AENA'S CLIMATE ACTION PLAN 2021-2030
Towards zero emissions

CHARACTERIZATION AND OBJECTIVES OF THE CAP

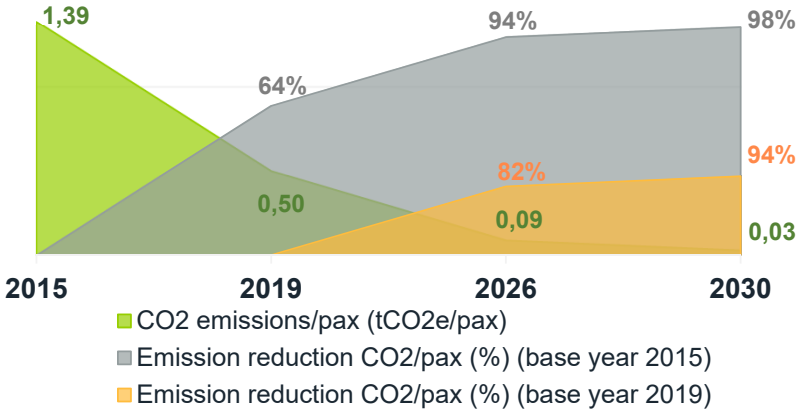
AENA'S COMMITMENT TO THE FIGHT AGAINST CLIMATE CHANGE

In 2018 Aena published its **Climate Change Strategy** in line with its commitment to achive sustainability in its activity. During 2020, the objectives derived from the first phase of the Aena's Strategy against Climate Change were achieved:

- Reduction of 53% of CO_2 emissions of Aena in absolute terms (base year 2015)
- Achieve a 100% share of energy supply from renewable energies
- Reduction of 30% of emissions from handling agents at Adolfo Suárez Madrid-Barajas Airport and 20% in remaining airports

This performance was recognized by the Carbon Disclosure Project (CDP) , which for two consecutive years has awarded the "**A List**" rating, the highest level established by this organization, placing it among the only 7 Spanish companies to have obtained this score.

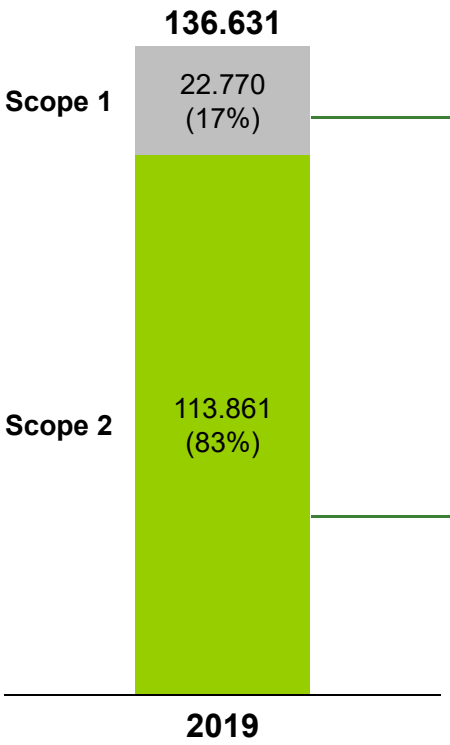
In the context of a green recovery of the sector Aena wants to go further in its initial objectives and based on them presents its Climate Action Plan



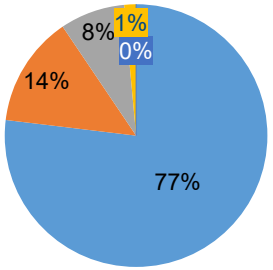
CONTRIBUTION IN THE EMISSIONS OF AENA – BASE YEAR

Emissions Scope 1 and 2

2019, $TnCO_2eq$

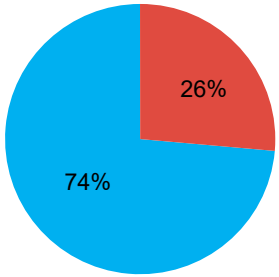


Scope 1



- Boilers
- Vehicles
- Generators
- Fire extinguishing service practices
- Auxiliary pumps of fire water tanks

Scope 2



- Electricity consumption
- Thermal energy consumption from the cogeneration plant of Madrid

OBJECTIVE, DURATION AND SCOPE OF THE CLIMATE ACTION PLAN

LONG TERM VISION

Definition of objectives and initiatives with a 2030 scope, laying the foundations to achieve Net Zero Carbon by 2040, for its integration into successive Aena Strategic Plans

GREATER SCOPE

Promote improvements in sustainability in the air transport sector, developing initiatives with an impact beyond its own operations

ROADMAP

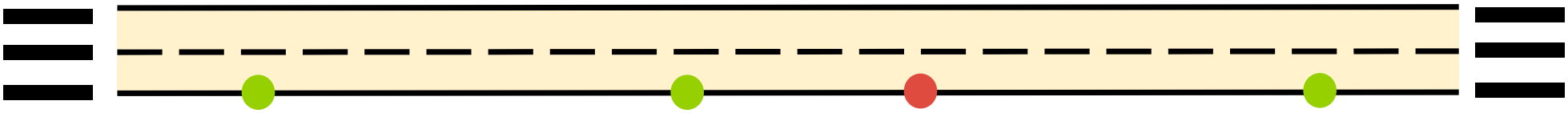
Annual objectives and breakdown of programs, lines of action, initiatives and projects, and their contribution to the achievement of the objectives

BASE YEAR OR STARTING POINT

CARBON NEUTRAL AIRPORTS aena **2026**

7 airports ACA level 3+ (NEUTRAL)

NET ZERO CARBON aena **2040**



2019

2026
Possible revision of the CAP objectives

2030
Finalization of CAP

2040

KEY FACTS

KEY FACTS OF THE CLIMATE ACTION PLAN

The Climate Action Plan will enable in **2026 to achieve carbon neutrality** and, laying the foundations to achieve Net Zero Carbon by 2040, will enable **a 94% reduction in emissions per passenger associated with Aena's own operations by 2030**

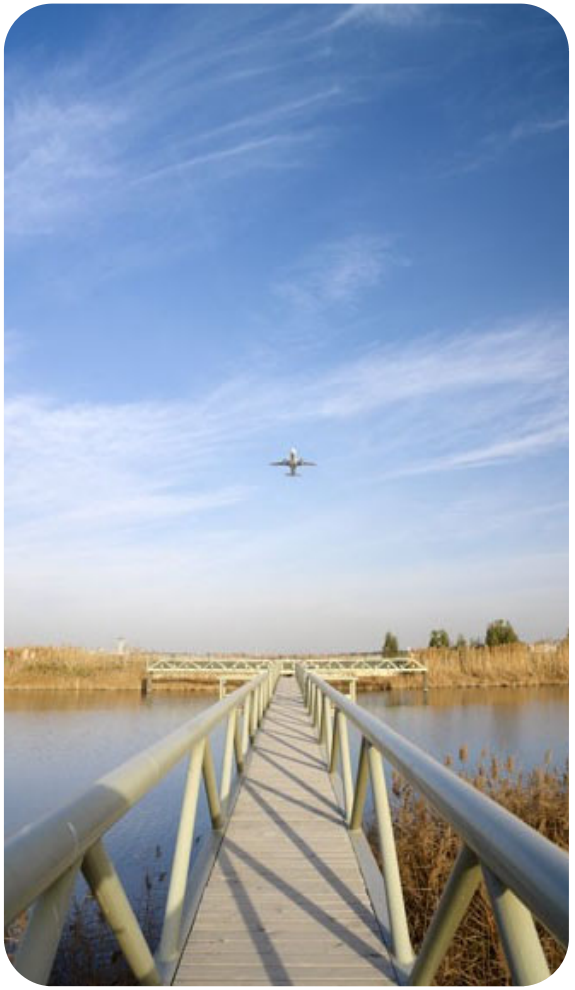
Aena will act as a driving force in the sector, promoting the introduction of **78% of sustainable and ground handling vehicles and equipment by 2030 and will drive additional reductions associated with airlines**

The plan involves investments of close to € 550M in the 2021-2030 period

The Plan strengthens **internal mechanisms for monitoring the plan to ensure the development and regular follow-up** of the initiatives (e.g. Specific Commission, Operational Working Group)

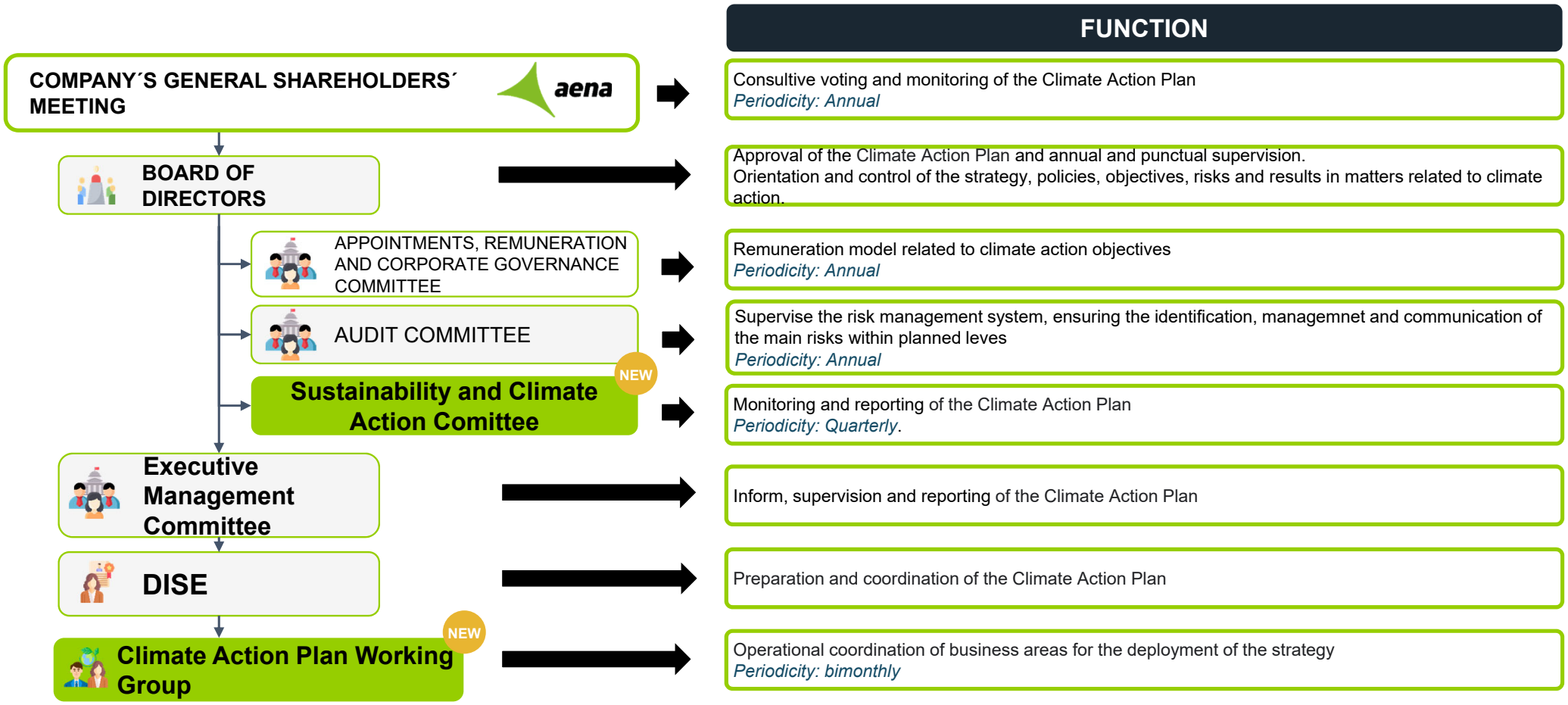
The Plan complies with the requirements of the **Task Force on Climate-related Financial Disclosures (TCFD)** and the **Sustainability Accounting Standards Board (SASB)**, including information related to corporate governance, strategy, risk and opportunity management, metrics and their evolution.

The implementation of the Climate Action Plan and the achievement of its objectives concerns **all** the Directorates of Aena



GOVERNANCE

GOVERNANCE REGARDING CLIMATE ACTION



CLIMATE RISKS AND OPPORTUNITIES

CLIMATE RISKS ANALYSIS

Based on the guidelines of the Task Force on Climate-related Financial Disclosure (TCFD), an analysis of risks and opportunities arising from climate change has been carried out, considering 3 climate scenarios.

TCFD TASK FORCE ON CLIMATE-RELATED FINANCIAL DISCLOSURES

PHYSICAL RISKS: factors such as rise of temperatures, heat waves, extreme precipitations and sea level rise due to the direct consequences that these may have on airport operations.

CONSEQUENCES: Possible increase in Heating, Ventilating and Air Conditioning (HVAC) costs, investments to extend runways at some airports to avoid operational restrictions or undertake investments to protect facilities from extreme precipitation or sea level rise.

The risk analysis leads to the need to promote emission reductions beyond own perations

TRANSITION RISKS: marketplace, regulatory and reputational risks are considered

REGULATORY AND LEGAL

- **Regulatory changes** could lead to the tightening of carbon markets
- Posible imposition of new **taxes** and **increase of ticket prices** (kerosene or eco-tax)
- Imposition of a percentage of **SAF utilization**

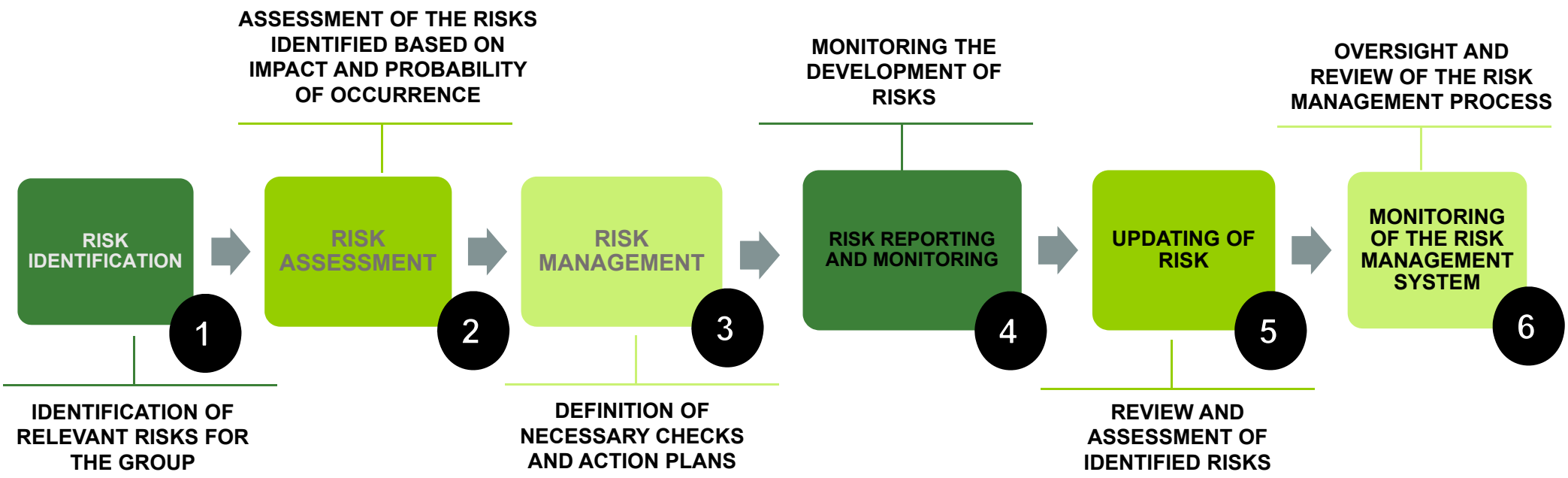
MARKETPLACE

- Changes in **consumer behaviour** (disincentive/restriction of domestic flights where high-speed rail alternative is available)
- **Decreasing international tourist demand**

REPUTATION

- **Divestment** of relevant **shareholders**
- Increase relevance of **sustainability in financing costs**

METHODOLOGY FOR RISK MANAGEMENT



CAP risk management must be integrated with Aena's global risks management to facilitate the external reporting process

STRATEGY

STRATEGIC PROGRAMS OF THE CLIMATE ACTION PLAN

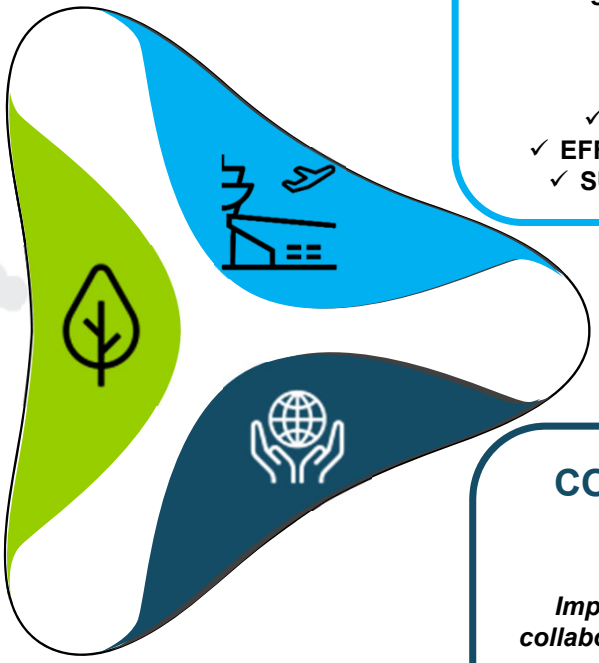
CARBON NEUTRALITY

Scope 1 + 2

Become a carbon neutral airport operator (2026) and lay the groundwork to achieve Net Zero Carbon (2040)

ACTION LINES:

- ✓ **RENEWABLE ENERGY**
- ✓ **ENERGY EFFICIENCY**
- ✓ **SUSTAINABLE FLEET**
- ✓ **EMISSION OFFSETTING**



SUSTAINABLE AVIATION

Scope 3

Acting as a tractor for other players in the aviation sector to accelerate its decarbonisation

ACTION LINES:

- ✓ **CLEAN PROPULSION FOR AIRCRAFT**
- ✓ **EFFICIENCY IN AERONAUTICAL OPERATIONS**
- ✓ **SUSTAINABLE *GROUND HANDLING* FLEET**

COMMUNITY AND SUSTAINABLE VALUE CHAIN

Scope 3

Improve the sustainability of the environment by collaborating with suppliers, tenants, transport agents and the community

ACTION LINES:

- ✓ **SUSTAINABLE MOBILITY**
- ✓ **CLIMATE COOPERATION AND AWARENESS**

STRATEGIC PROGRAM: CARBON NEUTRALITY

PROGRAM

1

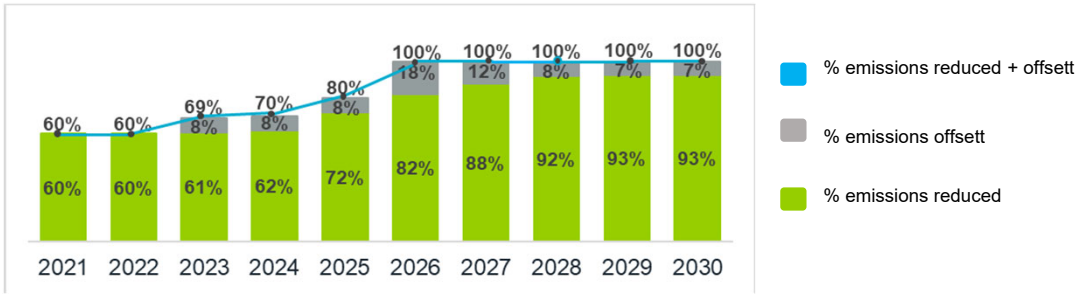
CARBON NEUTRALITY

STRATEGIC OBJECTIVES

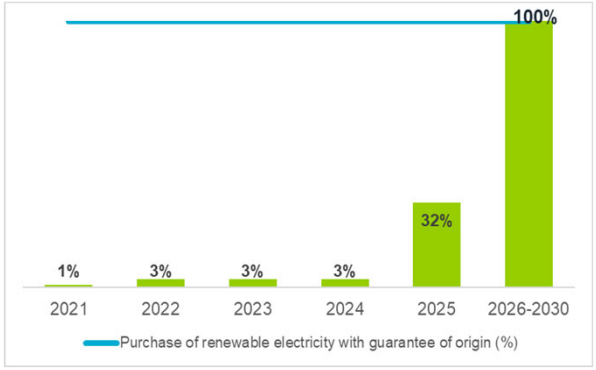
EMISSION REDUCTION IMPACT
~ **135.000** Tn CO_2eq

CO_2

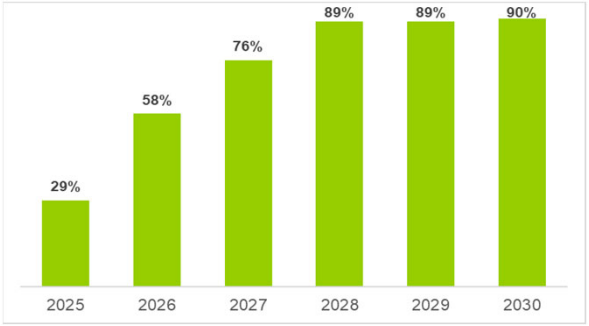
% REDUCTION OF ABSOLUTE CO_2 EMISSIONS (Scope 1 and 2)



% OF RENEWABLE ENERGY PRODUCED BY SELF-CONSUMPTION AND % OF PURCHASE OF GREEN ENERGY WITH GUARANTEE OF ORIGIN



% CONSUMPTION (PURCHASE+PRODUCTION) OF SUSTAINABLE ENERGY FOR BOILERS AND COGENERATION PLANT (MAD)*



** Geothermal energy included*

STRATEGIC PROGRAM: CARBON NEUTRALITY

RENEWABLE ENERGIES

Ensure 100% of self-consumed green electricity and 90% of sustainable fuels consumed (purchase+production) by 2030

SCOPE	ACTIONS	SPECIFIC OBJECTIVES
RENEWABLE ELECTRICITY PRODUCTION	**Green energy generation through the Photovoltaic Plan (975 GWh/year by 2026)** **Pilot project to replace 2 generator sets with hydrogen cells in BCN in 2023 and depending on results extrapolation project to PMI and LPA in 2028.**	Ensure 100% of self-consumed green electricity by **2026** Barcelona Project implemented by **2023**
SUSTAINABLE AIR CONDITIONING ENERGY PRODUCTION	**Green air-conditioning energy generation by means of geothermal energy at MAD, BCN and PMI airports by 2026** **Biogas production in MAD airport by 2026**	Ensure self-consumption of sustainable air conditioning energy: **19%** by **2026** **25%** by **2030**
PURCHASE OF GREEN ELECTRICITY AND PURCHASE OF SUSTAINABLE FUELS FOR AIR CONDITIONING	**Substitution of fossil fuels for sustainable fuels in MAD's boilers and cogeneration plant.**	% of sustainable fuel purchase: **22%** by **2026** **65%** by **2030**

STRATEGIC PROGRAM: CARBON NEUTRALITY

ENERGY EFFICIENCY

Reduce the energy comsuption per passenger by 9% by 2030

SCOPE	ACTIONS	SPECIFIC OBJECTIVES
EFFICIENCY IN ELECTRICITY CONSUMPTION	**Expansion to 100% LED in terminals in 2026** **Implementation of LEDs on platforms and beacons by 2030** **Extension of the intelligent energy management platform to monitor consumption at 10 airports by 2030**	Reduction of electricity consumption per passenger by **10%** by **2030**
EFFICENCY IN AIR CONDITIONING	**Reduction of the cogeneration plant's operating regime in 2026** **Progressive plan to replace equipment with more energy efficient ones (boilers...)**	Reduction of air-conditioning energy consumption per passenger by **9%** by **2030**

STRATEGIC PROGRAM: CARBON NEUTRALITY

AENA'S OWN SUSTAINABLE FLEET

100% sustainable vehicles by 2026

SCOPE	ACTIONS	SPECIFIC OBJECTIVES
VEHICLES ELECTRIFICATION	**Electrification of passenger cars and vans owned by Aena**	Electrification of **26%** of vehicles by **2026**
USE OF SUSTAINBLE FUELS	**Use of sustainable fuels in all other existing vehicles (e.g. trucks, coaches and off-road vehicles).**	**74%** of own vehicles using sustainable fuel by **2026**
CAR SHARING OWN	**Promoting sustainable mobility in aiport fleet**	Implementation of the car sharing pilot project airport fleet by **2022**

CARBON OFFSET

EMISSION NEUTRALITY	**Emissions offset projects**	Achive carbon neutrality by **2026** through progressive offsetting of emissions

STRATEGIC PROGRAM: SUSTAINABLE AVIATION

PROGRAM 2

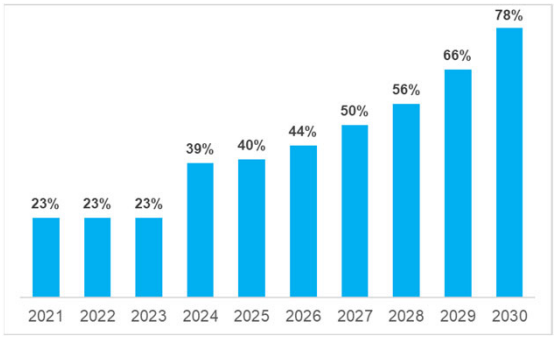
SUSTAINABLE AVIATION

EMISSION REDUCTION IMPACT
~ **171.000** Tn CO_2eq

CO_2

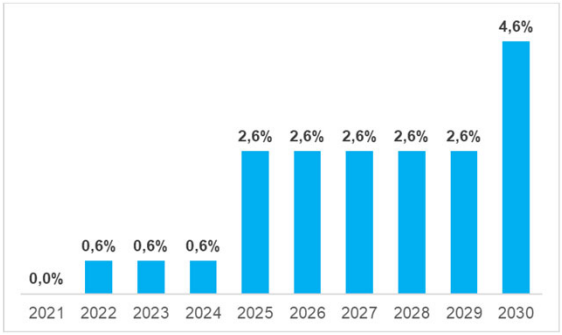
STRATEGIC OBJECTIVES

% SUSTAINABLE HANDLING FLEET (ELECTRIC EQUIPMENT + SUSTAINABLE FUELS)*



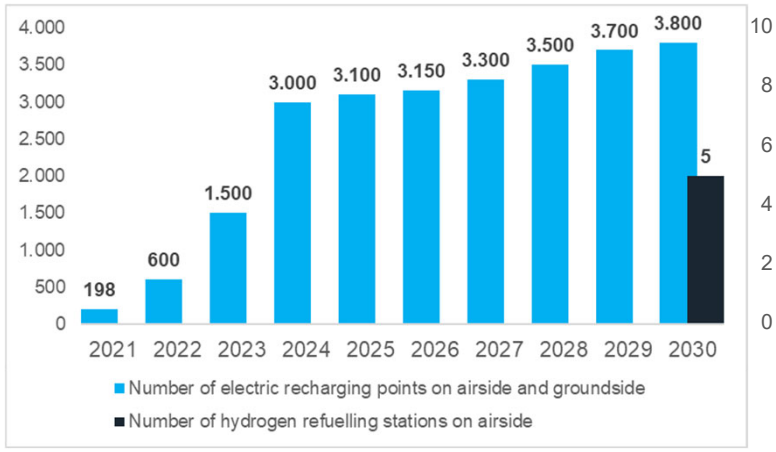
**Objectives conditioned to the resolution of the consultation process, prior to the tender for the selection of providers of the ramp service to third parties*

% OF SAF DISTRIBUTED IN THE AIRPORT NETWORK**



***Objectives conditioned on the entry into force of European or national regulations regarding the establishment of production / use percentages*

NUMBER OF ELECTRIC RECHARGING POINTS AND HYDROGEN REFUELLING STATIONS (LAND SIDE + AIR SIDE)



	2019	2026
	3 airports with ACDM	5 airports with A-CDM
	10 airports with advanced towers	12 airports with advanced towers
Additional Taxi-out time		Lower than the 5 main european airports
Additional ASMA time		Lower than the 5 main european airports

aena ENAIRE

STRATEGIC PROGRAM: SUSTAINABLE AVIATION

CLEAN AIRCRAFT PROPULSION

Proactively participate in the development of new sustainable aviation fuels and its integration with the aviation sector

SCOPE	ACTIONS	SPECIFIC OBJECTIVES
PROMOTING THE USE OF SAF	**Participation in SAF production projects to promote their use by airlines** **Facilitate the distribution of SAF in airports** **Creation of an incentive system for airlines to encourage sustainable fuel consumption**	SAF consumed at Aena´s airports: **2,6 %** by **2026** and **4,6 %** by **2030***
SUSTAINABLE AIRCRAFT	**Definition of a ranking program for airlines related to the use of sustainable aviation fleet in 2024**	Definition of the program, in coordination with airlines in **2024**
POSITIONING FOR HYDROGEN	**Define Aena´s position in hydrogen**	Defining the hydrogen strategy by **2026**

**Objective conditioned on the entry into force of European or national regulations regarding the establishment of production / use percentages*

STRATEGIC PROGRAM: SUSTAINABLE AVIATION

EFFICIENCY IN AERONAUTICAL OPERATIONS

Collaborate closely with ENAIRE, airlines and ground handlers to reduce the emissions generated in airport operations

SCOPE	ACTIONS	SPECIFIC OBJECTIVES
EFFICIENCY OF GROUND HANDLING OPERATIONS	**Network airport pooling pilot project** **Implementation of telemetry to improve fuel consumption efficiency**	Implementation of a pilot project by **2022** Implementation in 7 airports of the network by **2026**
LTO CYCLE EFFICIENCY	**Implementation of A-CDM and advanced towers to improve taxi efficiency**	**5** airports with A-CDM by **2021-2026** **12** airports with advanced towers by **2021-2026**
FLIGHT EFFICIENCY	**Collaboration with ENAIRE to optimize aeronautical operations (eg. route, approach) and definition of joint objectives** **Creation of working groups for the development of joint initiatives and objectives with ENAIRE**	In the 5 main Aena airports:Average additional time Taxi-out and ASMA average additional time lower than that of the 5 major European airports in the period **2021-2025** Holding quarterly meetings

STRATEGIC PROGRAM: SUSTAINABLE AVIATION

SUSTAINABLE GROUND HANDLING FLEET

Reach 78% of sustainable ground handling vehicles by 2030*

SCOPE	ACTIONS	SPECIFIC OBJECTIVES
VEHICLE ELECTRIFICATION	**Ground Handling vehicle electrification requirements** **Implementation of electric charging points to supply new electric vehicles**	Installation of **250 charging points** on the air side in **2026** and **900 points** in **2030**
USE OF SUSTAINABLE FUELS	**Requirements for the use of sustainable fuels in Ground Handling vehicles** **Implementation of hydrogen powered vehicles in 2030** **Implementation of hydrogen stations to supply new vehicles (electric and alternative fuels)**	Instalation of **Hydrogen refuelling stations** in the 5 main spanish airports by **2030**

**Objective conditioned to the resolution of the consultation process, prior to the tender for the selection of providers of the ramp service to third parties*

STRATEGIC PROGRAM: COMMUNITY AND SUSTAINABLE VALUE CHAIN

PROGRAM

3

COMMUNITY AND SUSTAINABLE VALUE CHAIN

EMISSION REDUCTION IMPACT
~ **17.000** Tn CO_2eq

CO_2

STRATEGIC OBJECTIVES

Environment sustainability improvement by collaborating with suppliers, tenants, transport agents and the community through:

- ✓ *Promotion of sustainable mobility to and from the airport*
- ✓ *Proactive collaboration with the supply chain and community to drive sustainability*

STRATEGIC PROGRAM: COMMUNITY AND SUSTAINABLE VALUE CHAIN

SUSTAINABLE MOBILITY

Promote sustainable mobility to and from the airport

SCOPE	ACTIONS	SPECIFIC OBJECTIVES
PUBLIC TRANSPORT PROMOTION	**Collaboration with 3rd parties to define sustainable initiatives (eg. group of mobility agents)**	
SUSTAINABLE PRIVATE TRANSPORTATION	**Investment in charging points to promote sustainable transport to / from the airport** **Establishment of sustainability requirements for Rent a Car / VTC / Car Sharing** **Promotion of sustainable mobility through pricing in car parks (parking concept as a sustainable mobility hub)** **Electrification of shuttles used between terminals at Madrid and Barcelona airports** **Employee travel emissions offsetting**	Installation of **1** charging point for every **40** parking places in **2026** Inclusion of requirements in new contracts (VTC and Car Sharing **2022**, Rent a car **2023**) Development of pricing scheme in **2021** **100%** Electric shuttle fleet in MAD + BCN in **2026** Offsetting of **100%** of emissions generated by Aena´s employees travels through sustainable projects verified as of **2024**
SUSTAINABLE LOGISTICS	**Creation of a forum for collaboration with airport logistics operators**	Launch of the collaboration forum in **2022**

STRATEGIC PROGRAM: COMMUNITY AND SUSTAINABLE VALUE CHAIN

COOPERATION AND CLIMATE AWARENESS

Proactive collaboration with the supply chain and the community to promote sustainability

SCOPE	ACTIONS	SPECIFIC OBJECTIVES
AGREEMENTS WITH UNIVERSITIES	**Collaboration agreements through transparent selection procedures with universities and technology centers or other entities to accelerate the sustainable transformation of the sector**	Provision of a fund for the promotion of agreements with universities until **2026**
CLIMATE CHANGE AWARENESS	**Definition of awareness mechanisms** **Creation of a plan of awareness-raising actions coordinated by a transversal internal working group**	Development of 1 awareness campaign each year
SUSTAINABLE SUPPLY CHAIN	**Establishment of selection criteria and requirements, as well as their monitoring and penalties, in the field of sustainability for Aena suppliers and tenants**	Definition and implementation of quantified sustainability requirements for **100%** of the contracts from the **2022**

INVESTMENTS ASSOCIATED WITH THE CLIMATE ACTION PLAN

ECONOMIC IMPACT OF THE CAP

CAPEX

~ 550 M€

AENA, 2021-2030,

CARBON NEUTRALITY

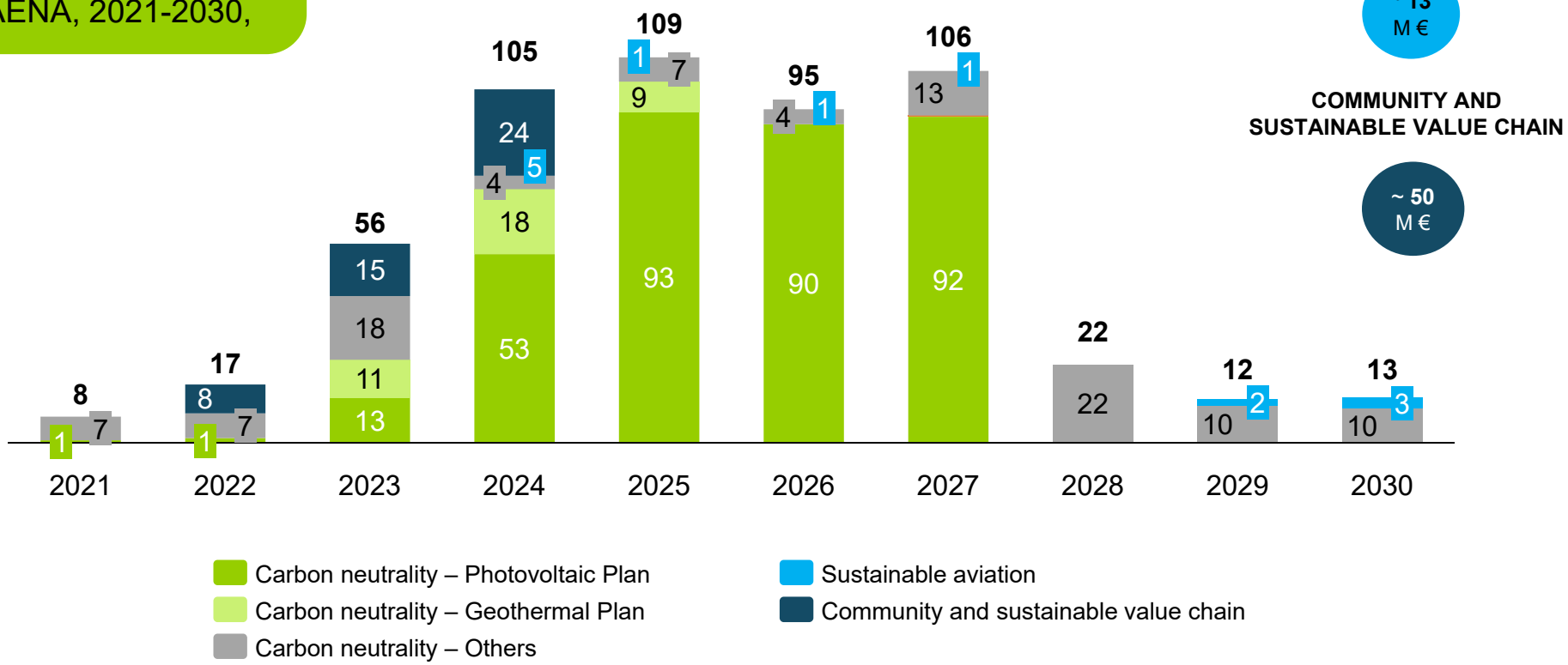
~ 485 M €

SUSTAINABLE AVIATION

~ 13 M €

COMMUNITY AND SUSTAINABLE VALUE CHAIN

~ 50 M €



CARBON NEUTRALITY PROGRAMS

CARBON NEUTRAL PROGRAMS

CARBON NEUTRAL PROGRAM 2026

- Approximate 82% reduction in CO_2 emissions from **entire Aena network** (scope 1+2), thanks to the implementation of the actions included in the Program of **Carbon Neutrality by 2026**
- The rest of the emissions that cannot be reduced in 2026 will be offset through projects that meet the methodological and quality criteria established in the accreditation framework, such as the Airport Carbon Accreditation program, for example the Clean Development Mechanism, Climate Action Reserve, American Carbon Registry, Gold Standard and Verified Carbon Standard.
- Aena will invest in reforestation projects, renewable energy, energy efficiency and other non-polluting technologies. Additionally, it will be sought that the typologies of selected compensation projects add value beyond reducing emissions such as access to drinking water and improving the health and livelihoods of communities, job creation and protection. of threatened species.
- Emissions offset will be carried out progressively from 2023

CARBON NEUTRAL AIRPORTS aena 2026

7 airports with ACA level 3+ (NEUTRAL)

NET ZERO 2040

- During the 29th Annual Congress and General Assembly of ACI Europe, in 2019, the main European airport operators pledged to achieve the goal of zero carbon emissions by 2050 and to work together to accelerate the decarbonisation of the aviation sector.
- This **Net Zero** commitment, acquired by Aena in 2019, has been reviewed within the framework of the CAP, and its achievement has been advanced to 2040, which will imply **net zero of CO_2 emissions in the airport network.**
- This milestone will be achieved by reducing its CO_2 emissions to the maximum and balancing the remaining part with the application of carbon absorption, capture and storage techniques consisting of the application of a set of techniques and technologies to remove CO_2 from the atmosphere or prevent it from being emitted.

NET ZERO CARBON aena 2040

MONITORING

MONITORING OF THE CLIMATE ACTION PLAN

QUARTERLY: monitoring of **developed actions**, as well as the progressive fulfillment of the specific objectives established by the **Aena Sustainability and Climate Action Comittee** who will report progress to the Board of Directors.

ANNUAL: report of the CAP **indicators** to the **Board of Directors** and the **Shareholders' meeting** on the progress in achieving the objectives of the Climate Action Plan.

ANNUAL MONITORING INDICATORS

PROGRAM: CARBON NEUTRALITY

RENEWABLE ENERGY

- ✓ % of self-consumed green electricity
- ✓ % of self-consumed green HVAC energy
- ✓ % of electricity purchase with guarantee of origin
- ✓ % of purchase of sustainable sustainable fuel for air conditioning

ENERGY EFFICIENCY

- ✓ Electricity consumption per passenger
- ✓ Air conditioning energy consumption per passenger

SUSTAINABLE OWN FLEET

- ✓ % of own sustainable vehicles

EMISSIONS OFFSET

- ✓ % emissions offsett

ANNUAL MONITORING INDICATORS

PROGRAM: SUSTAINABLE AVIATION

CLEAN PROPULSION AIRCRAFT

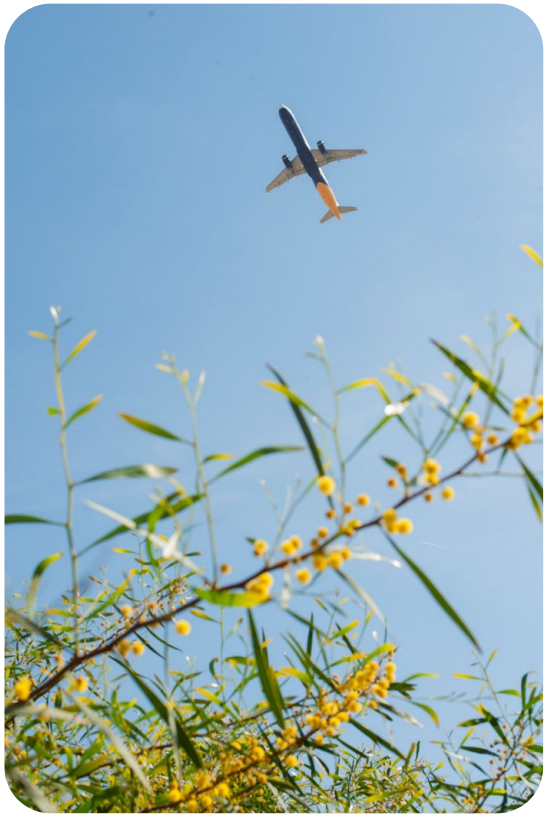
- ✓ % of SAF consumed in the airport network

EFFICIENCY IN AERONAUTICAL OPERATIONS

- ✓ Number of airports with telemetry system in Ground Handling equipment
- ✓ Number of airports with A-CDM
- ✓ Number of airports with Advanced Towers
- ✓ TAXI-OUT (Additional taxiing time at departures: min / departure) and ASMA (Additional time in approach: min / arrival) at 5 main Aena´s airports

SUSTAINABLE GROUND HANDLING FLEET

- ✓ % of sustainable ground handling vehicles
- ✓ Number of electric charging points on air side
- ✓ Number of hydrogen refueling stations



ANNUAL MONITORING INDICATORS

PROGRAM: COMMUNITY AND SUSTAINABLE VALUE CHAIN

SUSTAINABLE MOBILITY

- ✓ % of passengers using public transport
- ✓ Number of parking spaces per charging point
- ✓ % of sustainable vehicles in Rent a Car, VTC and Car Sharing
- ✓ % fleet of electric shuttles in MAD + BCN
- ✓ Total emissions offset of employees travels per year

Climate Action Plan 2021 – 2030

Towards Zero Emissions