

2024 ICAO REGIONAL SEMINAR ON ENVIRONMENT

In collaboration with
CIVIL AVIATION AGENCY
UNDER THE MINISTRY OF TRANSPORT OF THE REPUBLIC OF UZBEKISTAN
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Aviation & Climate Change State Action Plan ensuring sustainable air transport



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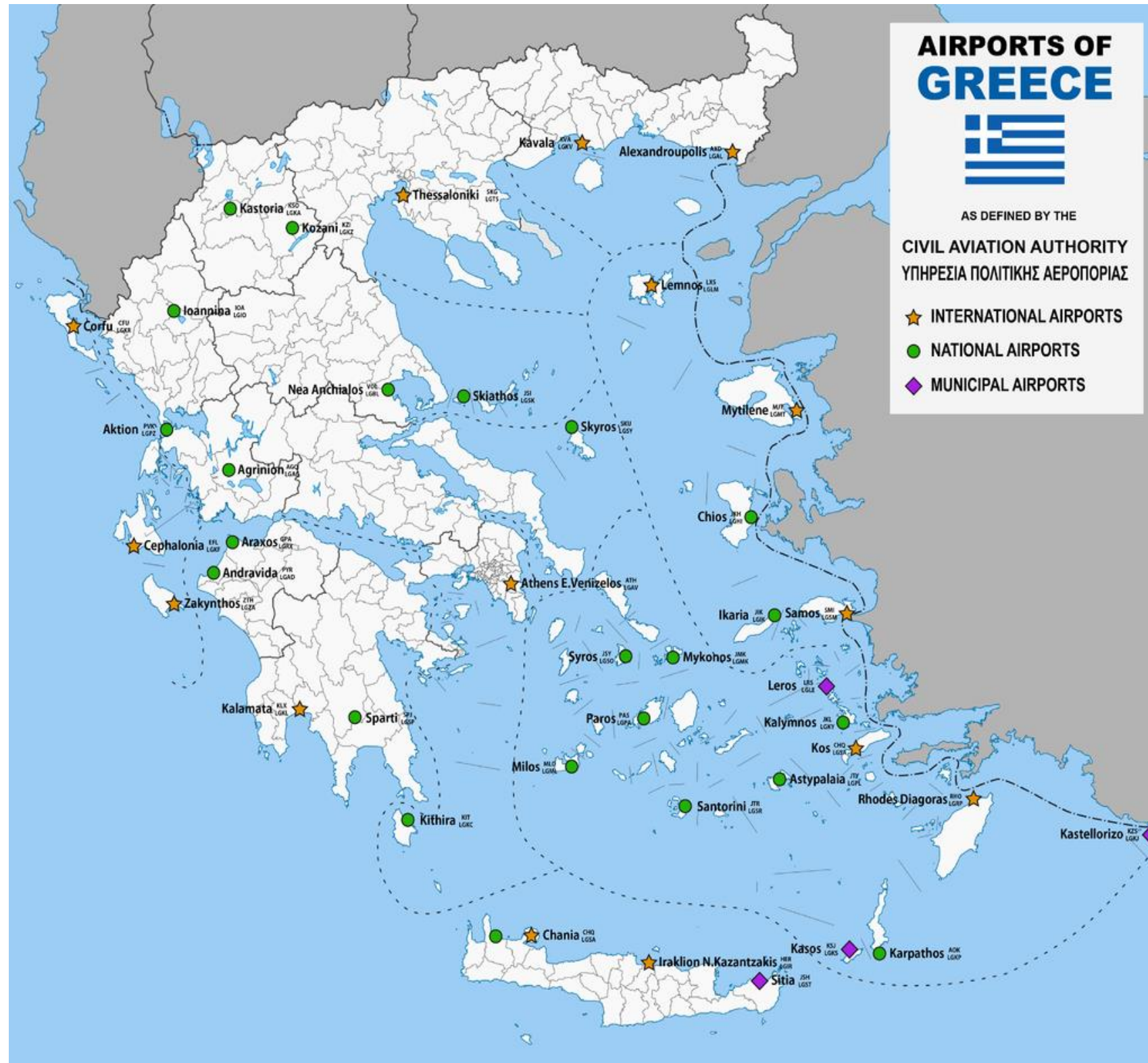
Hellenic Civil Aviation Authority (HCAA)

- ✓ **HCAA** has been established by National Law 4757/2020 as **Independent Civil Aviation Authority** and started its operation on January of 2022 with headquarters in Athens International Airport.
- ✓ Supported by the Ministry of Infrastructure and Transport, enjoys operational independence and financial autonomy. Subject to parliamentary control, submits annual report of its activities to the **Minister of Infrastructure and Transport and Hellenic Parliament**.
- ✓ Responsible for **national aviation strategy**, exercising **supervision** over the operation of civil aviation, the **implementation of national and EU law** and international conventions. Performs the duties of the Regulatory Authority of economic activity in the field of air transport, air traffic services and airports.
- ✓ It supervises the operation of the **HASP - Hellenic Aviation Service Provider**.

Hellenic Civil Aviation Authority (HCAA)

- Greece like all ECAC States share the view that the environmental impacts of the aviation sector must be mitigated. Recognize the value of each State preparing and submitting to ICAO an **updated State Action Plan for CO2 emissions reductions** as an important step towards the achievement of **ICAO Long-term Aspirational Goal (LTAG)** for international aviation of net-zero carbon emissions by 2050
- Fully supports ICAO's on-going efforts to address the full range of those impacts, including the key strategic challenge posed by **climate change**, for the sustainable development of international air transport.
- As committed by the 2016 Bratislava Declaration, Greece supports **CORSIA** implementation and voluntarily participate in CORSIA scheme, since 2019 from the start of its implementation.

Hellenic Civil Aviation Authority (HCAA)



In Greece, there are **40** aerodromes, designated as International, National and Municipal Airports.

They are categorized according to their ownership status, services provided, organizational structure etc.

Main Airport Hubs are:

- Athens International Airport (IATA: ATH, ICAO:LGAV) serves Athens and Attica region
- Thessaloniki Intl Airport (SKG/LGTS)
- Heraklion International Airport (HER/LGIR)
- Chania Intl Airport (CHQ/LGSA)
- Rhodes Intl Airport (RHO/LGRP)
- Corfu Intl Airport (CFU/LGKR)
- Kos Intl Airport (KGS/LGKO)

https://en.wikipedia.org/wiki/List_of_airports_in_Greece



Greek State Action Plans submitted to ICAO

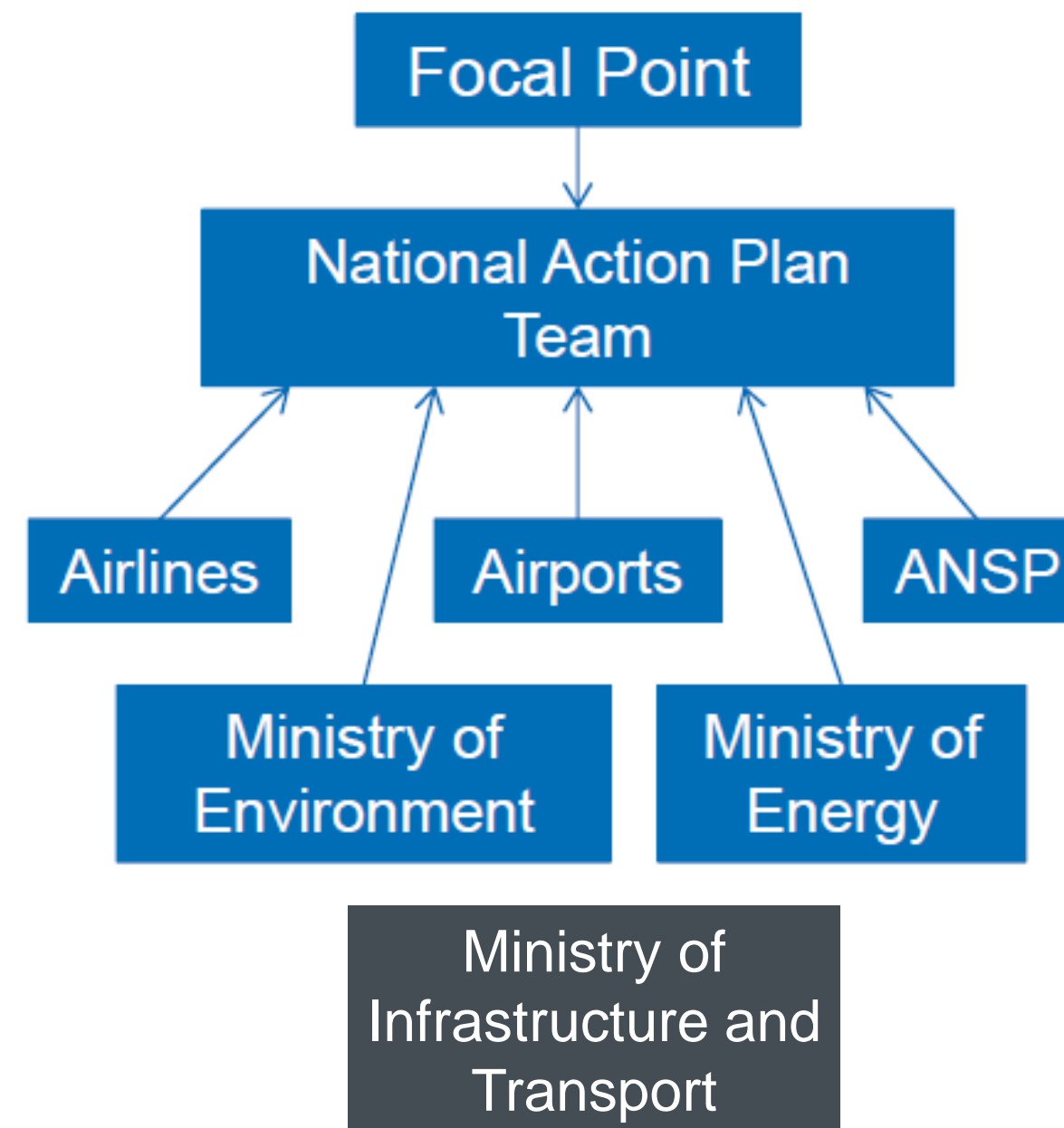
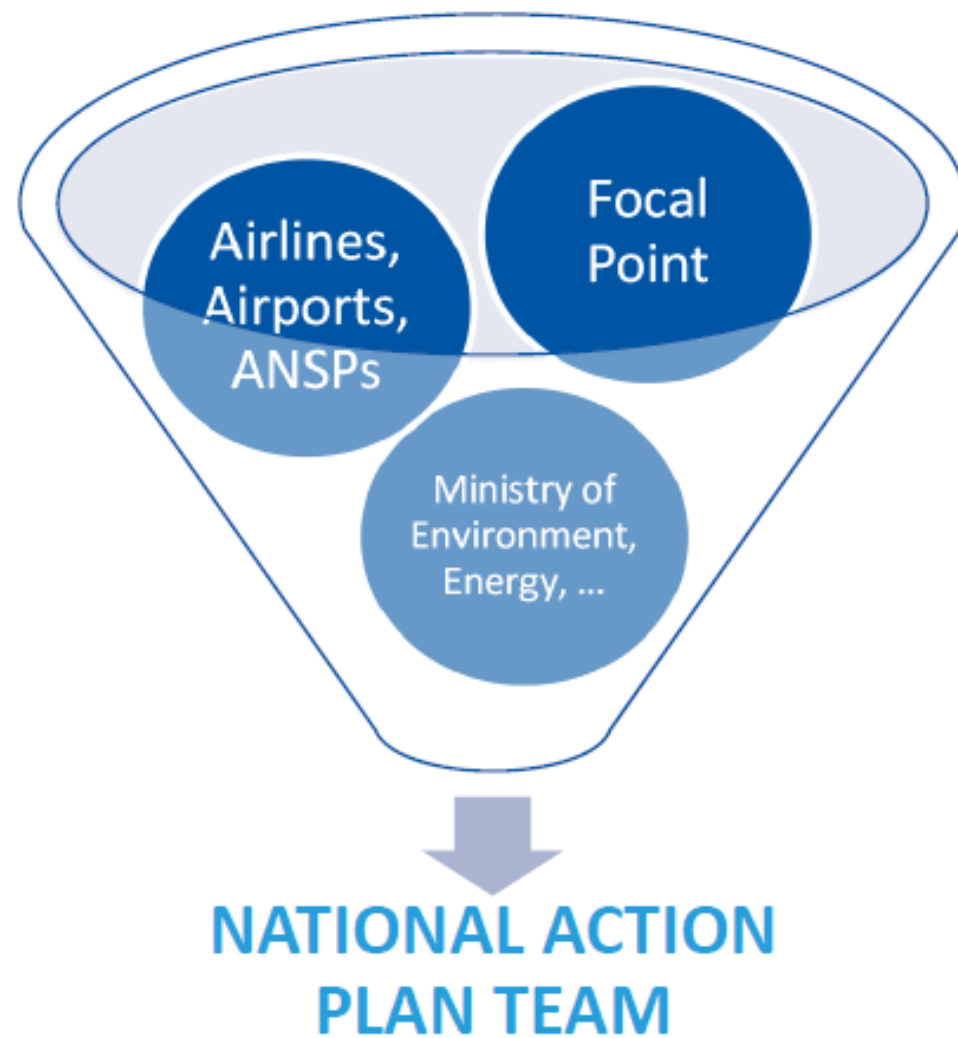
State Action Plans are a voluntary planning and reporting tool for States to communicate information on their activities to address CO₂ emissions from international civil aviation



A living document updated every three years, according to ICAO Doc 9988

Greek State Action Plans submitted to ICAO

Greece designated a State Action Plan Focal Point and communicated their contact information to ICAO. The **Focal Point** coordinated with ICAO, established a Nation Action Plan Team, developed the State Action Plan and submitted the document to ICAO.



Greek Action Plan main structure

- In Europe, many of the State actions are being undertaken collectively, most of them led by the European Union legislation. These actions are reported in the European Section, where the involvement of Greece is described collectively.
- The **European section (SECTION 1 – Measures taken collectively in Europe)** presents a summary of the actions taken throughout the 44 States of the European Civil Aviation Conference (ECAC) to reduce CO2 emissions and provides an assessment of their benefit against an ECAC baseline. It also provides a description of future measures aimed to provide additional CO2 savings.
- **The National Section (SECTION 2 – National Actions in Greece)** presents the actions undertaken in Greece, by the State and by stakeholders, in order to reduce CO2 emissions from the aviation system, as well as future measures aimed at further CO2 reduction.

Greece strongly supports the ICAO basket of measures, as the key means to achieve ICAO's CNG2020 target, that should include:

1. **Emission reductions at source**, including European support to CAEP work in standard setting process
2. Research and development on **emission reductions technologies**, including public private partnerships
3. Development and deployment of **sustainable aviation fuels**, including research and operational initiatives undertaken jointly with stakeholders
4. Improvement and optimization of Air Traffic Management and infrastructure use within Europe, in particular through the **Single European Sky ATM Research (SESAR)**, and beyond European borders through participation in international cooperation initiatives
5. **Market Based Measures**, which allow the sector to continue to grow in a sustainable and efficient manner, achieving emissions reductions needed to meet the ICAO 2020 CNG goal.

Greece supports European Aircraft related technology improvements and initiatives that include:



- **Clean Sky EU Joint Technology Initiative (JTI)** that aims to develop and mature breakthrough “clean technologies” in European Aviation.
- **Single European Sky ATM Research (SESAR)**, improvement and optimisation of Air Traffic Management and infrastructure use within Europe, in particular through and beyond European borders through participation in international cooperation.
- **Improved Air Traffic Management** The European Union’s **Single European Sky (SES)** policy aims to transform Air Traffic Management in Europe, tripling capacity, halving ATM costs with 10 times the safety and 10% less environmental impact.
- **Economic/Market Based Measures (MBMs)** always has been strong supporters of a market-based measure scheme for international aviation to incentivize and reward good investment and operational choices (ETS, CORSIA implementation).

Greece participates in the EU Emissions Trading System (including UK-ETS & CH-ETS) & ICAO CORSIA system

EU ETS

- EU ETS Directive 2003/87/EC

UK ETS

- Greenhouse Gas Emissions Trading Scheme Order 2020.

CH ETS

- Art. 46.d CO2 Swiss Ordinance & Annex 13.1.



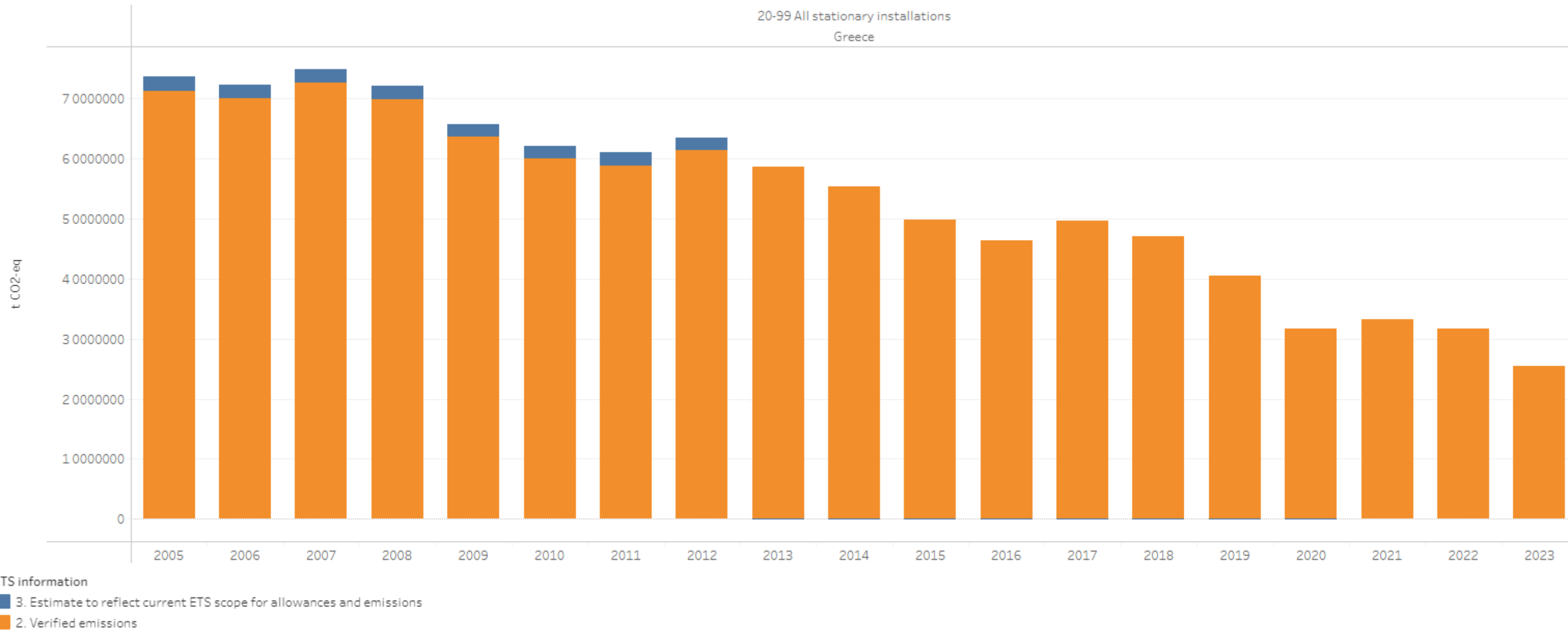
CORSIA

In line with the European legislation and policy, Greece implements the EU Emissions Trading System (EU ETS) since 2005. Aviation emissions included since 2012



Emission Trading Data for the years 2006-2023 in Greece

Historical Emissions



Source: <https://www.eea.europa.eu/data-and-maps/dashboards/emissions-trading-viewer-1>



The National Energy and Climate Plan (NECP)

Reducing GHG emissions and environmental objectives

Total GHG emissions to be reduced by at least 40% compared to 1990 (reduction rate >42%)

- to attain emission reduction objectives in the individual sectors within and outside the emissions trading system which are equivalent to the respective core EU objectives
- to attain quantitative targets for reducing national emissions of specific air pollutants
- to shut down lignite power plants by 2028

Increasing the RES share in energy consumption

The RES share in gross final energy consumption to reach at least 35%

- RES share in gross final electricity consumption to reach at least 60%
- RES share in covering heating and cooling needs to exceed 40%
- RES share in the transport sector to exceed 14% (19% attained), using the relevant EU calculation methodology

Enhancing energy efficiency

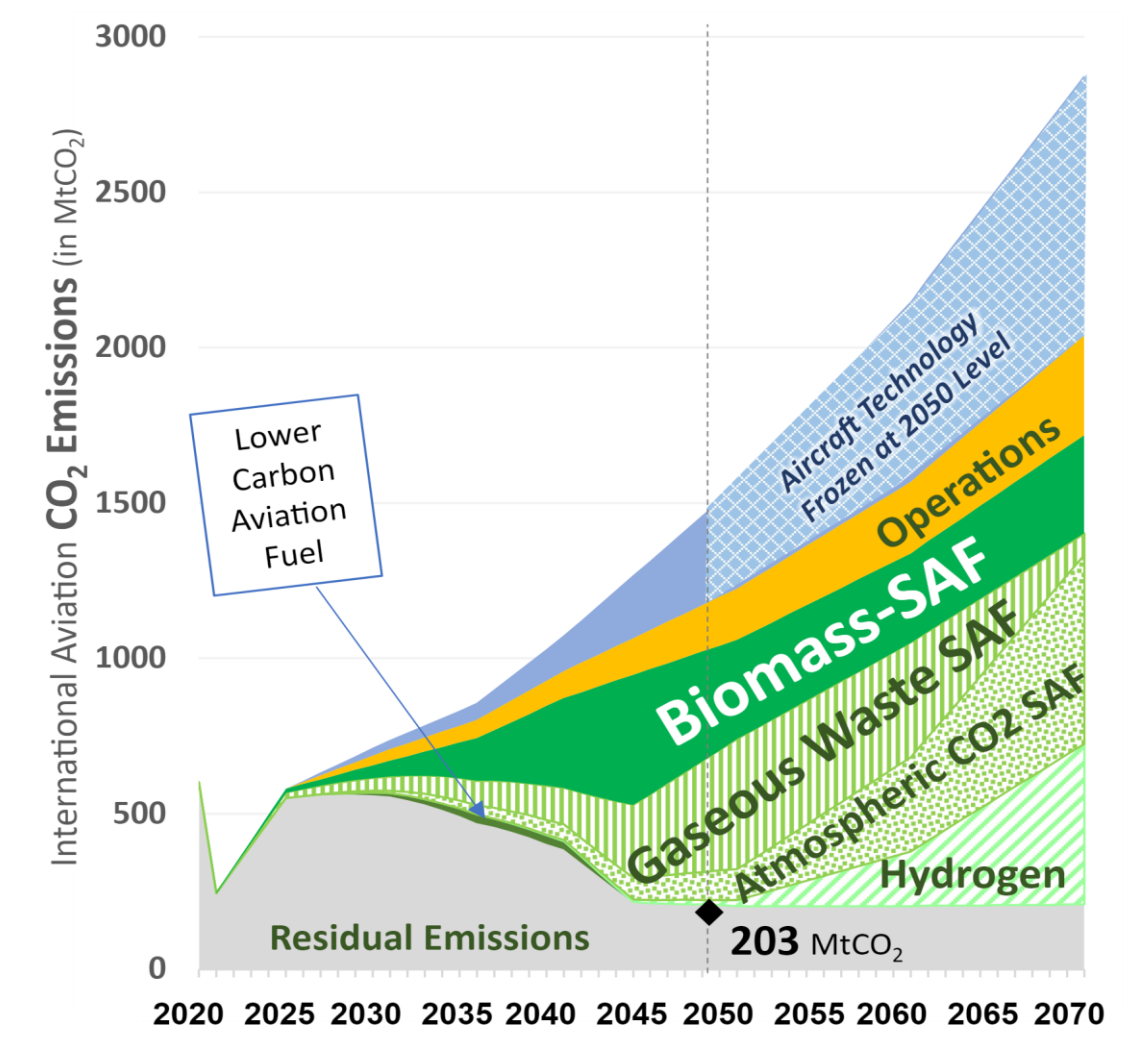
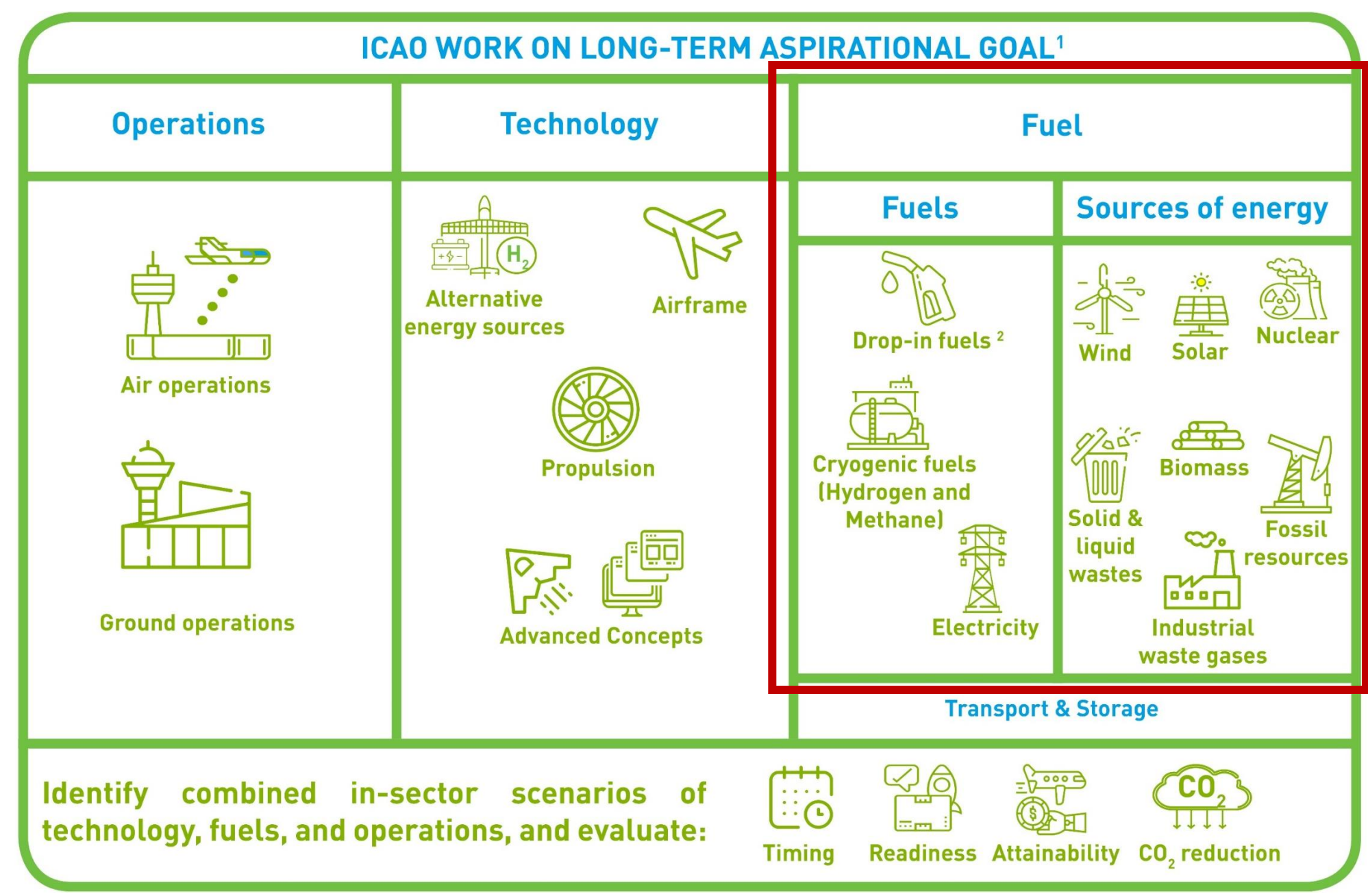
To achieve an improvement in energy efficiency by 38%, using the EU methodology

- final energy consumption not to exceed 16.5 Mtoe in 2030
- primary energy consumption not to exceed 21 Mtoe in 2030
- to attain cumulative energy savings of 7.3 Mtoe in the period 2021-2030**
- energy renovation to cover, on an annual basis, 3% of the total surface area of the heated parts of central government buildings by 2030

- NECP is the Greek government’s strategic plan for climate and energy issues, setting out a detailed roadmap regarding the attainment of European Union’s energy and climate objectives by 2030.
- National energy and environmental objectives for the period 2021-2030 priorities and policy measures in respect of a wide range of development and economic activities intended to benefit Greek society, and therefore it is a reference text for the forthcoming decade.
- NECP is also directly linked to other national policies, such as waste management, circular economy and adapting to climate change.

Greece supports ICAO work and Initiatives for LTAG

ICAO 2024 Regional Seminar on Environment





Here you will find more information on ACT-SAF Participants* and Initiatives.

87

States

Name of State

- Γαβόν
- Georgia
- Ghana
- Greece
- Guatemala
- Haiti

States



Acceptance to ... ● Pending ● Yes



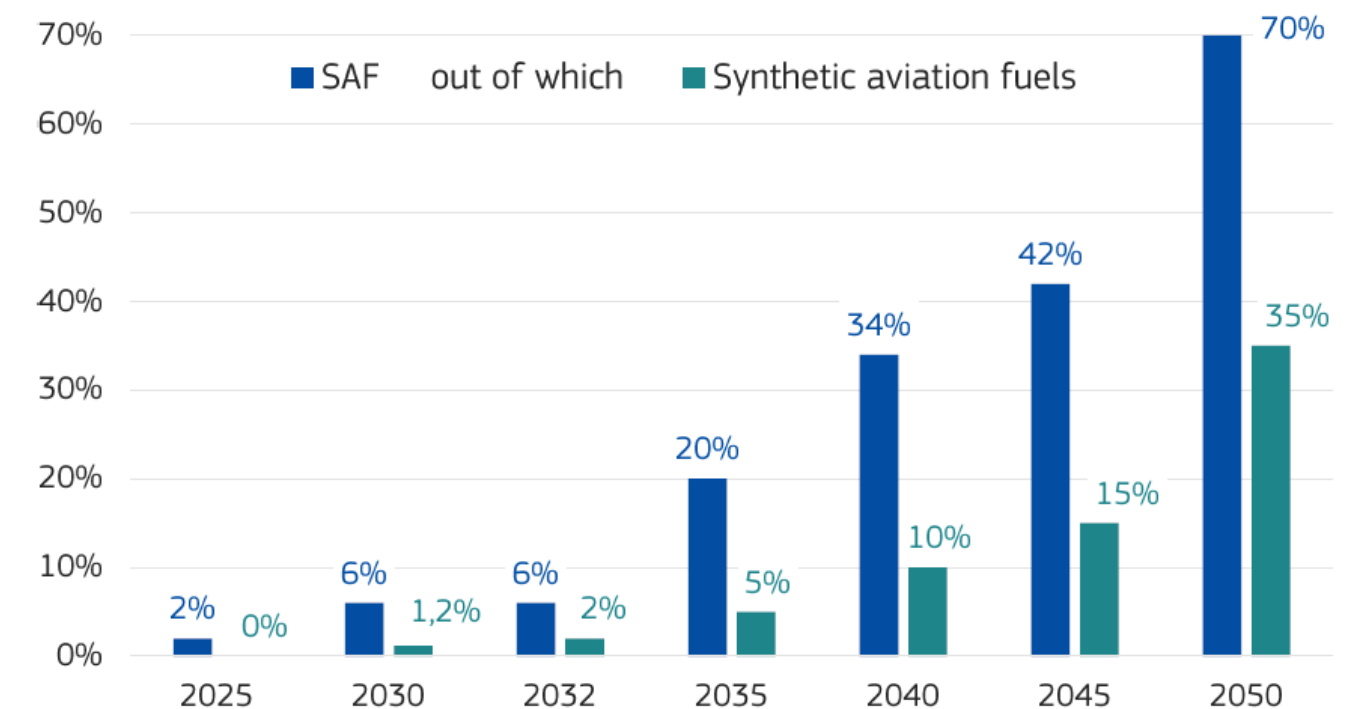
Microsoft Bing

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Refuel Aviation Regulation EU 2023/2405



- The ReFuel EU Aviation Regulation includes mandatory shares of sustainable aviation fuels (SAFs) to be available at airports, starting at 2% of overall fuel supplied by 2025 and reaching 70% by 2050.
- It also includes mandatory RFNBOs sub-quotas of 1.2% in 2030 all the way to 35% in 2050.



Aviation fuel suppliers

All aviation fuel suppliers supplying to Union airports



Union airports

≥ 800 000 passengers
 ≥ 100 000 tonnes freight
 Opt-in for airports below threshold, and those in outermost regions



Aircraft operators

> 500 passengers flights
 > 52 all-cargo flights
 Opt-in for other commercial flights and for non-commercial flights

Refuel Aviation Regulation EU 2023/2405

- The regulation is part of a legislative package aimed at reducing net greenhouse gas emissions by at least 55 % by 2030, compared to 1990 levels – the 'fit for 55' package. The regulation applies from **1 January 2024** and the first reporting obligation (Article 8) for aircraft operators under the scope of ReFuelEU Aviation is expected in 2025.
- EASA webpage: <https://www.easa.europa.eu/en/domains/environment/refueleu-aviation-digital-reporting-tool>
- EASA has developed the **Sustainability Portal** for all EU State Competent Authorities and aircraft operators attributed to these States in order to fulfil their reporting obligations defined under Article 8 of the regulation: <https://sustainabilityportal.easa.europa.eu/>
- EASA Sustainability Portal offers various functions for the ReFuelEU Aviation and the **Environmental Labelling Scheme** for Flight emissions calculation (eg ReFuelEU Aviation Template for Aircraft Operators)
 - Fuel Reporting
 - SAF Purchase Reporting

Union Airport Name	ICAO Code of Union Airport	Total flights operated departing from the Union Airport (N° flights)	Total flights hours operated departing from the Union Airport (N° hours)	Yearly aviation fuel required (tonnes)	Yearly actual aviation fuel uplifted (tonnes)	Yearly non-tankered quantity (tonnes)	Yearly tanked quantity for fuel safety rules (tonnes)

GREECE NATIONAL ACTION PLAN TEAM

HCAA
FOCAL POINT (CO ORDINATOR)

MINISTRY OF INFRASTRUCTURE
AND TRANSPORT



GREEK AIR OPERATORS



AIA, HASP, FRAPORT GREECE
AVIATION SERVICE PROVIDERS



GROUND HANDLERS, ANSPs



Aviation Stakeholders Environmental Initiatives (1)



HASP Hellenic Aviation Service Provider & Operator of 24 Hellenic Civil Airports

➤ **HASP Environmental Management:** all projects (construction, expansion, remodeling of airport facilities) and activities (operation of an airport or an air navigation facility) must have an environmental license.

➤ **Revised Performance-Based Navigation (PBN) Implementation Plan** for all airports.

➤ **Operational Improvements:**
BLUE MED FAB
Environmental Performance improvements

➤ **4 BLUE MED States,** reduction of the planned distance of 12 NM per flight compared to 2020

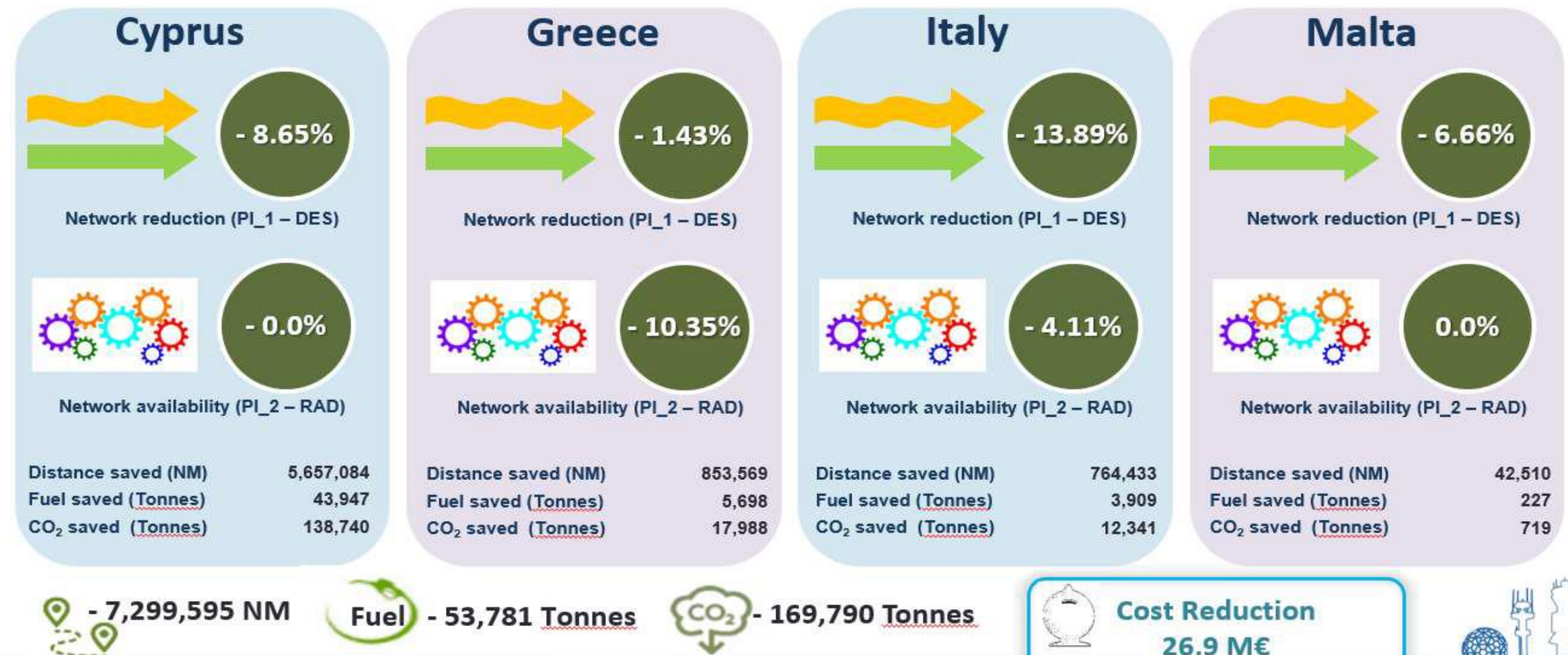
➤ **Reduction of approximately 90 kg of fuel per aircraft, and approximately 285 kg of lower CO₂ emissions into the atmosphere.**

BLUE MED FAB

Operational Performances & Flight Efficiency

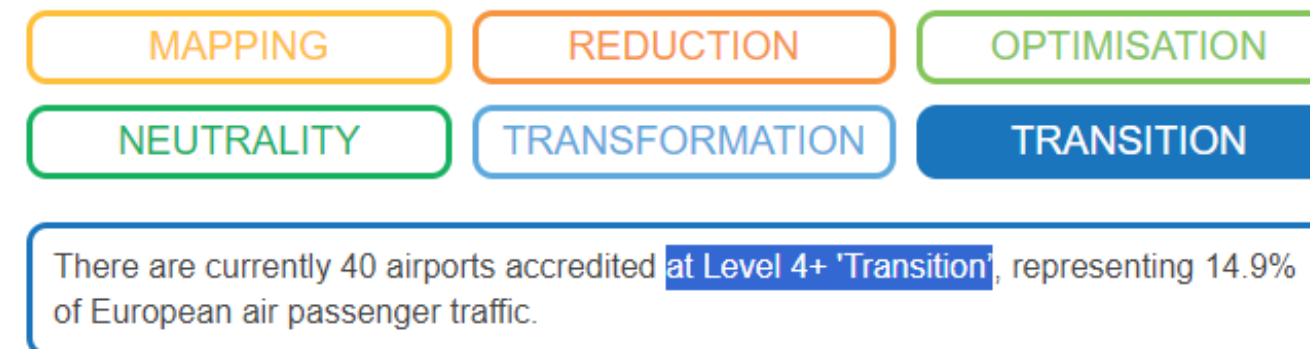
2021 - Flight Efficiency Plan

Traffic & Delay – Network Routing & Availability



Aviation Stakeholders Environmental Initiatives (2)

- **Athens International Airport AIA:** played an instrumental role in helping shape the concept for **Airport Carbon Accreditation** - mapped its carbon emissions from the following sources: Electricity consumption (from purchased electricity), Natural gas consumption (for heating purpose), Petrol, diesel and LPG consumption by AIA's vehicle fleet, Heating oil consumed by AIA's boilers, Diesel consumed by AIA's generators



In June 2024, obtained for the first time ever a **Zero Waste To Landfill (ZWTL) certification** managed to divert 88% of airport's waste from going to landfill in 2023.

Further to AIA's involvement in Airport Carbon Accreditation AIA also requires that **all Third Parties (airlines, ground handlers, caterers, retail, etc.) submit a carbon footprint to AIA** on an annual basis. Currently, more than 60 companies submit an annual carbon footprint.

AIA has attained the highest level of Airport Carbon Accreditation (Level 4+), as certified by the Airport Council International's (ACI) Airport Carbon Accreditation management programme.

FRAPORT GREECE: Operator of 14 Hellenic Civil Airports

Upgrade, maintenance, management and operation of **14 regional airports in Greece** for 40 years

- **E&S Management System (ESMS).** Energy Use and Climate Protection (emissions and adaptation) have been identified as significant environmental aspects of the ESMS.
- **Master Plan Decarbonisation (MPD)** with the following targets for Scope 1 and 2 emissions (with 2018 as baseline year)
- Main categories of the measures included in the MPD are the development of **P/V plants, energy optimisation at terminals, electrification** of vehicles fleet, etc.

Year	Target
2030	-42,0%
2040	-80,7%
2045	Net Zero

- **Fraport Greece carbon reduction targets:**
- **Following quantities of SAF were delivered at Thessaloniki airport (SKG) by fuel supplier EKO**

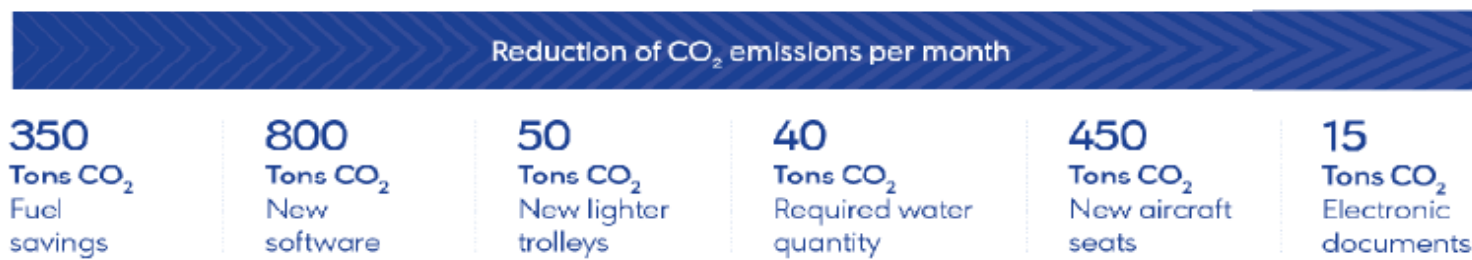
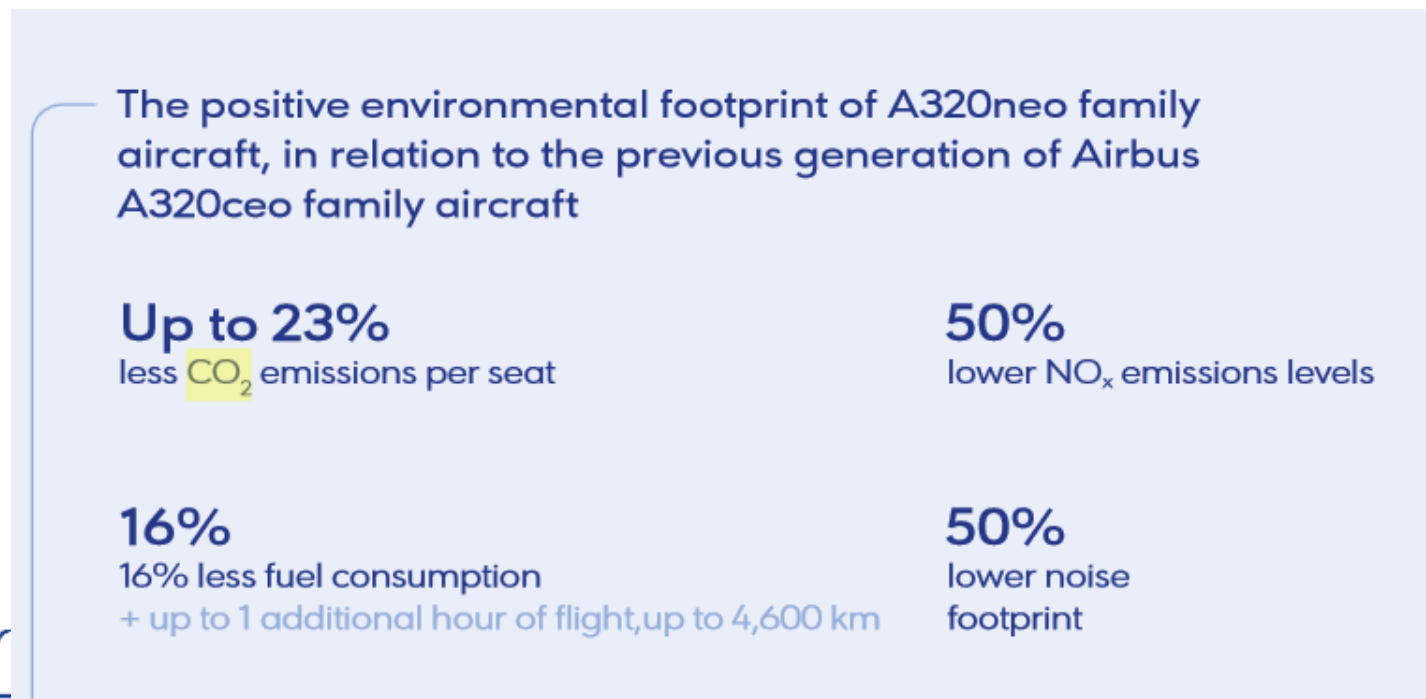
Table 2 SAF quantities delivered at SKG airport

Year	2022	2023
SAF quantity (in MT)	64,40	155,12

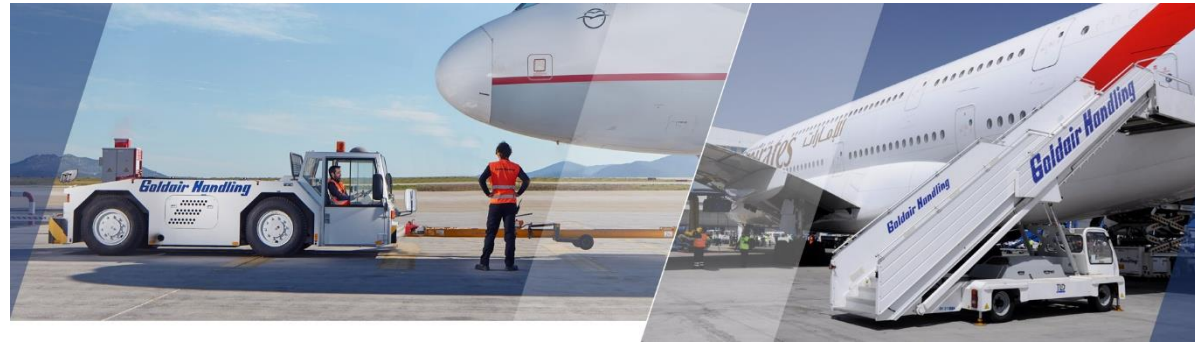
Greek Air Operators Environmental Initiatives



- ✚ Proper planning of the flight network:
 - Route Optimization + On-time performance**
- ✚ Launched a **Sustainable Aviation Fuel (SAF) program** to power its fleet with sustainable aviation fuel
- ✚ Managed to significantly reduce its CO2 emissions by investing in a **large Airbus A320/321 neo fleet renewal program** (completed by 2028).
- ✚ The renewal of aircraft fleet with new technology engines is to contribute to:
 - **16% reduction per flight, in terms of fuel consumption**
 - **19-23% less CO2 emissions, per passenger seat**
- ✚ Reduce **NOX emissions** by 50% below the CAEP 6 standard, per passenger seat (according to manufacturer data).

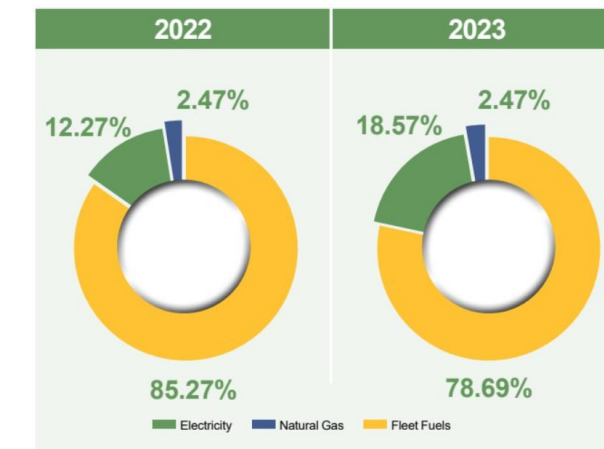


Greek Handlers Environmental Initiatives



Goldair Handling: first private ground handling company, which operates in the Greek market since 1999

- 4-year **Energy Audit Reports**: Environmental Performance Indicators (EPis) and Energy Performance Indicators (EnPIs)
- **calculates CO2 emissions**, specifically **Scope 1** and **Scope 2** emissions, each year. These calculations extend to monitoring fuel consumption per departing flight and energy consumption per square meter of building facilities.
- Upgrades its facilities to improve energy efficiency. LED light bulbs, refrigerators and cooling machines are upgraded and maintained constantly. Reports on equipment and installations containing fluorinated gases annually, as well as **imports of F-gasses** into the EU.
- Staff environmental training



Carbon Emissions (tnCO ₂ e)	2022	2023	%
Natural Gas	85.68	104.98	22.53%
Diesel - GSE	3,887.96	3,996.62	2.79%
Gasoline - Vehicle Fleet	40.85	85.83	110.13%
Diesel - Vehicle Fleet	360.06	288.41	-19.90%
Scope 1	4,374.54	4,475.84	2.3%
Scope 2	1,133.35	1,273.06	12.3%
Total Emissions	5,507.90	5,748.90	4.4%
Total Emissions Intensity (kg CO ₂ e/Number of Flights)	47.86	46.01	-3.9%

The Goldair Handling ESG and Sustainability Report is available in the following link: [Goldair Handling \(goldair-handling.gr\)](https://goldair-handling.gr)



CONCLUSIONS

- The Action Plan provides an overview of past and future actions decided both at European and national level in order to mitigate climate change and to develop a resource efficient, competitive and sustainable aviation system. The national actions presented in Section 2 of this Action Plan cover measures taken at state level by State authorities and by stakeholders of aviation industry.
- The Greek Government and Hellenic Civil Aviation Authority are fully committed to address the climate change impacts of commercial aviation and achieve CO2 emissions reductions through an integrated strategy of technology, operations and policy framework.
- Greece has already achieved significant reductions in Green House Gas emissions and energy efficiency improvements in the aviation sector over the past years, through public and private efforts, and is on a trajectory to continue that progress in coming years.



THANK YOU !!
Questions ?

