



ACI
EUROPE
AIRPORTS COUNCIL
INTERNATIONAL

REGIONAL AIRPORTS
CONFERENCE & EXHIBITION

28-29 April 2025
Dalaman, Türkiye

Airport Decarbonisation Initiatives

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Carbon Strategy Officer at Environmental Minds

Tuesday 29th April 2025



Environmental Minds



Established: 2021

Location: Athens, Greece

Focus: Aviation and sustainability projects

Key Project: Administration of *Airport Carbon Accreditation*

Portfolio



Airport Carbon Accreditation



Global

	Level 1	Level 2	Level 3	Level 3+	Level 4	Level 4+	Level 5
Global	143	196	156	31	44	50	20
Europe	34	100	62	20	15	39	16

Europe



640 Airports

4.77 Billion
Passengers

97 Countries

55% of
Global
Passengers

286 Airports

1.83 Billion
Passengers

41 Countries

80% of
Passengers
in Europe

Airport Decarbonisation Initiatives



SCOPE 1

Emissions from airport-owned or airport-controlled sources

- Reduce fuel consumption in airport owned vehicles and equipment
- Reduce use of refrigerants in cooling system

SCOPE 2

Indirect emissions from the consumption of purchased energy

- Produce on-site renewable electricity
- Procure renewable electricity
- Install energy efficiency measures

SCOPE 3

Indirect emissions from sources operated/controlled by third-parties

- Drive third parties to electrify their fleet and equipment
- Phase out APUs and install electrical power units
- Encourage airlines to use Sustainable Aviation Fuel (SAF)



Airport Decarbonisation Initiatives



Source: ACI, 2021, Long-Term Carbon
Goal Study Report for Airports

Airport Decarbonisation Initiatives



SCOPE 1

Ground Fleet to Low/Zero-Emission Vehicles



**Toulon Hyères
Airport**
France
Level 5

Use of electric
and biofuel-
powered ramp
vehicles

**Madeira
Airport**
Portugal
Level 5

Electric
Ambulifts for
passengers
with reduced
mobility

**Edinburgh
Airport**
Scotland
Level 4

Electric and
hybrid vehicles,
along with HVO
replacing diesel

**Dalaman
Airport**
Turkey
Level 3

Phase out
diesel-fueled
vehicles to
reduce
emissions from
vehicles by
28%

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SCOPE 1



Refrigerants with low-GWP



Natural refrigerants or newer
HFOs with GWPs < 10

Naples Airport
Italy
Level 5

Replaced multiple
small refrigeration
units with a single,
centralised system

Geneva Airport
Switzerland
Level 4+

Use of low-emission
refrigerants in
cooling system

Monitoring fugitive emissions



Leak detection systems and
performance monitoring

Nice Côte d'Azur
France
Level 4+

Monitored & reduced
leakage-related
emissions by 73%

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SCOPE 2



Renewable electricity
production on-site

Procurement of
Renewable Energy

**Geneva
Airport**
Switzerland
Level 4+

Use 100%
renewable
electricity via
onsite
photovoltaic
solar panels

**Belgrade
Airport**
Serbia
Level 3

Solar Power
Plant which can
generate 1.13M
kWh of
electricity
annually

**Edinburgh
Airport**
UK
Level 4

Power Purchase
Agreements for
solar energy via
Renewable
Energy
Certificates

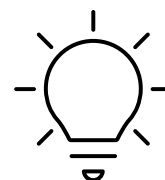
**Antalya
Airport**
Turkey
Level 3+

Natural gas with
the least CO₂
emission
potential for
electrical energy
production

Airport Decarbonisation Initiatives



SCOPE 2



Replacement of existing lighting devices with LED

Installment of light sensors

Toulon Hyères Airport
France
Level 5

Replacement of lighting in terminal and aircraft parking area with LEDs

London City Airport
UK
Level 4+

Replacement of all lighting in terminal with LEDs

Newcastle Airport
UK
Level 4

Upgraded its lighting system by replacing manual switches with PIR sensors

Antalya Airport
Turkey
Level 3+

Installed light sensors throughout the airport to reduce energy consumption

Airport Decarbonisation Initiatives



Infrastructures for electrical GSE models

Electrical Ground Power Units (e-GPUs) that supply clean electrical power to the aircraft, instead of APUs

Electrical power units for ground power

Strategically placed fast chargers near gates, aprons, and hangars to drive 3rd parties

SCOPE 3

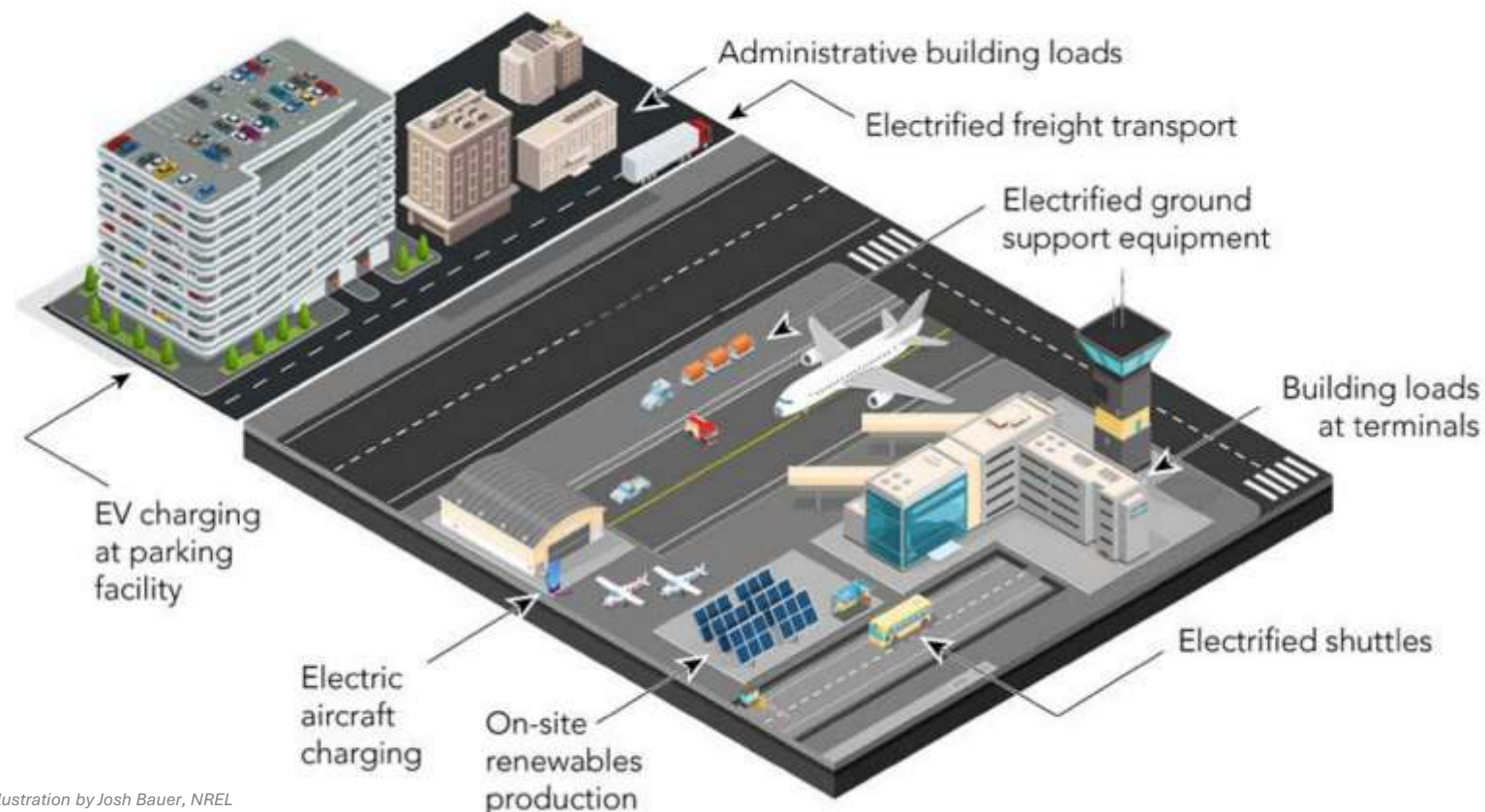
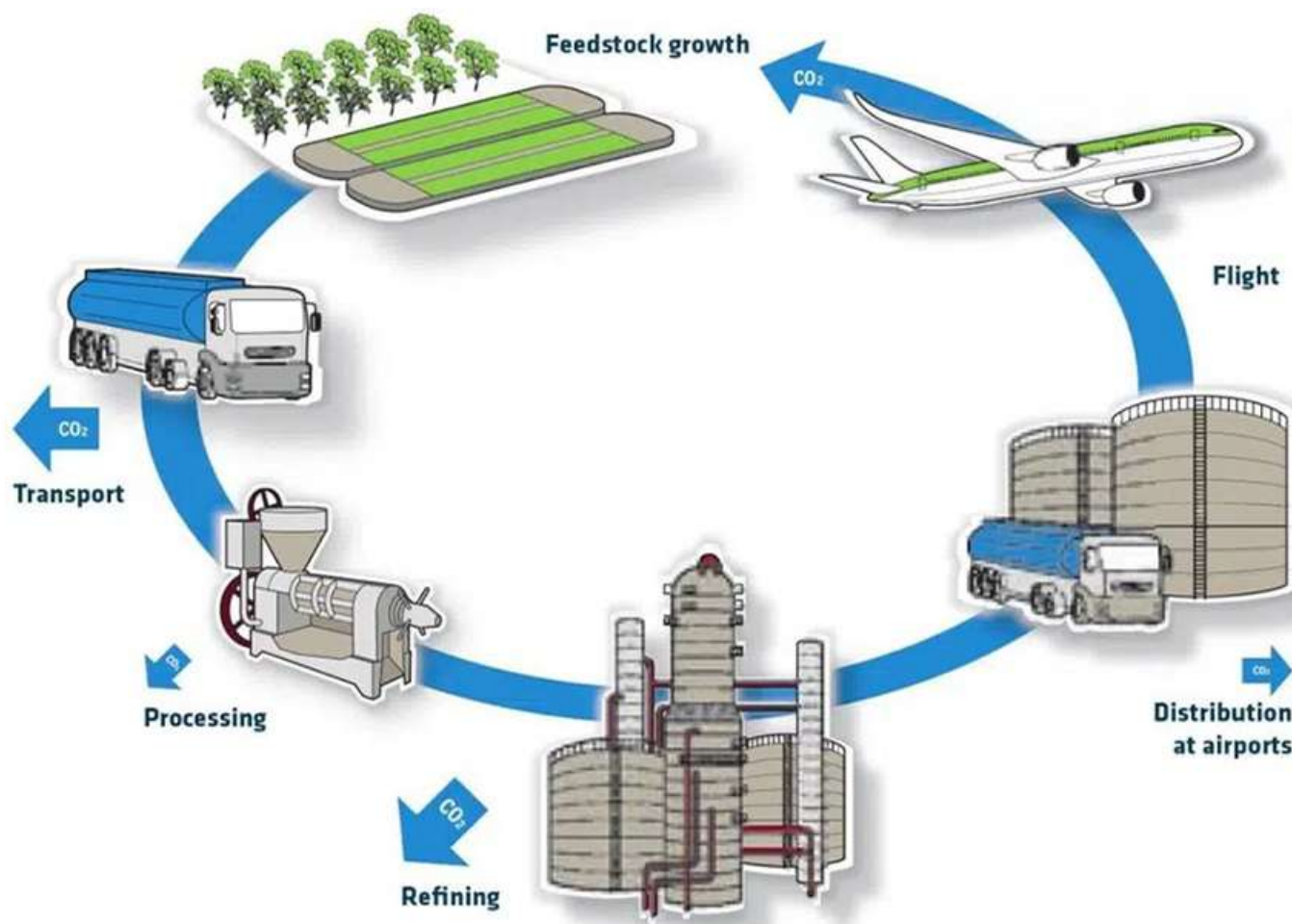


Illustration by Josh Bauer, NREL

Airport Decarbonisation Initiatives



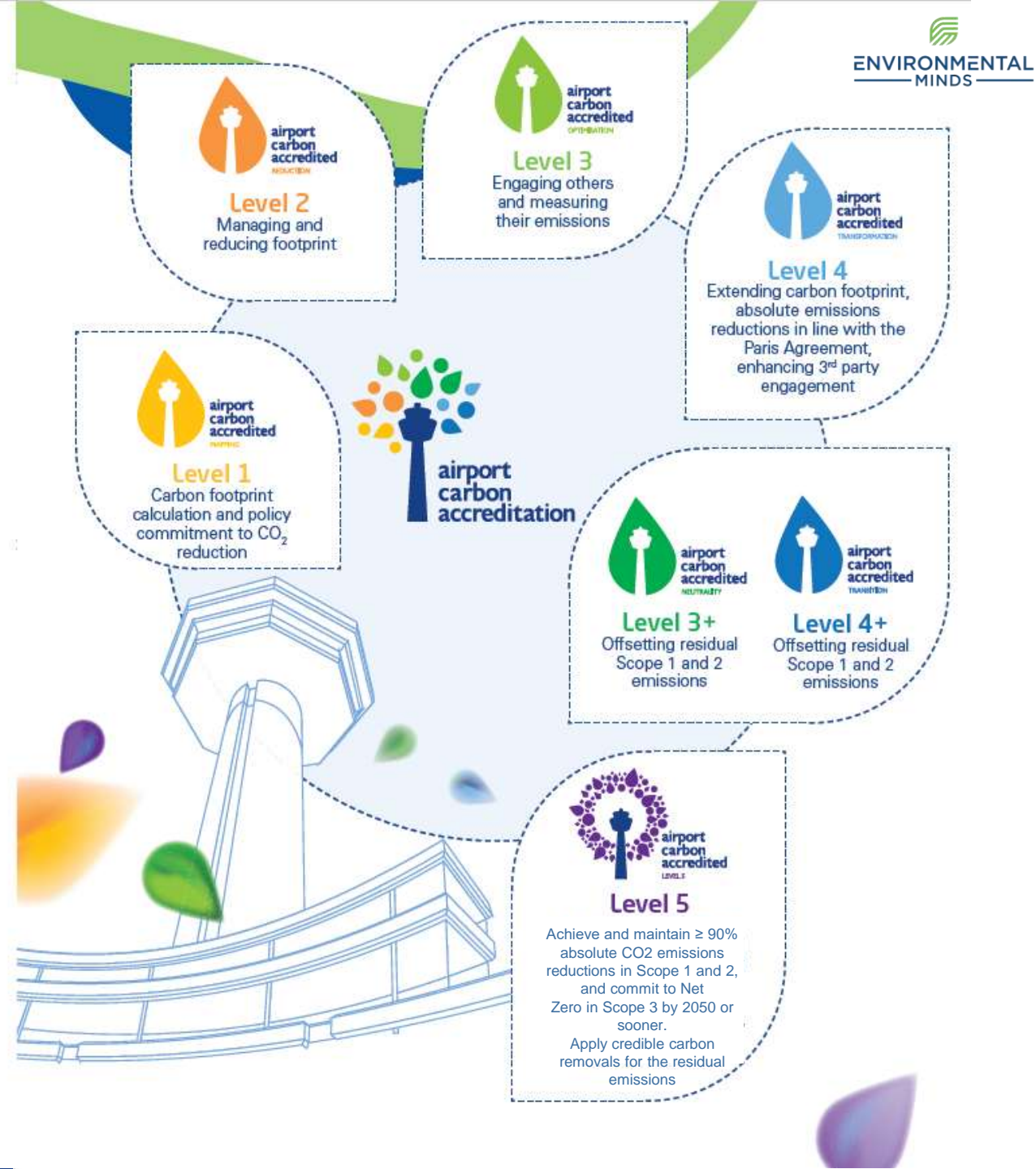
SCOPE 3

Sustainable Aviation Fuel
(SAF)

SAF allows airports to support cleaner flights & can cut lifecycle CO₂ emissions by up to 80% compared to fossil jet fuel

Modify or expand fueling systems to accommodate SAF blends

Airport Carbon Accreditation



Thank You

