ANA – Aeroportos de Portugal

Decarbonization Roadmap

TOWARDS NET ZERO EMISSIONS (2018-2030)

ANA AEROPORTOS DE PORTUGAL

VINCI AIRPORTS

Table of Contents

01 About VINCI Airports

VINCI AIRPORTS, 1ST PRIVATE AIRPORTS OPERATOR IN THE WORLD

13
countries

+70
airports

17,000
employees

267m
passengers

€5,5bn
managed revenue

ANA AEROPORTOS DE PORTUGAL

VINCI AIRPORTS

3 LEVERS TO MOVE TOWARDS NET ZERO EMISSIONS

A pioneer in the sector, in 2016 VINCI Airports became the first airport operator in the world to define a global policy to control and reduce its environmental impact and integrate it in all its development projects.

In 2018, defined an action plan and a reduction trajectory in line with the IPCC's 1.5°C scenario for each consolidated airport, to achieve Net Zero emissions by 2030 in airports in the European Union, and London Gatwick; and Net Zero by 2050 in airports in the rest of the world. All the airports in the network are committed to an ambitious and concrete environmental transition path, involving the entire airport ecosystem in this approach, working with partners on a local and international scale.

Our priority is to decarbonize our operations and, more broadly, to support the decarbonization of the airport sector, in conjunction with local authorities. This ambition for transformation inspires all our projects, investments and innovations, in both the contracting and operating phases. Our environmental plan is built around three priorities:

EXEMPLARY ON OUR SCOPE

ACTING ON THE VALUE CHAIN AND BEYOND

FINANCING CARBON SINKS

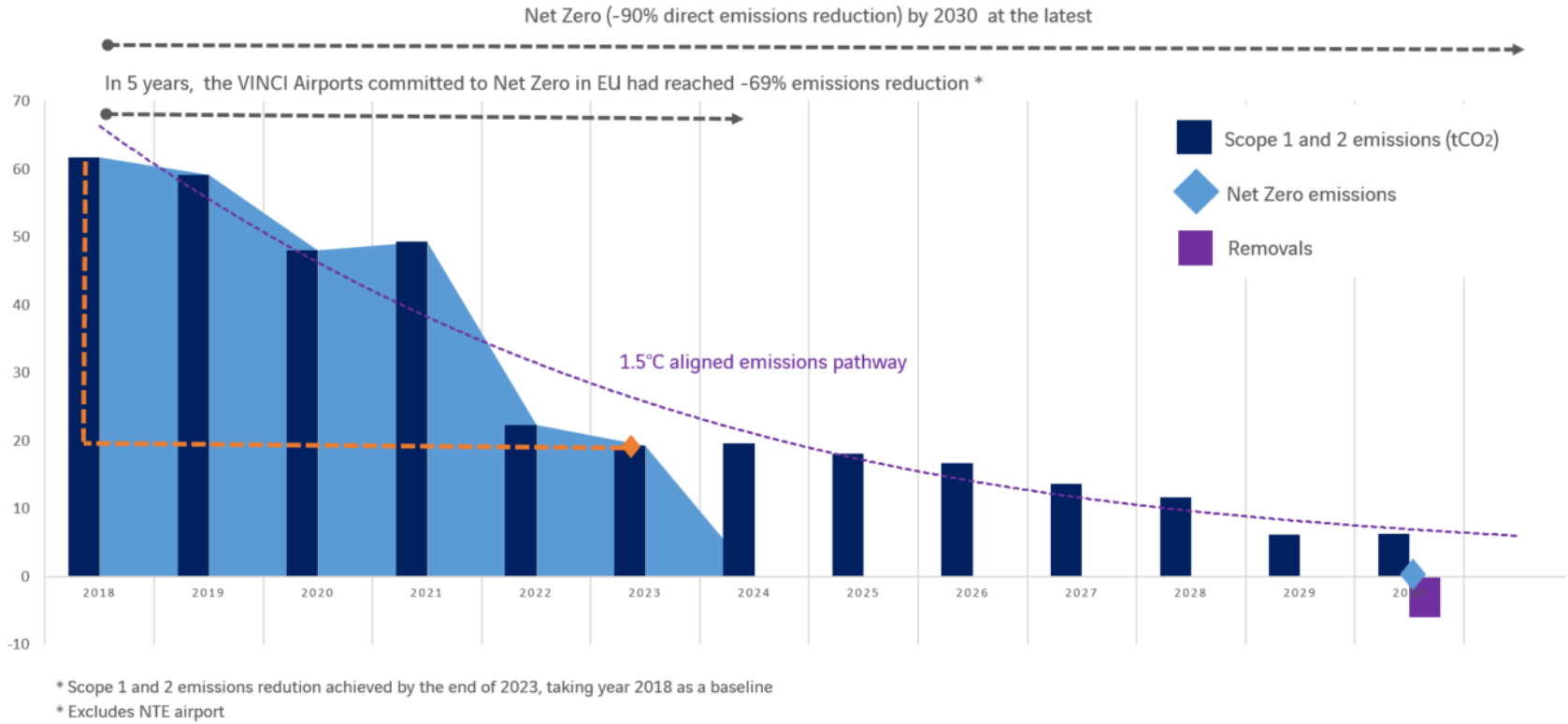
EXEMPLARY ON OUR OWN SCOPE

ACHIEVEMENTS IN 2023

-50%
OF OUR CARBON FOOTPRINT
SCOPE 1 & 2 (vs. 2018)

51 MWp
OF PHOTOVOLTAIC PLANTS

52
ACA ACCREDITED AIRPORTS
(10 Level 4+ & 4 Level 5)



* Scope 1 and 2 emissions redution achieved by the end of 2023, taking year 2018 as a baseline
* Excludes NTE airport

By 2023 and across its *global network*, VINCI Airports has achieved 50% reduction of its direct emissions by implementing renewable energy, energy efficiency measures, LED relamping (passenger terminal buildings, aprons, runways and taxiways, passenger carparks), low emission fleets, among other actions.

All the aforementioned initiatives respond to the core of VINCI Airport's environmental strategy: being exemplary on its own scope, representing the first step consistent with the global goal of achieving net-zero emissions.

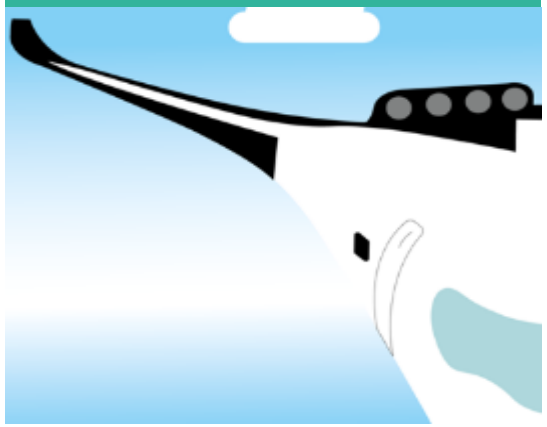
ANA AEROPORTOS DE PORTUGAL

VINCI AIRPORTS

ACTING ON THE VALUE CHAIN AND TERRITORIES

One of the most critical issues on the path to net zero is the collaboration with various stakeholders and third parties for the reduction of indirect emissions (Scope 3), both upstream and downstream. For our airports, these can represent the majority of emissions, ranging from 90% to over 95% of their total greenhouse gas (GHG) emissions. While technology and emerging innovations, like hydrogen-fuelled aircraft, will play an important role for Scope 3 reduction, there are several actions and strategies already in place to make an impact now.

HYDROGEN



Creation of a large fund for clean hydrogen infrastructure in partnership with Total Energies and Air Liquide + MoUs signed in France / Portugal / Chile / Japan

SUSTAINABLE AVIATION FUELS

Sustainable Aviation Fuels available at Clermont-Ferrand Auvergne Airport

(20% SAF delivered in 2022)

MODULATION OF LANDING FEES

World premiere: VINCI Airports launches the carbon modulation of airport charges to encourage fleet renewal and to promote SAF usage (France and Gatwick)

FOREST CARBON SINKS

Investment in carbon sinks with local benefits to address residual emissions

To us, installing EV charging stations on and around our airports fuel the ambition to decarbonize the whole chain of mobility. In the VINCI Airports network globally we have deployed 316 EV charging stations available to our employees, operations and third parties.

Additionally, 75 % of our contact stands are now equipped to provide pre-conditioned air (PCA) and/or have 400Hz ground power units, allowing the aircraft to turn off its auxiliary power unit (APU) and reduce emissions associated with fuel burn.

About ANA Airports

ANA PORTUGUESE AIRPORTS

66,4 Millions of passengers (pax) in 2023

+ 19,1% Variation 2023/2022

+ 123,8% Variation 2022/2021

Specific indicators by region

ANA operates the public airport service in support of civil aviation in **Portugal** under a concession regime.

It is 100% owned by **VINCI** Airports and has a 100% of Portway, its handling subsidiary.

It also has a stake of around:

- 30% of Cabo Verde Airports
- 51% of PTDF - Portugal Duty Free (through a joint venture with AER Rianta International)
- 3,89% of Futuro - Pension Fund Management Company.

ANA AEROPORTOS DE PORTUGAL

VINCI AIRPORTS

MISSION & VALUES

OUR VISION

To achieve a profitable and sustainable business, by positioning our company among the best managed airport operators of comparable size, leveraging our relationship with customers and stakeholders.

OUR MISSION

To efficiently manage our airport infrastructures and to contribute toward the economic, social and cultural development of the surrounding communities.

To provide our customers with a world-class service offering, while enthusing our shareholder and motivating our people.

OUR VALUES

- **Customer Satisfaction:** We are fully focused on understanding our customers' needs and fulfilling them flawlessly.
- **Integrity:** We honour our commitments with customers, communities, shareholders and stakeholders, in a professional and respectful manner.
- **Innovation:** We continually strive to improve our performance, encouraging an open-minded and creative approach to management.
- **Team Spirit:** We aim to learn, communicate, and share ideas and resources, prizing individual work as a crucial part of the whole organization.
- **Employees:** We support all opportunities for the professional and personal growth of our team..
- **Results:** We are committed to meeting ambitious targets.

02

Our Transition

OUR BASELINE AND TRAJECTORY

01. STARTING POINT: 1995 — 2022

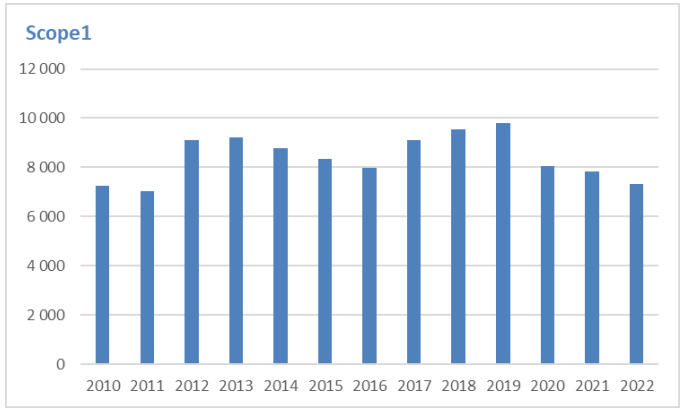
- **1995** – ANA's 1st Environmental Policy
- **2000-2008** – Strengthening environmental teams, with a focus on integrating environmental management into the overall management of the company
- **2008** – Start of carbon footprint calculation and ISO 14001 certification
- **2010** – ACA accreditation - level 1
- **2019** – VINCI Airports' environmental strategy launched
- **2020/2021** – Pandemic situation at the forefront of concerns, however, Energy Action Plans and Stakeholder Partnership Plans have been outlined
- **2022** – Fine-tuning of plans, development of the Carbon Budget tool

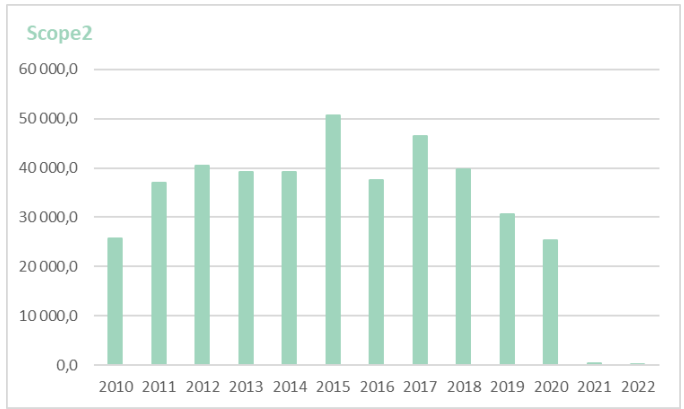
02. 2023

- Participation in several studies and pilots
- Integration of carbon in the Smart Data Hub tool
- Analysis of SBTi criteria - Madeira & Faro
- Publication of Sustainability Report 2022 in accordance with GRI criteria
- ACA accreditation - **level 4+**
- ACA - **level 5** for Beja, Ponta Delgada and Madeira Airports (being part of the group of the first 10 airports accredited to this new and demanding level)

Expansion & Speed

03. CARBON EMISSIONS 2010 — 2022





03

Our Net Zero Commitment

SUSTAINABILITY AT ANA

Together for positive mobility

4 Ambitions 2030

ANA believes that the company's approach to sustainable development only makes sense within the framework of its mission and business strategy. This is also VINCI's vision: a resilient business model drives responsible and sustainable growth.

01. Ensuring excellent environmental performance

- Reduce direct and indirect GHG emissions
- Promote circular economy, promote the economy, sustainable use of water and sustainable mobility
- Monitor and minimise noise inherent to operation
- Preserve biodiversity

02. To be a reference employer

Attract, retain and promote development and training of employees, generating opportunities for all, encouraging intergenerationality and knowledge sharing, and guaranteeing the best health, safety and well-being

03. Playing a central role in the success of territories

Contribute to the prosperity of the country, regions and communities where we operate, through robust financial performance and encouraging resilient value chains.

04. Together

- Accelerating the transition of the aviation industry
- Promoting collaborations in the aviation sector and airport community for economic recovery and green transition

Direct Responsibility

Influence & Co-operation

CLIMATE CHANGE

ANA's commitment

Faced with the unquestionable climate and environmental emergency, ANA works with its teams every day to take action and develop solutions that reduce the impact of its activities.

The company's commitments are aligned with the three main areas of action defined in the environmental strategy defined by VINCI Airports:

01. Energy and Climate Change

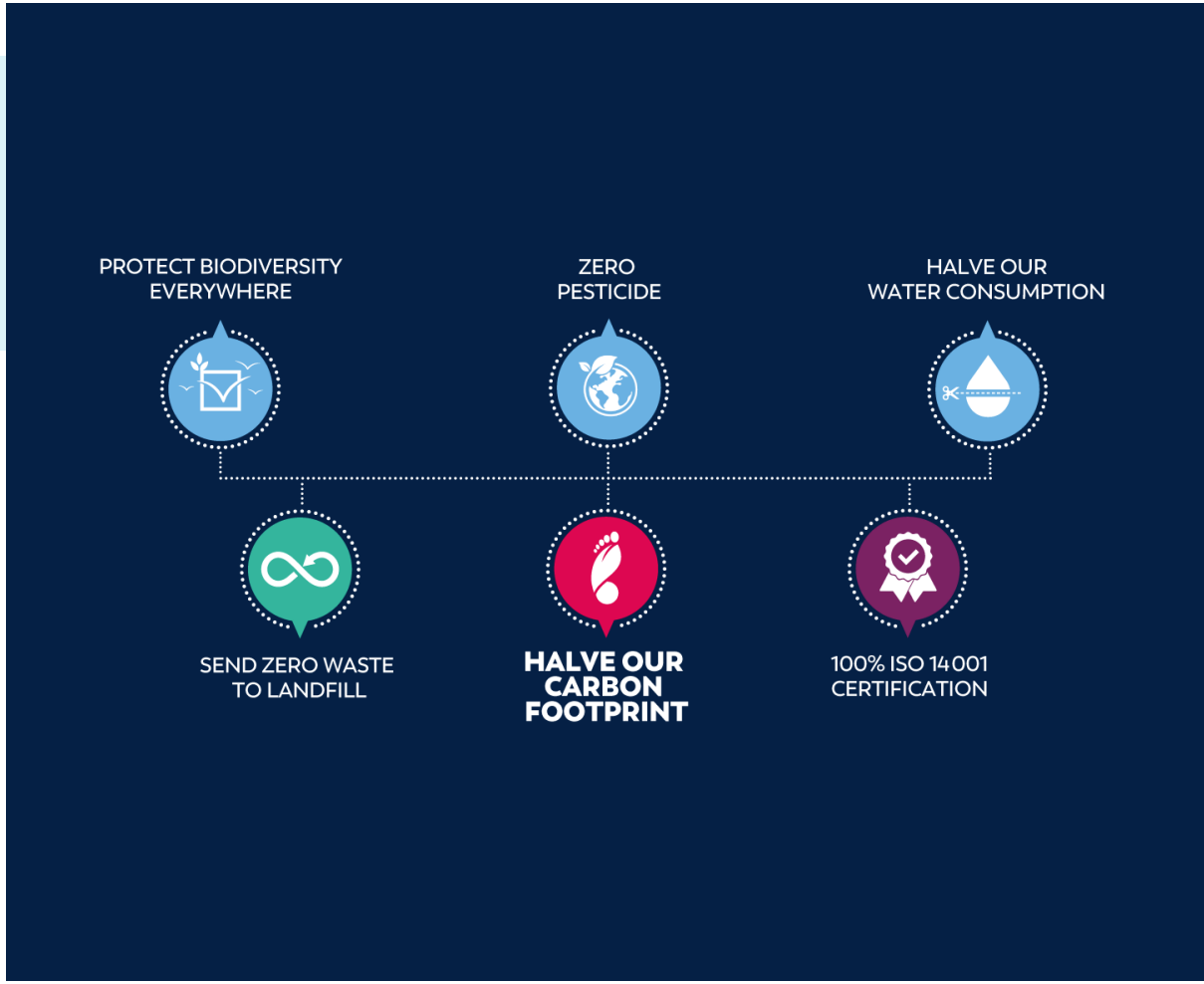
- 50% reduction in absolute emissions (Scope 1 and 2) by 2030 (vs 2018)
- Net Zero (Scope 1 and 2) by 2030 (ACI Commitment)
- Airport Carbon Accreditation ACI (highest level)

02. Circular Economy and Waste Management

- Increasing the waste recovery rate
- Zero Direct Waste to Landfill by 2030

03. Natural Resources Protection

- 50% reduction in water consumption (10.7Lpax)
- Protecting biodiversity alongside air safety Zero phytosanitary products by 2025



CLIMATE ACTION PLAN

ANA's Climate Action Plan is one of the company's long-term strategic tools, as it outlines a roadmap towards various objectives, including the primary goal of NetZero by 2030 for the 10 company's airports.

This Plan is made up of various sub-plans, in particular the Energy Action Plans (concerning all scopes), the Stakeholder Partnership Plans (scope 3) and the future Value Chain Plans (also associated to scope 3).

For the Energy Plans and the 2022-2030 period, around 80M€ of investment has already been accounted for. However, ANA is still working on new projects that will be integrated in the Plans and, thus, optimizing overall emission reductions.

Regarding the Stakeholder Partnership Plans, ANA has already signed more than 77 memorandums of understanding, with measures and indicators for both sides, for reducing consumption, electrifying the fleet, installing car charging points, increasing the monitoring of third-party consumption, reinforcing more sustainable mobility plans, among others.

ANA's Climate Action Plan therefore involves numerous employees (ANA and third parties), as well as having an essential and critical engagement component from the decision-makers, namely the Executive Committee and the Board of Directors.

The Climate Action Plan is aligned with:

- Paris Climate Agreement
- European and national regulations
- Airport Carbon Accreditation requirements
- VINCI objectives

ENERGY PLANS

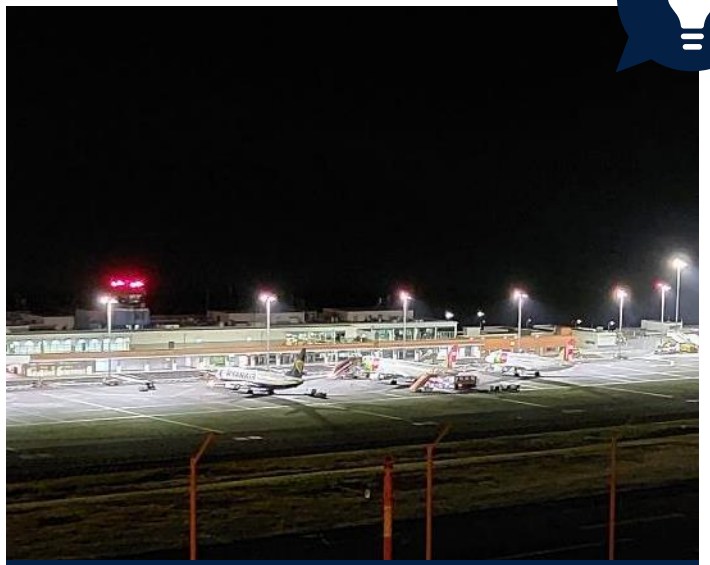
Monitoring
- Energy Plans per Airport
- Carbon Budgets

Scope 1 Reduction measures
- Boiler replacement with Heat pumps- Gas (S1) to electricity (S2)
- Temperature optimisation = 18ºC Winter
- Fleet renewal - fossil fuels (S1) to electricity (S2)
- Use of alternative fuels (ex. HVO)

Scope 2 Reduction measures
- Energy Efficiency Measures
  - LEDs on platforms, taxiways, terminals, parks and streets
  - HVAC: high-efficiency solutions and equipment
  - Building Management Systems
  - Temperature optimisation (New national legislation = up to 24º in summer)
  - Photovoltaic Plant for self-consumption
  - Guarantees of Origin

Compensation measures Residual emissions
- Voluntary Carbon Market
- Marine Grasslands
- Reforestation

ENERGY PLANS



ILUMINATION – 100% LED

Platforms, taxiways, terminals, streets and car parks

Target: 100% LED in all airports by the end of 2025

Madeira and Beja Airports: already 100% LED in 2022

Lisbon, Oporto, Faro and Azores - *Ongoing*

FLEET RENEWAL

Renewal of the operational fleet and service vehicles with **low-emission vehicles**

Target: 100% electric

Mobility Study - electrification of **91% of the fleet by 2029**

136 Charging points already installed

HVO utilisation test at Faro Airport - ANA + handlers (potential increase of tests in Oporto, Lisbon and Funchal)

ONSITE RENEWABLE ENERGY

Photovoltaic Energy

Operational: Faro Airport – covers 30% of the total electricity consumed by the airport (2.9MWp)

Future projects: Lisbon, Oporto, Ponta Delgada, Santa Maria, Horta, Madeira and Porto Santo

Total installed capacity ANA 17MWp by the end of 2025

ENERGY PLANS

SOFT MOBILITY

Bicycles to support workers' daily journeys

Oporto: for ANA and handlers on the Air Side
Madeira: for ANA on the Land Side
Faro: Bicycles and electric scooters

CLIMATISATION

Temperature setpoints

Reducing the temperature setpoints in terminals and office buildings in winter to 18ºC – resulted in 24% savings in ANA's natural gas consumption

New equipment

Heating: transition from Natural and Propane Gas to Electricity by replacing boilers with heat pumps

BMS & CONSTRUCTION ENVELOPE

Building Management Systems: Improving technical management of buildings, promoting their greater energy efficiency

Integrating more sustainable options into project development

Projects that will have **LEED certification**: New Porto Santo Terminal and South Pier in Lisbon Airport

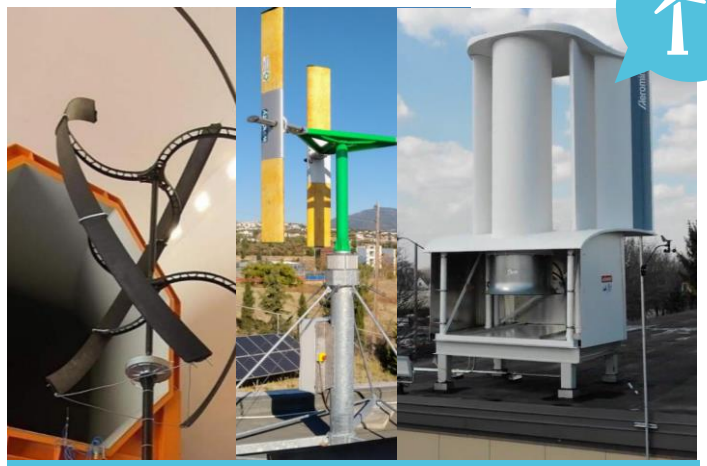
PILOT PROJECTS

ANA has been working on innovation and development projects, supporting the creation of new products and, at the same time, seeking to improve its processes. The area of energy efficiency has been a good example in recent years.

PREDICTIVE CONTROL

The Predictive Company software test in Lisbon T2

This software is learning the energy profile of the building and combines it with external metrics such as weather, solar radiation and occupation. As a result, it is able to learn, predict and optimize energy demand by the climate system, while increasing comfort. And adding predictive maintenance capabilities to our BMS



MICRO WIND GENERATION

ANA/EDP Micro wind project

Wind is normally an operational constraint of airports, this pilot wants to balance this, by harnessing some of the wind energy to power the airport with this form of renewable energy

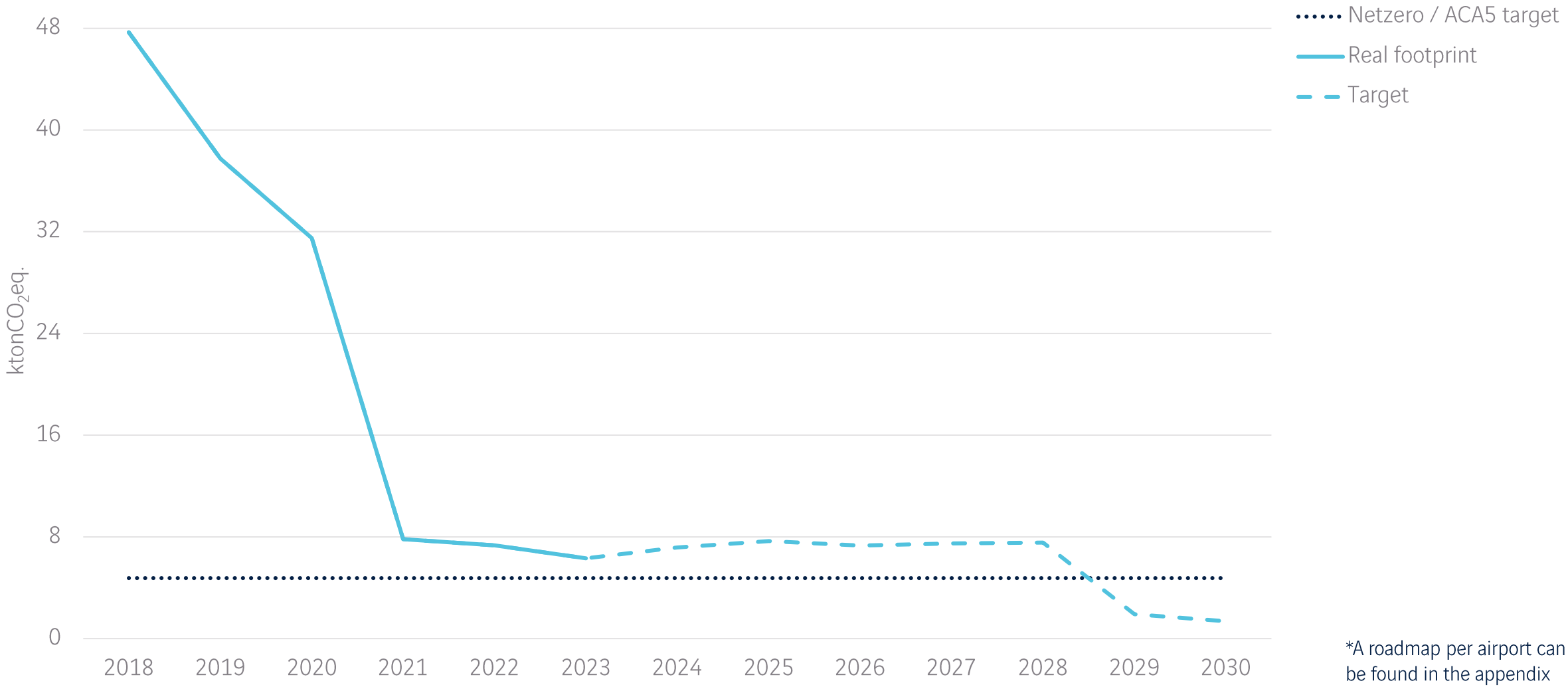
Two distinct technologies are now approved to be tested at Madeira's Airport.

HYDROTREATED VEGETABLE OIL (HVO)

HVO Pilot

Since 2023 we have been using 100% HVO with a dedicated refuelling tank installed at Faro Airport. This has been a success for the allocated ANA's fleet, as well as for our stakeholders. The project's expansion to the remaining airports is expected in the near future.

ANA'S CO_2 ROADMAP 2018 – 2030*



*A roadmap per airport can be found in the appendix

04

Acting on the value chain and beyond

ACTIONS TO REDUCE SCOPE 3

FULL ANA'S CARBON FOOTPRINT 2022

SCOPE 1	SCOPE 2 (location based)	SCOPE 3	
		99,5%	
0,1%	0,3%	Full Flight 92,0%	Other emissions sources 8,0%

% from footprint total

The largest part of ANA's carbon footprint are indirect emissions, i.e. emissions produced as a result of the company's activity but occur from sources owned and/or controlled by another company.

Scope 3 represents the largest percentage of ANA's carbon footprint (**99.5%**), which is why the company has developed **actions aimed at reducing it**.

ACTIONS TO REDUCE SCOPE 3

ENERGY PLANS

FOR SCOPE 3

There are measures in ANA's airports Energy Plans, that will directly reflect on the third party's emissions, as for example:

- LED illumination
- AVAC systems (equipment and temperatures optimization)
- Photovoltaic energy
- Guarantees of origin
- Construction solutions.

STAKEHOLDERS PARTNERSHIP PLANS

ANA maintains open communication with its stakeholders. Since 2021, it has set up working groups with them, bringing together the following areas of activity:

- ✈ Aviation;
- ✈ Handling;
- ✈ Energy (large consumers);
- ✈ Mobility - 1 for each geographical area (Oporto, Lisbon, Beja, Faro, Azores and Madeira).

This work resulted in the establishment of 10 Partnership Plans and more than 70 signed commitment statements. In each of the Plans, actions were established for ANA, but also for the partner.

VALUE CHAIN PLAN

Aware of the importance of its value chain for the overall sustainability of the company and its activities, ANA began analysing it in 2023 with objective to create an integrated Action Plan.

ACTIONS TO REDUCE SCOPE 3

Stakeholders Partnership Plans

01. AVIATION

- TAP Portugal
- Ryanair
- EasyJet
- Air France
- Transavia
- SATA Air Açores/Azores
- HyFly
- Condor

02. HANDLING

- Portway
- TAP Portugal
- Ryanair Handling/Groundlink
- Groundforce – SPDH
- Air BP
- GALP (GOC)
- REPSOL

03. MOBILITY

- Metro Lisboa
- Carris e Aerobus
- TML (Transportes Metropolitanos de Lisboa)
- Lisbon Municipality
- Loures Municipality
- NAV
- Land&Sea

04. ENERGY

- Áreas Portugal-Restauração Distrib Cateringpor
- NAV Portugal
- Ibersol Madeira e Açores
- Restauração
- Prime Food, S.A. Sistemas McDonald's Portugal, Lda
- MESA
- Groundforce-SPDH Portway
- SATA

ACTIONS TO REDUCE SCOPE 3

Stakeholders Partnership Plans

WORKING ON SAF

ANA has been developing numerous initiatives to promote the use of Sustainable Aviation Fuels (SAF) at our airports. This sustainable fuel reduces CO_2 emissions by at least 75 % compared to traditional fossil fuels.
In 2022, ANA carried out the following flights:

LISBOA

Flight AF1624, operated with the new A220 by AIRFRANCE, arrived in Lisbon on 4 May - introduction of 39% SAF

OPORTO

Flight KL1713, operated by KLM with an Embraer 190, arrived in Porto on 7 May - 40% introduction SAF

PONTA DELGADA

The flight, operated by the Azores Airlines A320, arrived in Ponta Delgada on 24 October.

ACTIONS TO REDUCE SCOPE 3

Energy Plans

eGOANA

AFIF (Alternative Fuels Infrastructure Facilities) – potential CEF-AFIF financing programme

Pre-Conditioned Air, Ground Power Supply, Network changes, Electric charger points

10 Airports project

Stands with new PCA and/or GPS or plugs to mobile equipment; deploy of charging areas

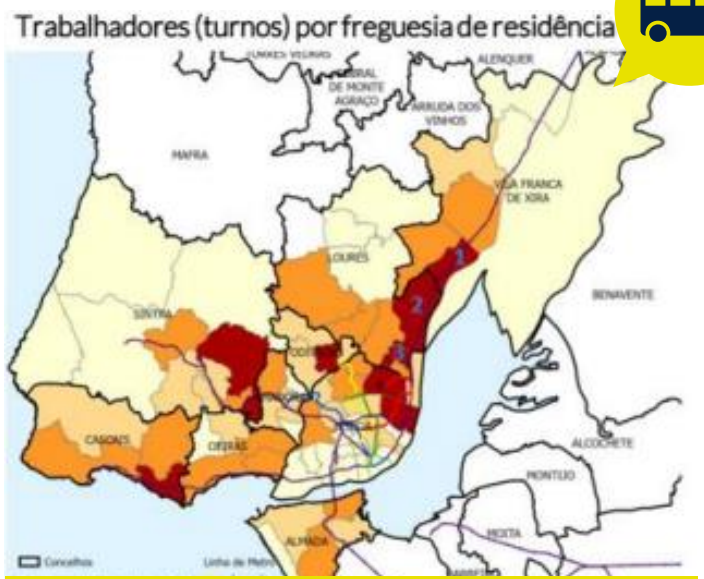
Mainly scope 3 but also scope 1

GREEN HYDROGEN

Feasibility Study on the use of Green Hydrogen for airside operations and for buses between terminals at Lisbon airport is underway - partners GALP, Caetano Bus and Mitsui.

IMAGHyNE – is a Hydrogen Valley project funded by EU in the region of Lyon.

ANA will participate as an observer in IMAGHyNE valley with the goal of bringing Lyon Airport's learnings to the Portuguese Airports



MOONSET

MOONSET is a project in consortium with companies from Portugal, Austria, Holand and Estonia

It's an EU grant awarded (LIFE programme) project

The purpose is to build and deploy a pilot with electrical mini-vans for Lisbon airport premises staff during night period, when public transport is not available

Duration – 36 months (studying replication and enlargement)

05

Acting for the Climate through Carbon Sinks

SUPPORT & INVESTMENTS IN CARBON SINKS PROJECTS

VOLUNTARY CARBON MARKET

International Voluntary Carbon Market projects

Present: Reduction & Removal projects

Future: Only removal projects - continuous transition

TOGETHER WE PLANT THE FUTURE

Implementation of Vinci Airports' **reforestation policy** - local reforestation - **7,000 trees already planted in Portugal** - Porto Santo, Faro and Gouveia

A new national voluntary carbon market to certify forest areas was created in 2024 – ANA intends to participate in the creation of national carbon credits (capture)

SEA GRASSLANDS

Development of future projects to capture ANA's residual carbon emissions, as for example, **Sea Grasslands in Algarve**

06

Acting beyond Mitigation

ADAPTATION & RESILIENCE

Risk Assessment

Risk management at ANA is an integral part of the organisation's processes and is based on the principle that the different categories of risk are monitored by different areas and supervised by top management.

With the worsening of climatic phenomena and the forecast projections for the evolution of the climate, we can foresee a future in which there will be a need to adapt and strengthen resilience to adverse climatic events. This adaptation is necessary at all sectoral and economic levels and is extremely important to airport sector due to the size, importance and connectivity of airport infrastructures.

For this reason, it is extremely important to survey and analyse the main consequences of climate change in our airports.

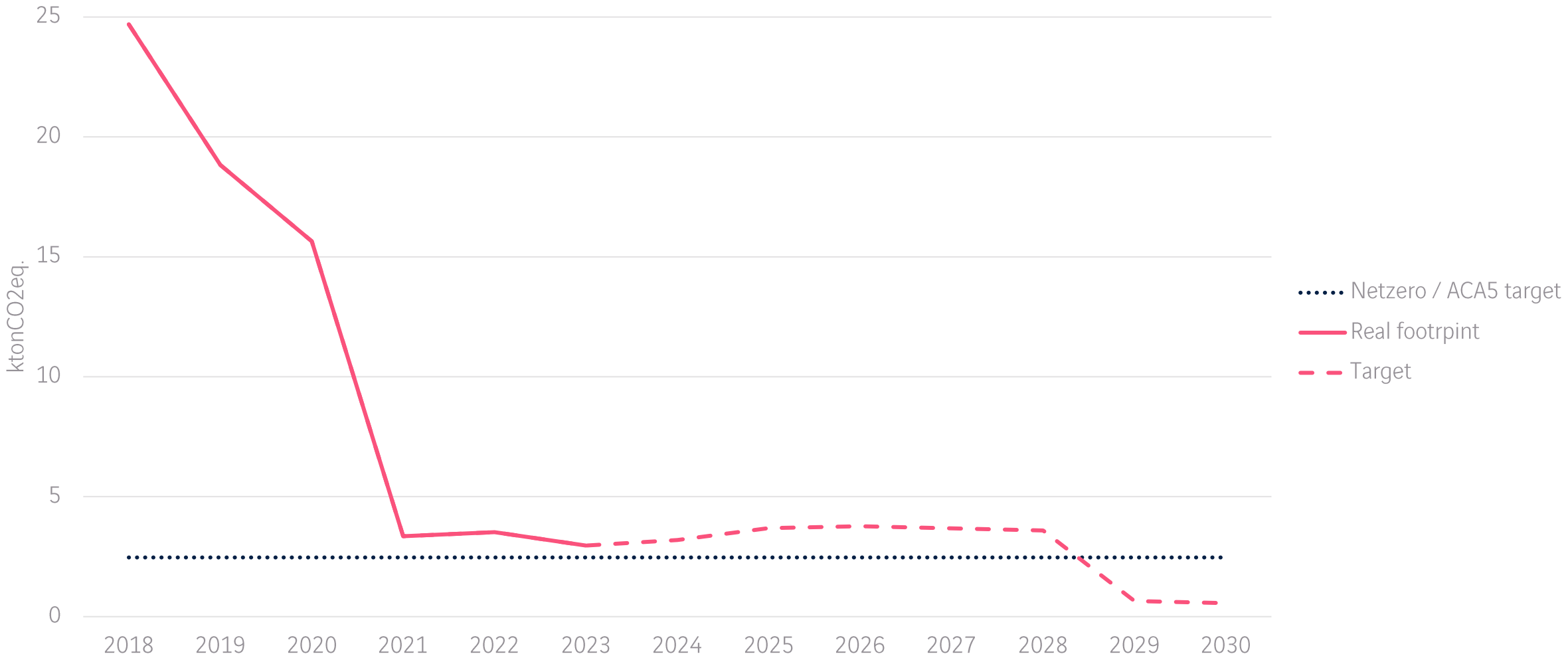
In 2020, a diagnosis and assessment of vulnerabilities was carried out for all ANA Airports, which aimed to systematise the main consequences of climate events on airport infrastructures and the regions in which the airports are located and, consequently, to draw up vulnerability matrices and define lines priorities.

During the 2022-2025 period, Studies and Adaptation Plans are planned for each airport, starting with Gago Coutinho Airport in Faro, which carries the greatest potential risk.


VINCI
AIRPORTS

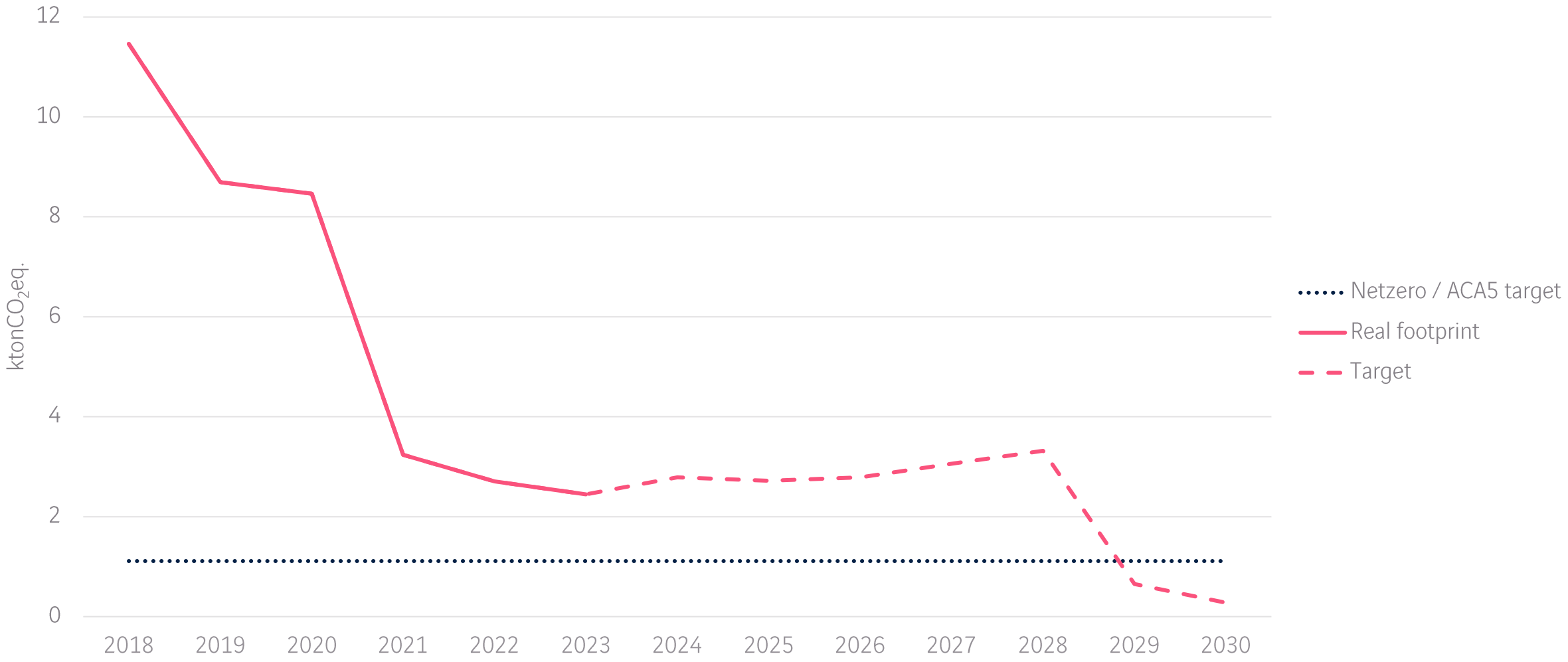
APPENDIX: CO_2 ROADMAP 2018 – 2030 PER AIRPORT

LIS – Humberto Delgado Airport



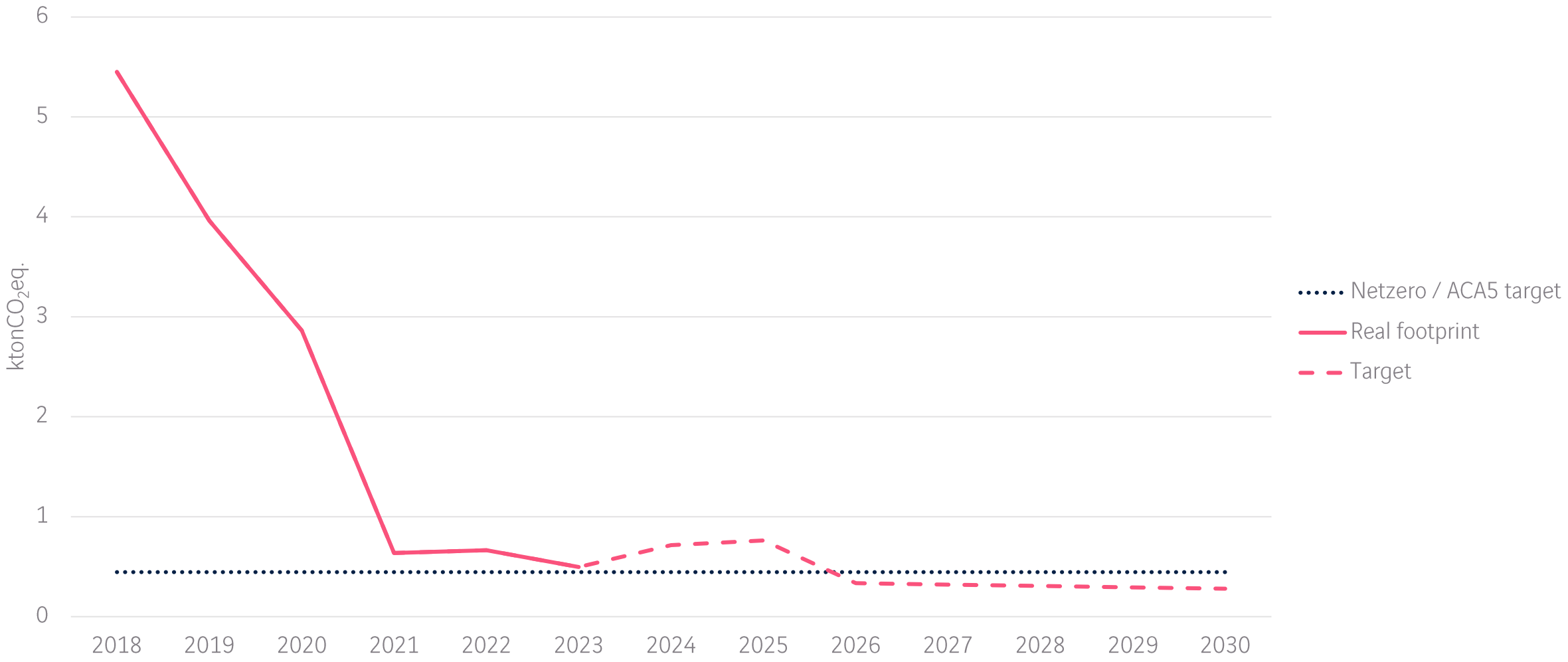
APPENDIX: CO_2 ROADMAP 2018 – 2030 PER AIRPORT

OPO – Francisco Sá Carneiro Airport



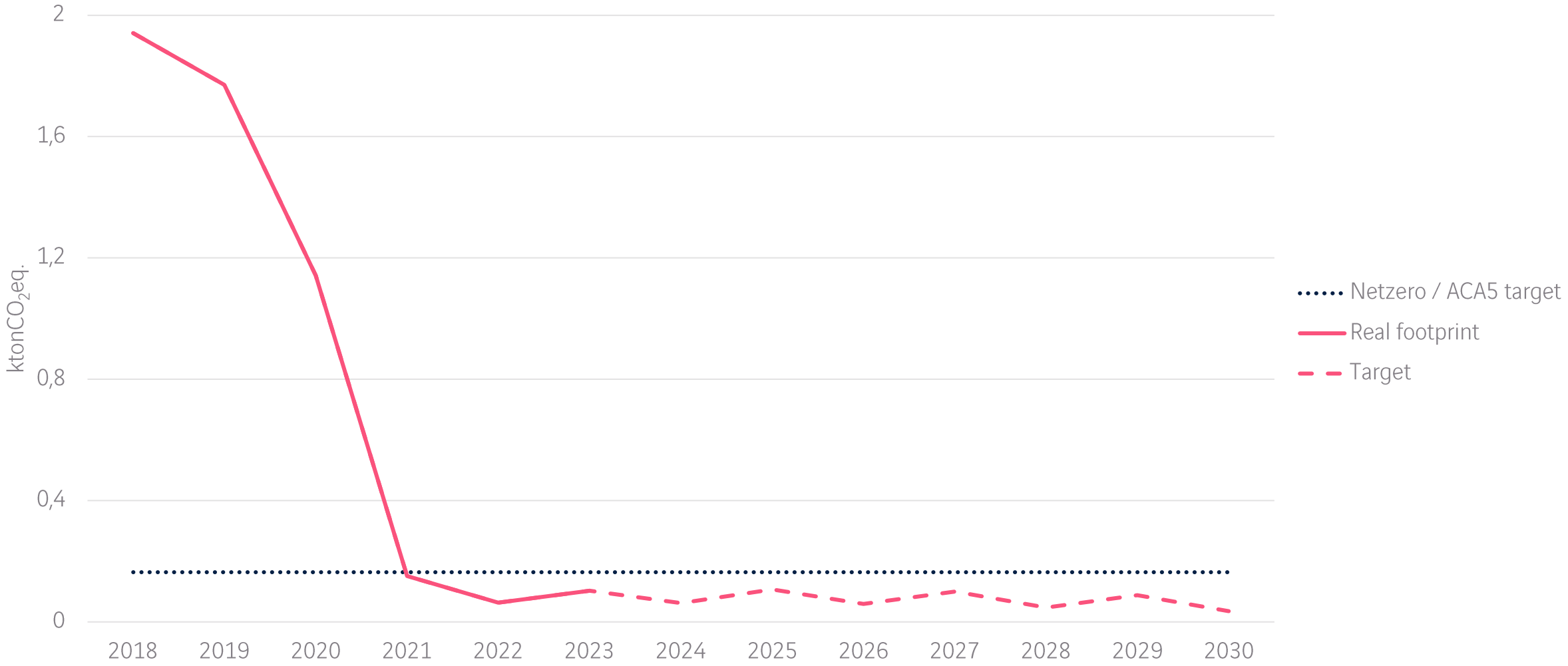
APPENDIX: CO_2 ROADMAP 2018 – 2030 PER AIRPORT

FAO – Gago Coutinho Airport



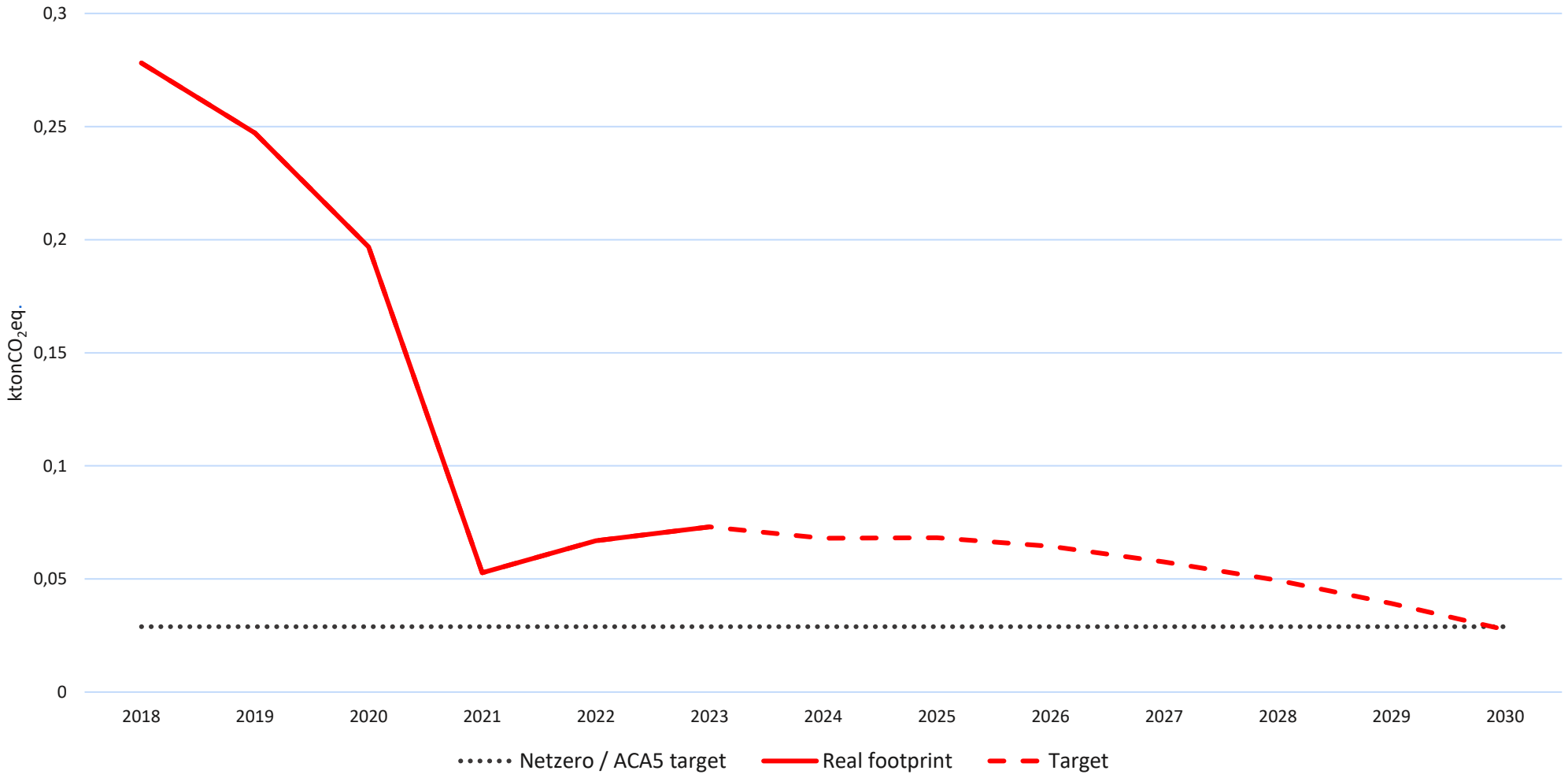
APPENDIX: CO_2 ROADMAP 2018 – 2030 PER AIRPORT

PDL – João Paulo II Airport



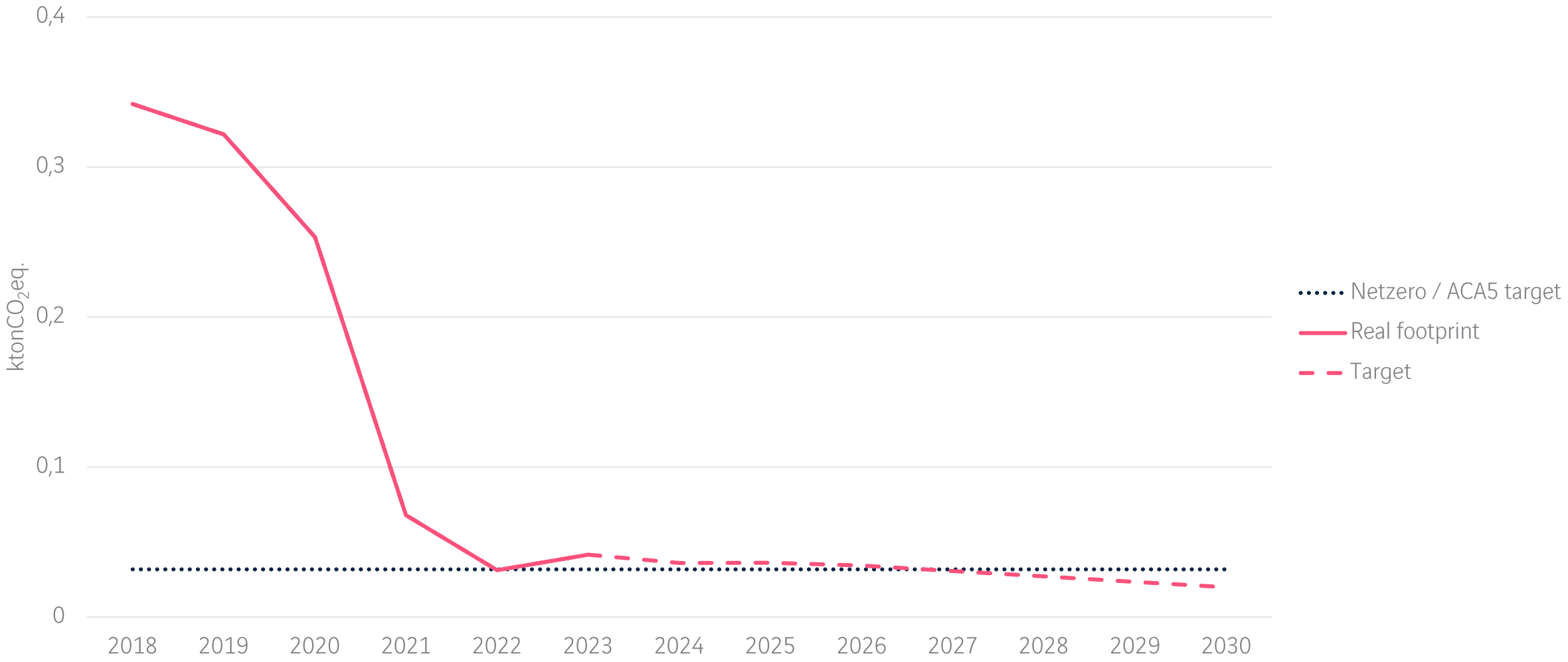
APPENDIX: CO_2 ROADMAP 2018 – 2030 PER AIRPORT

SMA – Santa Maria Airport



APPENDIX: CO_2 ROADMAP 2018 – 2030 PER AIRPORT

HOR – Horta Airport



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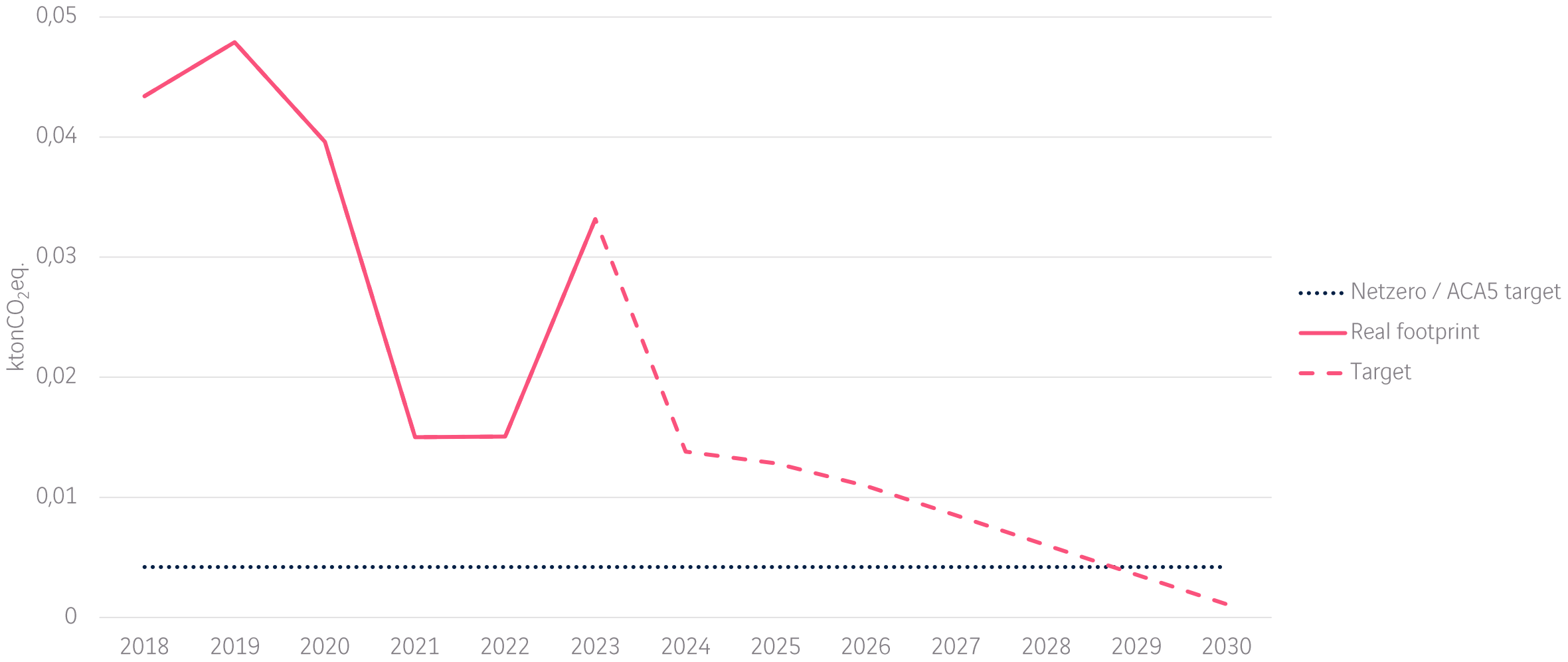
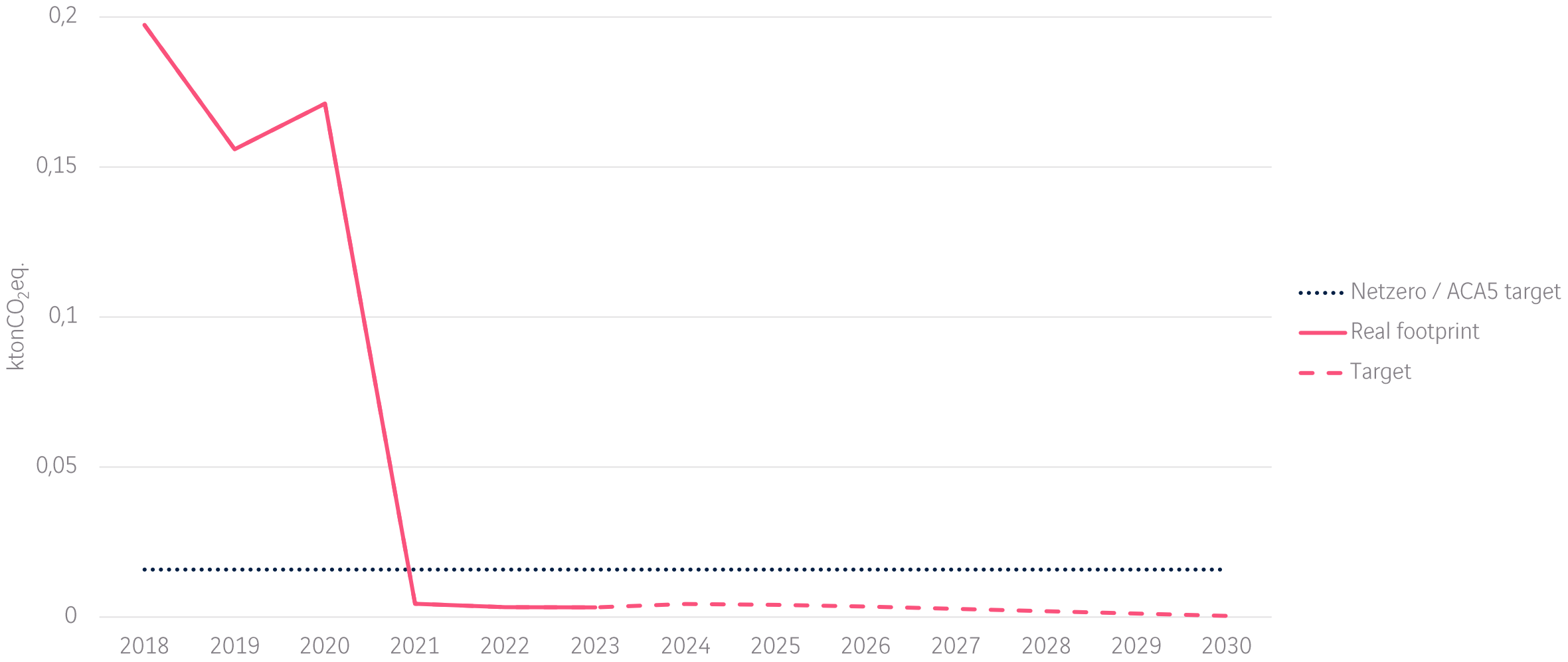
FLW – Flores Airport



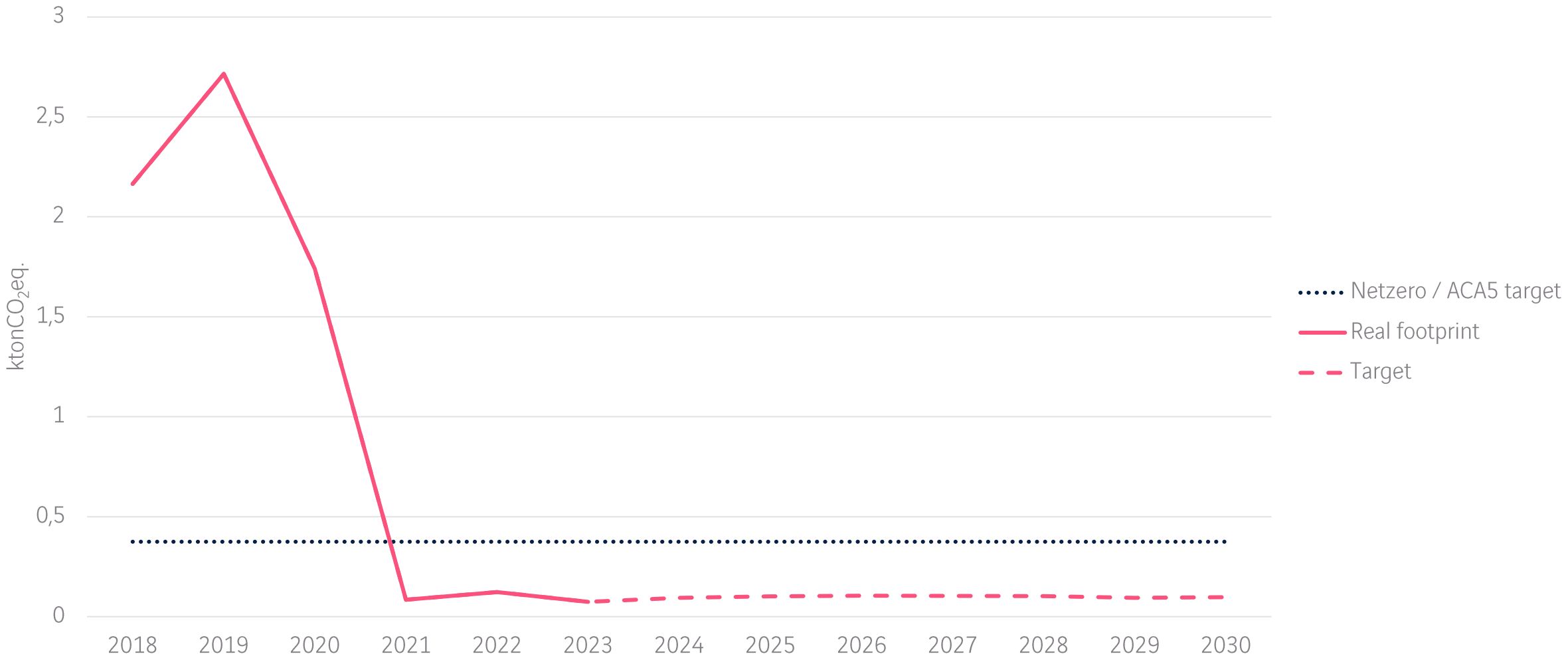
APPENDIX: CO_2 ROADMAP 2018 – 2030 PER AIRPORT

BYJ – Beja Airport



APPENDIX: CO_2 ROADMAP 2018 – 2030 PER AIRPORT

FNC – Madeira Airport



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PXO – Porto Santo Airport