivered through ISO 50001-aligned practices have partially offset the impact of higher absolute consumption.

14.4 Carbon Intensity Performance

Carbon Intensity Reduction — Performance Highlight

The 30.4 percent reduction in carbon intensity per passenger between the 2022 baseline (0.8756 kg CO₂e/pax) and 2025 (0.6094 kg CO₂e/pax) represents a significant performance achievement. This intensity improvement reflects a combination of higher passenger throughput per unit of operational infrastructure, improved capacity utilisation, energy management practices and operational

optimisation. Sustaining this trajectory of intensity improvement is a central objective of ISG's Carbon Management Plan.

15. Emission Reduction Target

Pursuant to ACA Level 2 requirements, ISG hereby establishes the following emission reduction targets and commitments. These targets are calibrated against the 2022 baseline year and are designed to support verifiable improvement in ISG's carbon intensity performance while monitoring absolute emissions in parallel with operational growth.

15.1 Headline Targets

Target	Description	Baseline (2022)	Target By 2032
T1	Carbon Intensity Target — Reduce Scope 1 + Scope 2 emissions per passenger by at least 35 percent versus the 2022 baseline.	0.8756 kg/pax	≤ 0.5691 kg/pax
T2	Absolute Emissions Monitoring — Monitor and seek to stabilise Scope 1 + Scope 2 absolute emissions through energy efficiency, trigeneration optimisation and low-carbon electricity options, subject to operational growth and feasibility assessments.	27,105 tCO₂e	Stabilisation / reduction where feasible
T3	Renewable Electricity Evaluation — Evaluate certified renewable electricity options, including PPAs and/or I-RECs, for future market-based Scope 2 reporting and reduction planning.	0%	Feasibility assessment and phased implementation plan

15.2 ACA Level 2 Reduction Performance

ACA Level 2 reduction performance is assessed against the selected emissions improvement metric. ISG has selected carbon intensity per passenger as the most appropriate emissions improvement metric, as it reflects operational growth and passenger throughput while monitoring Scope 1 and Scope 2 emissions performance.

3-year rolling average (2022–2024)	27,744.0 tCO₂e
2025 reporting year emissions	29,503.2 tCO₂e
2025 vs rolling average	+6.34%

ISG's 2025 carbon intensity performance is below the 2022–2024 rolling average intensity, demonstrating continued reduction performance against the selected ACA Level 2 emissions

improvement metric. Absolute Scope 1 and Scope 2 emissions will continue to be monitored separately, particularly in the context of passenger growth, energy demand and future operational changes.

16. Carbon Management Plan

ISG has developed a Carbon Management Plan (CMP) that sets out operational and investment action areas to support the emission reduction targets in Section 15. The CMP is structured around five strategic pillars (introduced in Section 4) and is summarised below. The full Carbon Management Plan is maintained as a separate operational document and will be uploaded to the ACA online portal as part of the Level 2 application package.

16.1 Energy Efficiency Actions

Action Area	Description and Expected Impact
Lighting	Continue replacement of remaining conventional lighting with high-efficiency LED systems within ISG-controlled terminal interiors, car parks and landside areas. Estimated emission reduction impacts will be quantified following detailed project scoping and measurement.
HVAC Optimisation	Optimisation of building automation, demand-controlled ventilation, temperature setpoints and chiller plant operation within ISG-controlled facilities. Estimated emission reduction impacts will be quantified following energy audits, implementation planning and measurement/verification studies.
Building Envelope	Continued investment in roof insulation upgrades, window film application and air sealing to reduce heating and cooling demand.
Equipment Replacement	Phased replacement of legacy equipment (escalators, baggage handling motors, pumps) with high-efficiency variable-speed drive alternatives at end of useful life.

16.2 Renewable Energy Procurement

ISG will progressively integrate renewable electricity into its supply mix through three complementary mechanisms. First, the airport will conduct a feasibility study in 2026–2027 for the installation of on-site solar photovoltaic generation on suitable roof areas of the terminal complex, car park canopies and ancillary buildings. Second, ISG will explore long-term Power Purchase Agreements (PPAs) with Turkish renewable energy generators to lock in a portion of its electricity consumption from verified renewable sources. Third, ISG will evaluate the potential procurement of I-REC (International Renewable Energy Certificate) instruments to support future market-based Scope 2 reporting, subject to internal approval, budget availability and alignment with the company's carbon management strategy.

16.3 Fleet Decarbonisation

ISG operates a fleet of light-duty vehicles for management, maintenance and operational functions. ISG will evaluate low-emission and electric vehicle alternatives at future fleet renewal cycles, where operationally feasible

and subject to procurement approval. Charging infrastructure deployment in airport landside areas will accompany this transition. The diesel fleet, which is dominated by maintenance vehicles, will transition to lower-emission alternatives at fleet renewal points, with consideration of HVO (hydrotreated vegetable oil) drop-in fuel as an interim measure to reduce well-to-wheel emissions from existing diesel vehicles.

16.4 Refrigerant Stewardship

ISG operates a structured refrigerant management programme that includes annual leak inspections of large refrigeration and air-conditioning equipment, mandatory recovery of refrigerant during equipment decommissioning, and prioritisation of low-GWP refrigerants (such as R32, HFOs and natural refrigerants) at equipment replacement. Existing R134A and R410A inventories will be progressively replaced through the natural equipment renewal cycle.

16.5 Monitoring, Reporting and Governance

Implementation of the Carbon Management Plan is overseen by ISG's Quality, Environment and Sustainability Department, with quarterly progress reviews at senior management level. Annual carbon footprint updates will be prepared and submitted under the ACA programme, providing transparent verification of progress against the targets set out in Section 15. The CMP will be reviewed and updated annually to reflect new opportunities, technology developments and changes in the operational context.

17. Conclusion

This Carbon Footprint Report establishes ISG's Scope 1 and Scope 2 greenhouse gas inventory for the activities and assets under its direct operational control, in the form required by the Airport Carbon Accreditation programme at Level 2. With 2022 confirmed as the baseline year (27,105.04 tCO₂e total emissions, 0.8756 kg CO₂e per passenger), the airport now has a robust analytical foundation against which to measure and demonstrate emission reduction performance in future years.

The four-year emissions trajectory documented in this report tells two parallel stories. The first story is one of substantial passenger growth: passenger throughput at Istanbul Sabiha Gökçen International Airport has expanded by more than 56 percent between 2022 and 2025, reflecting the airport's strategic position as a major gateway for the Istanbul metropolitan region and its continuing operational success. The second story, no less significant, is one of meaningful efficiency improvement: per-passenger carbon intensity has fallen by 30.4 percent over the same period, demonstrating that the airport has begun to decouple its emissions trajectory from its growth trajectory.

ISG has selected carbon intensity per passenger as the most appropriate emissions improvement metric for ACA Level 2, reflecting the airport's rapid passenger growth and the operational nature of terminal energy demand. On this basis, 2025 performance demonstrates a clear improvement against the 2022 baseline and the prior-year trend. Absolute emissions will continue to be monitored separately and addressed through the Carbon Management Plan.

Looking forward, ISG is firmly committed to the trajectory of continuous improvement that the ACA programme is designed to incentivise. The reduction targets, renewable energy evaluation areas and operational actions set out in this report provide a foundation for continued carbon management improvement and potential future progression within the ACA programme. With the strong governance framework provided by ISG's existing ISO management system certifications, and with the active engagement of senior management in the carbon management agenda, the airport is well placed to deliver on the commitments made in this report and to play its part in the global decarbonisation of the aviation sector.

ISG looks forward to engagement with ACA programme administrators and verifiers in support of this Level 2 application and welcomes the opportunity to demonstrate continued progress in carbon management performance in future reporting cycles.

Appendix A: Activity Data Summary

The following table sets out the underlying activity data — measured in physical units — that has been used to derive the carbon footprint figures presented in the body of this report. All figures have been compiled from primary internal records as described in Section 11.3.

Activity Data	2022	2023	2024	2025
Scope 1 — Stationary Combustion				
Natural gas (m ³)	5,459,700	5,734,469	4,652,021	5,738,337
Diesel — emergency generators (l)	8,887	2,821	5,017	11,839
Scope 1 — Mobile Combustion				
Gasoline — vehicles (l)	5,129	6,498	11,808	20,618
Diesel — vehicles (l)	39,423	44,437	160,550	138,815
Scope 1 — Fugitive Emissions				
R410A refrigerant (kg)	0.0	310.0	190.0	50.1
R134A refrigerant (kg)	0.0	0.0	396.0	0.0
CO ₂ fire extinguisher (kg)	0.0	0.0	0.0	276.0
Scope 2 — Purchased Energy				
Grid electricity (kWh)	38,340,696	37,696,638	44,955,165	42,845,709
Heat / steam purchased (kWh)	0.0	0.0	0.0	0.0

Note: Electricity generated by ISG's trigeneration plant is disclosed as an operational energy memo item and is not reported as Scope 2. The associated natural gas combustion emissions are included under Scope 1 to avoid double counting.

Operational energy memo item	2025
Electricity generated by ISG trigeneration plant	14,065,558 kWh

Appendix B: Emission Factors Used

The following emission factors have been applied to convert physical activity data into carbon dioxide equivalent emissions. Factors are sourced from the IPCC 2006 Guidelines for National Greenhouse Gas Inventories (with 2019 Refinement), supplemented by IPCC AR6 100-year Global Warming Potentials for refrigerants, and a Türkiye-specific national grid emission factor for Scope 2 electricity.

Source	Unit	Factor	Units	Source
Natural gas	m ³	1.8906	kg CO ₂ e/m ³	IPCC
Gasoline (vehicle)	l	2.3397	kg CO ₂ e/l	IPCC
Diesel (vehicle)	l	2.6988	kg CO ₂ e/l	IPCC
Diesel (stationary generator)	l	2.7759	kg CO ₂ e/l	IPCC
R410A refrigerant	kg	2,088	kg CO ₂ e/kg (GWP)	IPCC AR6
R134A refrigerant	kg	1,430	kg CO ₂ e/kg (GWP)	IPCC AR6
CO ₂ fire extinguisher	kg	1.0	kg CO ₂ e/kg	IPCC
Grid electricity (Türkiye)	kWh	0.4340	kg CO ₂ e/kWh	Türkiye national grid emission factor

Note on Emission Factor Sources

IPCC factors refer to the IPCC 2006 Guidelines for National Greenhouse Gas Inventories, Volume 2 (Energy), with 2019 Refinement updates where applicable. Refrigerant GWPs are from the IPCC Fifth Assessment Report (AR6), 100-year time horizon, in line with current ACA programme requirements. The Türkiye grid emission factor reflects publicly available data on the carbon intensity of the Turkish electricity mix and may be updated in future reporting cycles to reflect annual changes in the national generation mix.

— End of Report —