SAF 101
A beginners' guide

Prepared for Tampa International Airport

August 28, 2025

Agenda

01	Welcome to Tampa – Eric Caplan
02	Introduction to PA - Ken Conway, Michael Rossell, Jeff Oboy
03	Introduction to Sustainable Aviation Fuel (SAF) - Michael
04	SAF around the world - Ken
05	SAF in the US – and a case study - Michael
06	SAF in Tampa : Discussion and next steps - All

01

Welcome to Tampa

Welcome from Eric Caplan

02

Introduction to PA Consulting

Today’s flight plan

AUG-28
2025

1000-1200
EDT

MS Teams

Workshop
facilitator

Tampa International Airport

Introductions

Ken Conway

Partner
Global Airports & ESG

London, UK

Michael Rossell

Associate Partner
Commercial Aviation Strategy

Boston, USA

Jeff Oboy

Managing Consultant
Commercial Aviation

Ney York, USA

PA is an innovative, multi-disciplinary firm

Working in global teams across seven sectors in the United Kingdom, United States, the Netherlands, the Nordics and Australia …

Consumer and Manufacturing

Government and Public Services

Defence and Security

Health and Life Sciences

Energy and Utilities

Transport

Financial Services

PA in numbers

We are more than

4,000+

experts working from offices across the UK, Ireland, US, Netherlands, Nordics and Australia.

fee income

US ~$1bn

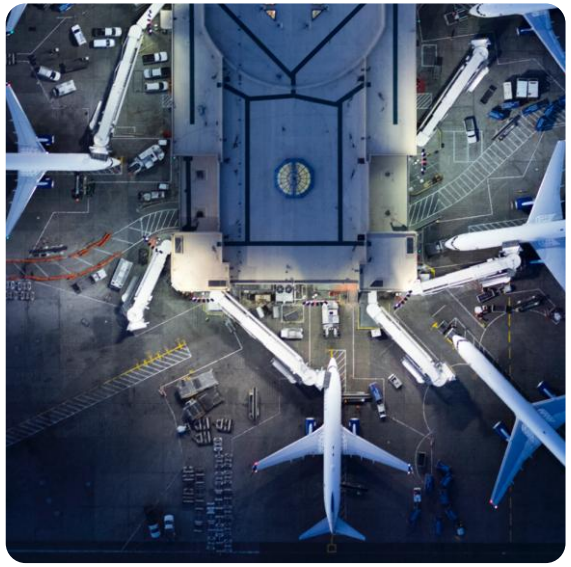
Founded in

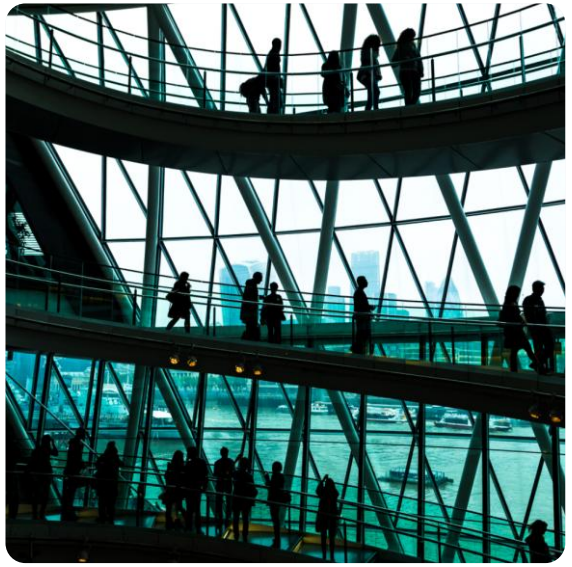
1943

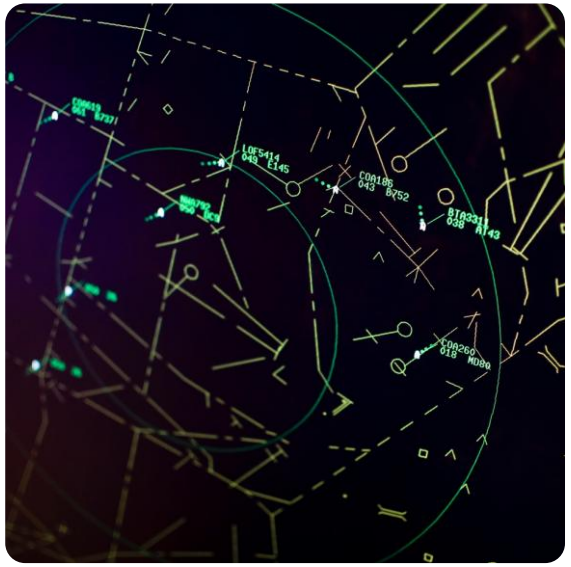
Clients would recommend us

97%

PA's aviation team have experience across the aviation value chain







Airlines

QANTAS GROUP
Virgin australia
Aer Lingus
BRITISH AIRWAYS
RYANAIR
AIRFRANCE KLM GROUP
ETIHAD
AIR NEW ZEALAND
TUI
virgin atlantic

Airports

Heathrow
Making every journey better
LONDON GATWICK
Perth Airport
LAX Los Angeles World Airports
GROUPE ADP
LONDON CITY AIRPORT
MAG Manchester Airport
HONG KONG INTERNATIONAL AIRPORT
Schiphol Group
brussels airport
مطارات دبي
daa
DUBAIRPORTS
FINAVIA

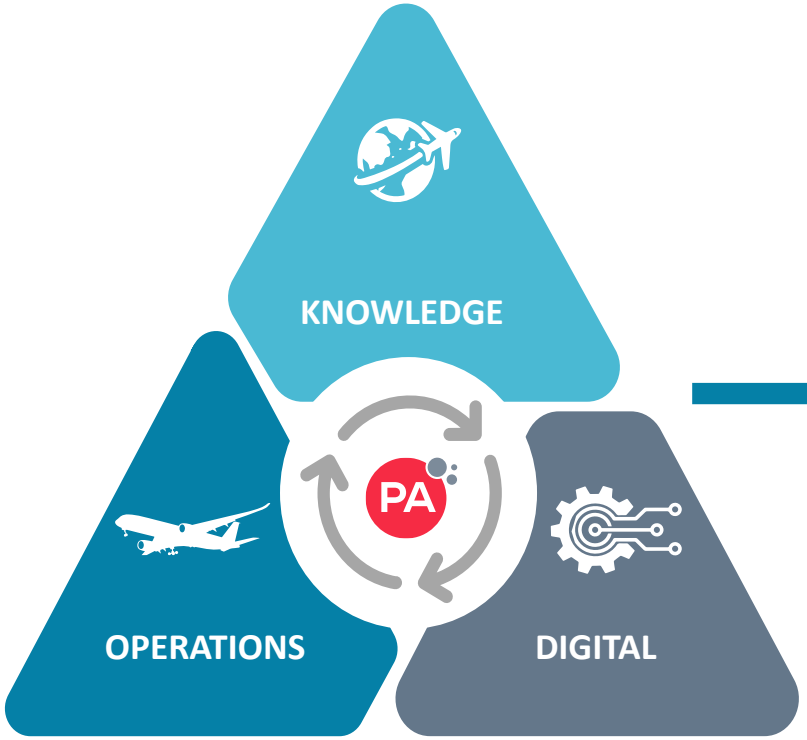
Investors

MACQUARIE
BARCLAYS
HSBC
IFM Investors
PSP Investments
ONTARIO TEACHERS' PENSION PLAN

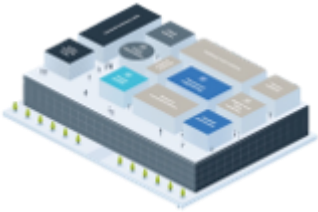
Other Aviation Operators

Department for Transport
UK Civil Aviation Authority
ACI EUROPE
Australian Government
Ministerie van Financiën
European Commission
NATS

Our core aviation team works with different PA specialists who are active across industries to benefit the rapidly evolving complexities in our sector



*Global Innovation and Technology Centre **(GITC)***
Cambridge, England
***More than 400+** strategists, scientists, designers, technologists and engineers invested in to end-to-end innovation*
***11,000 m²** of design studios, laboratories and engineering workshops*



PA Advantage

KNOWLEDGE
Global aviation industry

DIGITAL
Digital asset transformation

OPERATIONS
Efficiency models and capacity use

Snapshot of PA's relevant experience

SAF and e-SAF

Investment Fund

Detailed analysis of SAF market with a focus on UK and Europe, and a high-level assessment of two potential investment targets in SAF industry

Special Projects Investment Fund

Evaluation of SAF market, policy, supply, demand and price outlook for SAF across UK, Europe and US to support potential investment into US-based eSAF project

Major European Airport Fuel and SAF Strategy

Developed a future-looking, actionable strategy over 12 weeks, using PA's 'double diamond' framework to drive insight and focus

Nordics SAF Joint Venture

Designing a joint business and operating model for large-scale production of eSAF and eDiesel in the Nordics

Major Energy Provider

Developed strategic recommendations to support access to new input sources to generate higher revenues from gate fees for SAF production

Major Australian Airport Fuel and SAF Strategy

Partnered with Jacobs to deliver an Aviation Fuels Strategy, to be used to support the development of its 2026 Master Plan

Sustainable Fuels Investor

PA facilitated the submission of the clients bid for the Advanced Fuels Fund (AFF) in the UK to support commercialisation of a first-of-a-kind SAF plant in the UK

Japanese Investment Company

Development of an end-to-end supply chain strategy, offtake contract pricing, and logistics cost optimisation for our client in the US SAF space at target airports

American Aircraft Leasing Firm

Development of a markets assessment, project finance model, business plan, and template information memorandum (IM) for an American aviation company

Major International Aviation OEM

PA are currently working with an aviation OEM to track SAF production and usage in real time, and explore possible organisational models for wider roll-out

Airport Incentive Scheme Review

Reviewed an airports incentive scheme to assess whether it remained fit for purpose with the release of new UK SAF regulations

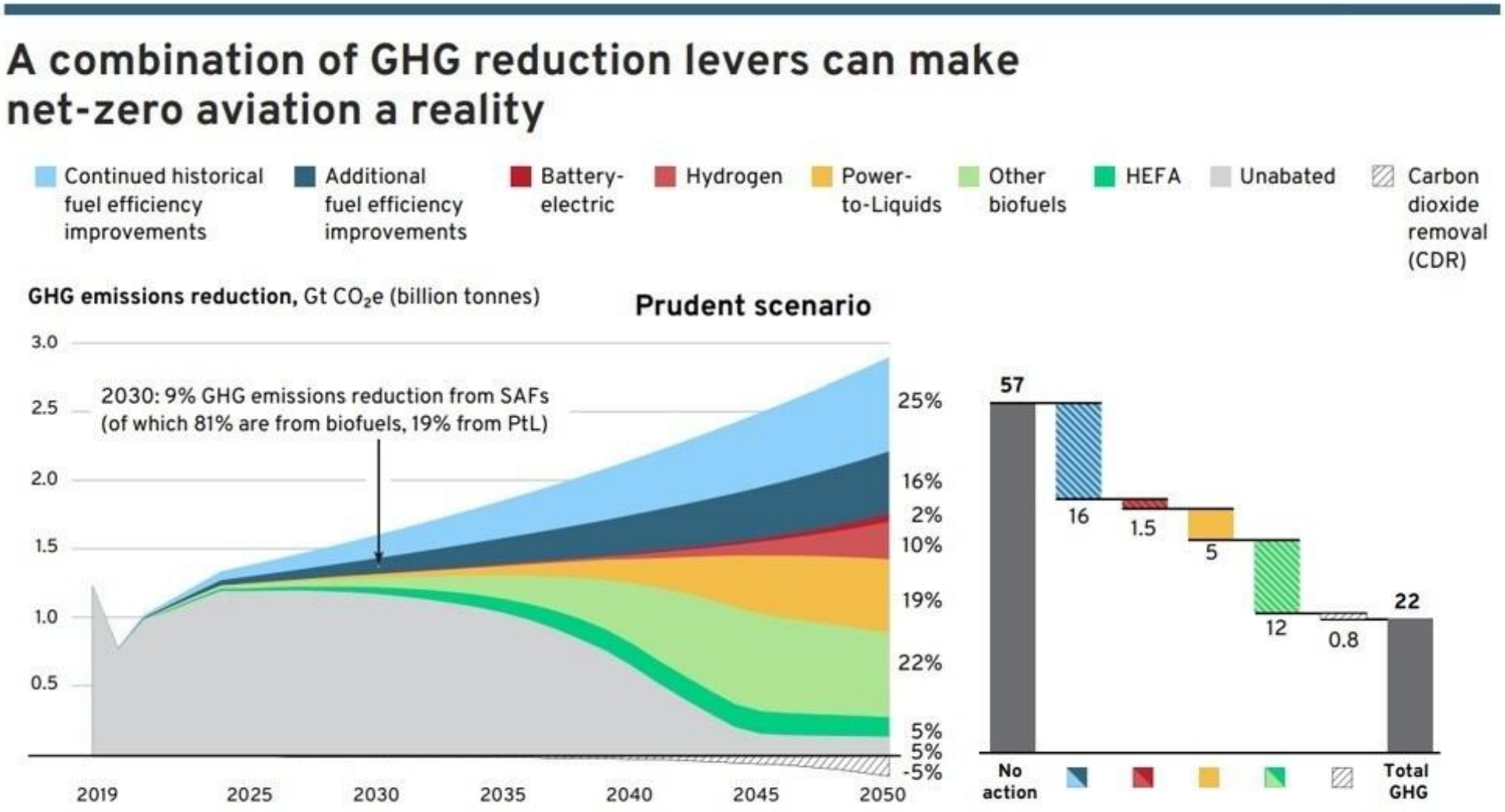
Major US carrier SAF strategy

Helped a US carrier develop a multi-year SAF strategy in the context of wider sustainability objectives

03

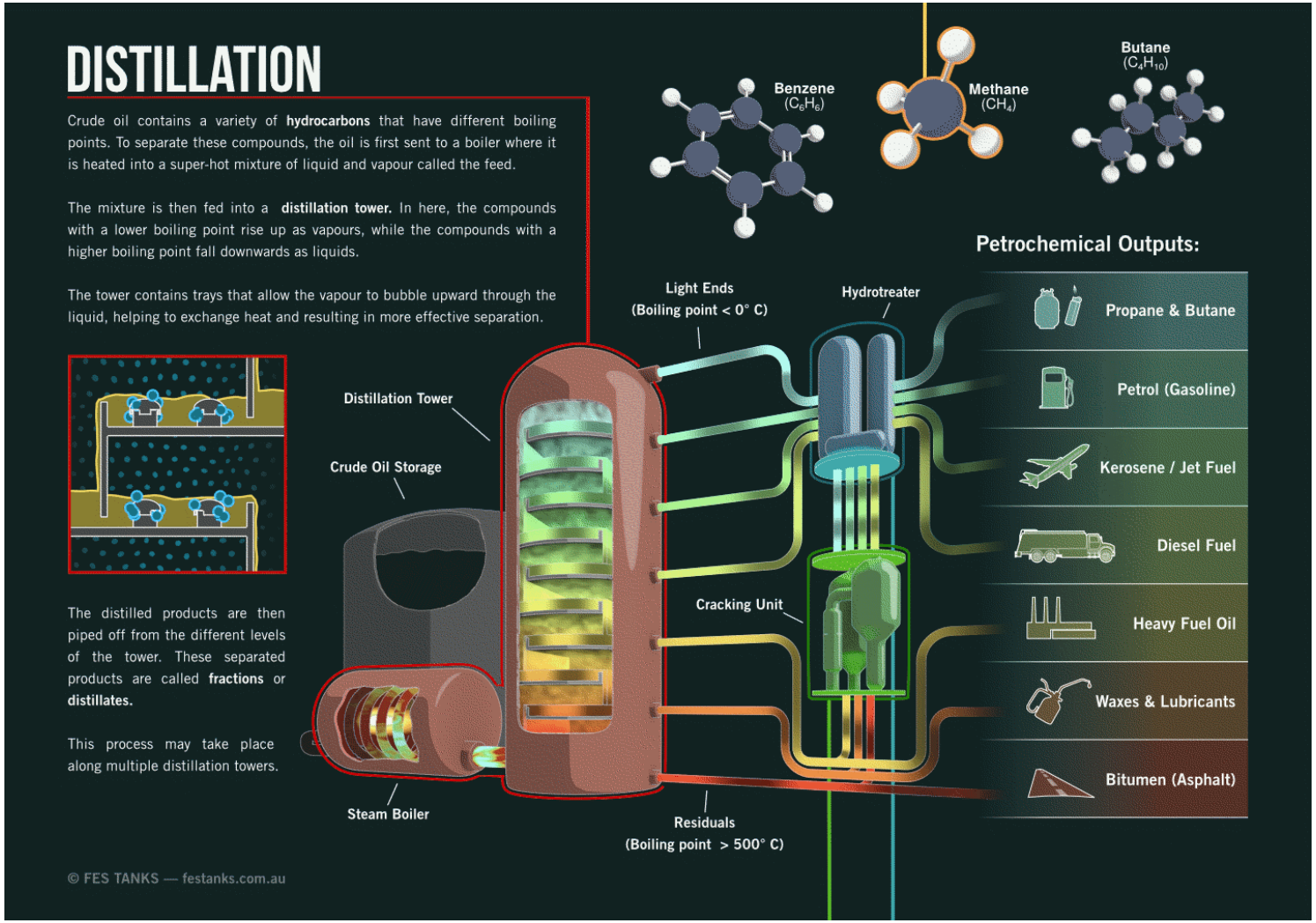
Introduction to SAF and why is it the key to decarbonising aviation?

Setting the scene – World Economic Forum



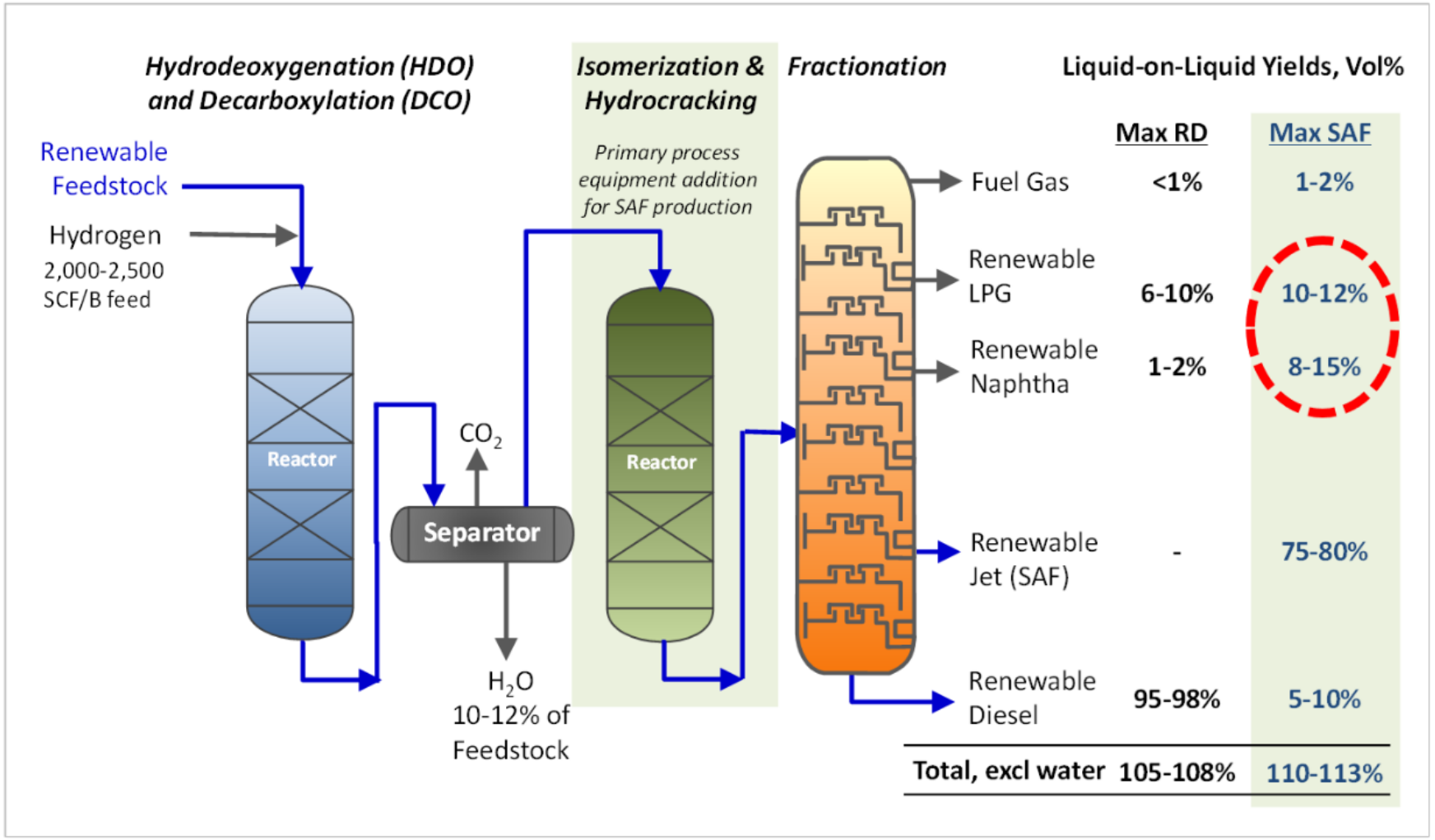
What exactly is SAF …. crude oil refinery

Crude oil distillation



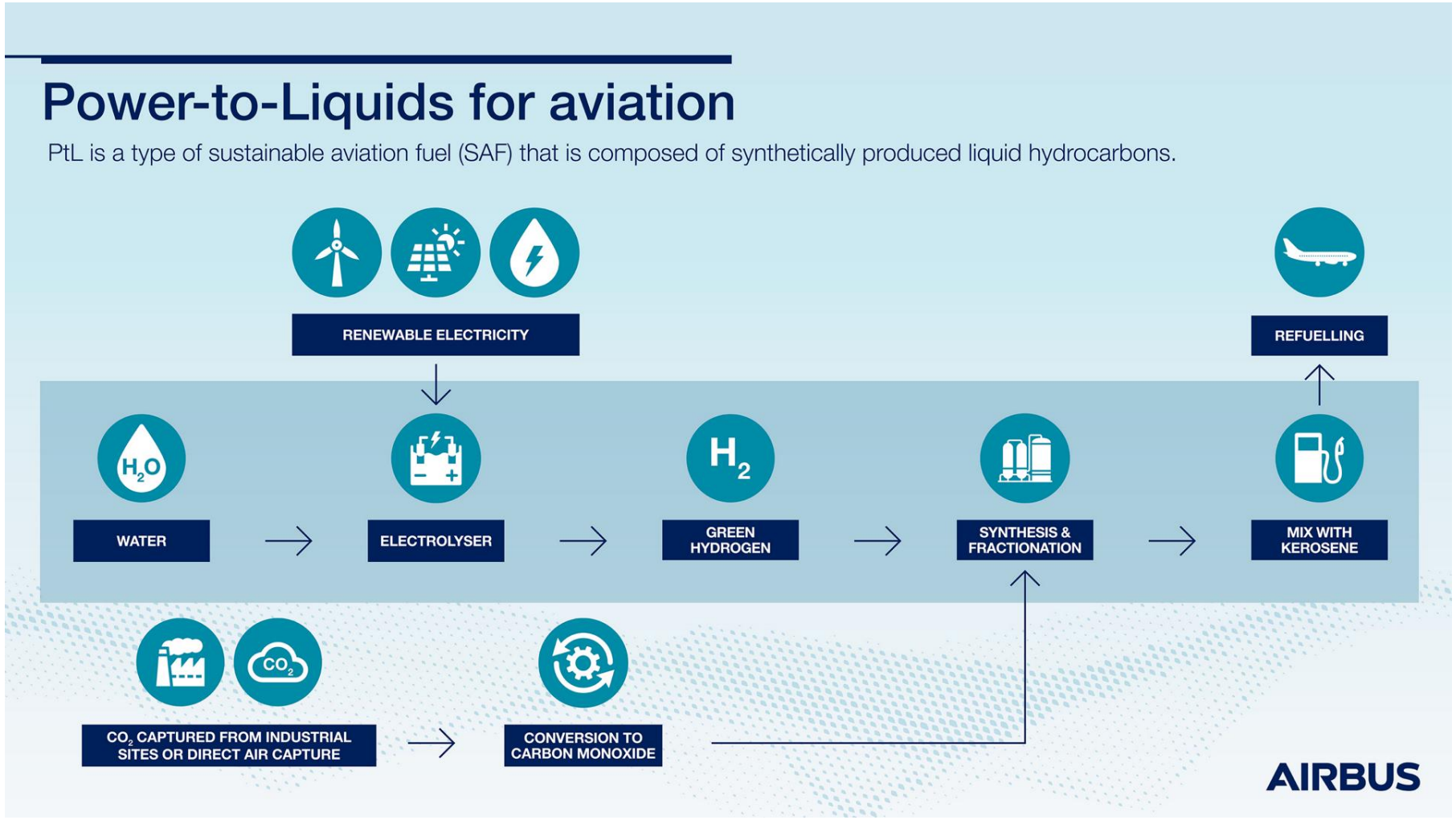
SAF refinery

How to make SAF – Hydroprocessed Esters and Fatty Acids



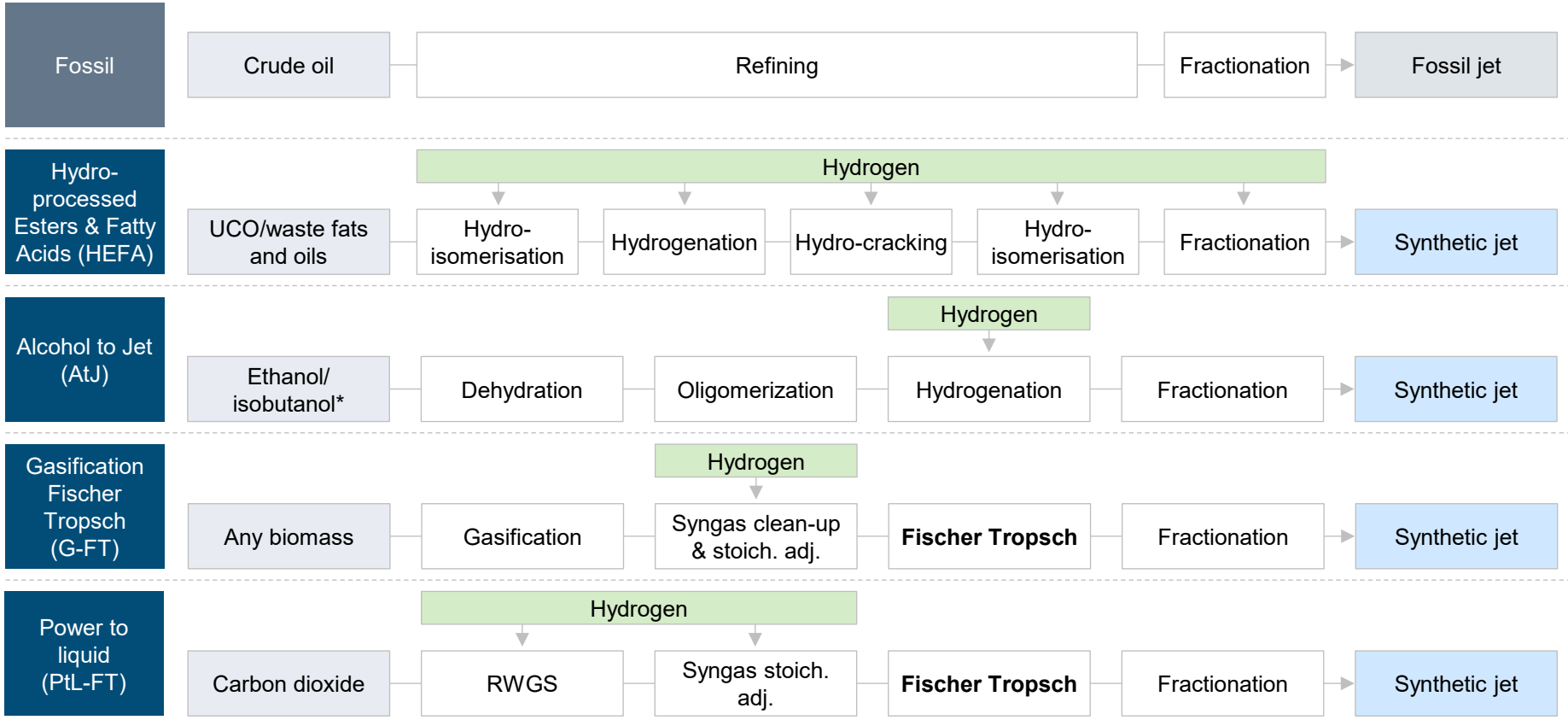
Feedstocks – using intermediate carbon

Feedstocks 2 – energy plus CO2



Several pathways : HEFA; AtJ; FT; and PtL

Main pathways to fossil and sustainable aviation fuel



Technology maturity (TRL)

Fossil	Incumbent jet fuel production process and will remain the cheapest way to produce jet fuel	10
Hydro-processed Esters & Fatty Acids (HEFA)	Current cheapest pathway to SAF and uses same chemical process as the HVO process to produce renewable diesel	8-9
Alcohol to Jet (AtJ)	Allows utilization of alcohol feedstock which could be plentiful as gasoline demand drops; bioethanol can also be produced from biomass fermentation	6-7
Gasification Fischer Tropsch (G-FT)	Allows a high degree of feedstock flexibility; can use municipal solid waste as feedstock so producers are able to claim waste gate fees	6-7
Power to liquid (PtL-FT)	Potentially unlimited feedstock supply but is energy intensive and likely to remain the most expensive pathway to SAF	6-7

Key: Carbon feedstock; Hydrogen feedstock; Product

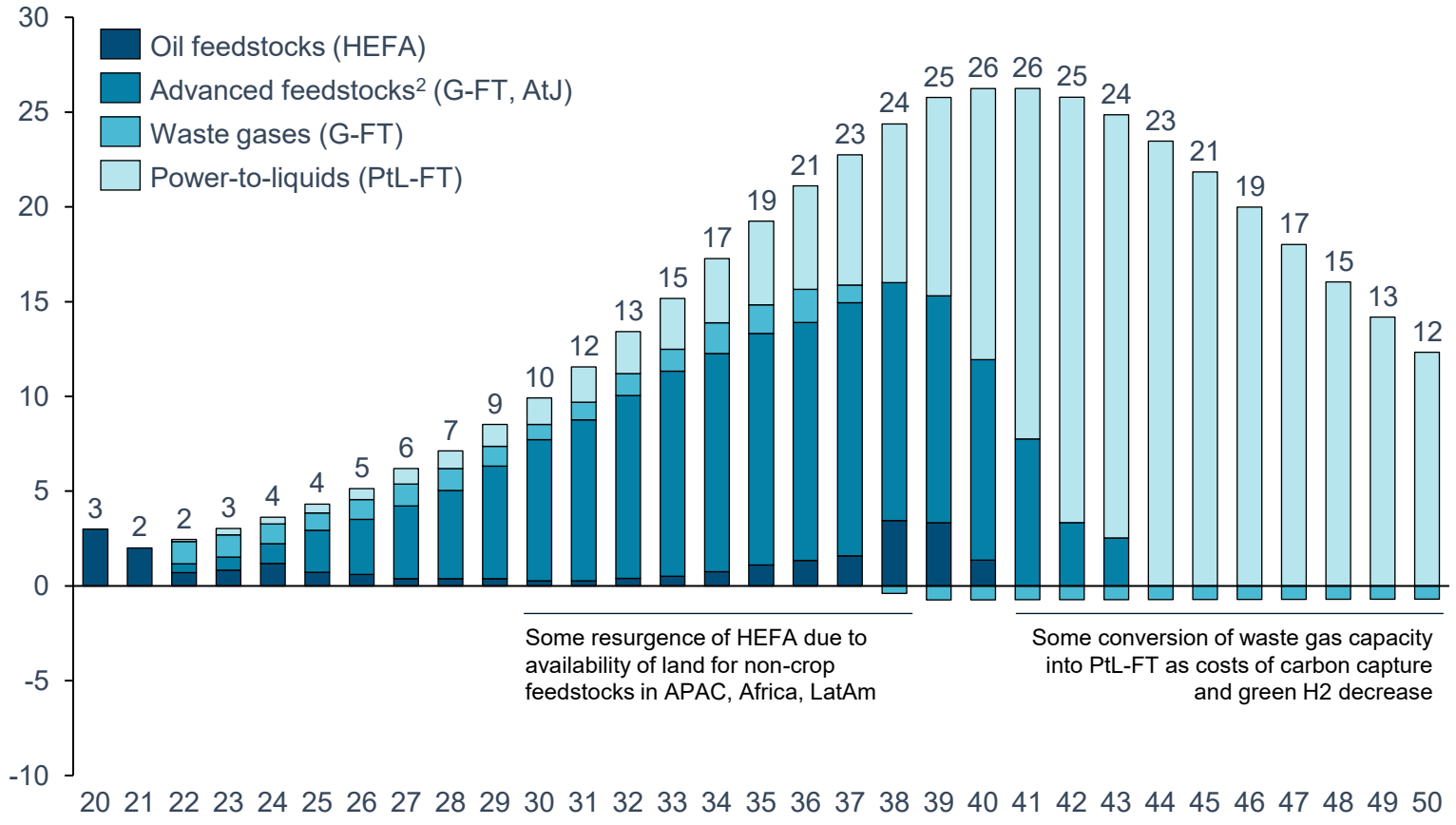
Maturity: High; Medium; Low

Sources: EASA

Note: TRL has been evaluated on a technology basis and not for specific projects

Availability of cost-effective and sustainable SAF feedstock and feedstock production infrastructure will drive annual capacity additions

Annual required global capacity additions by feedstock, million tonnes (MT)[1]



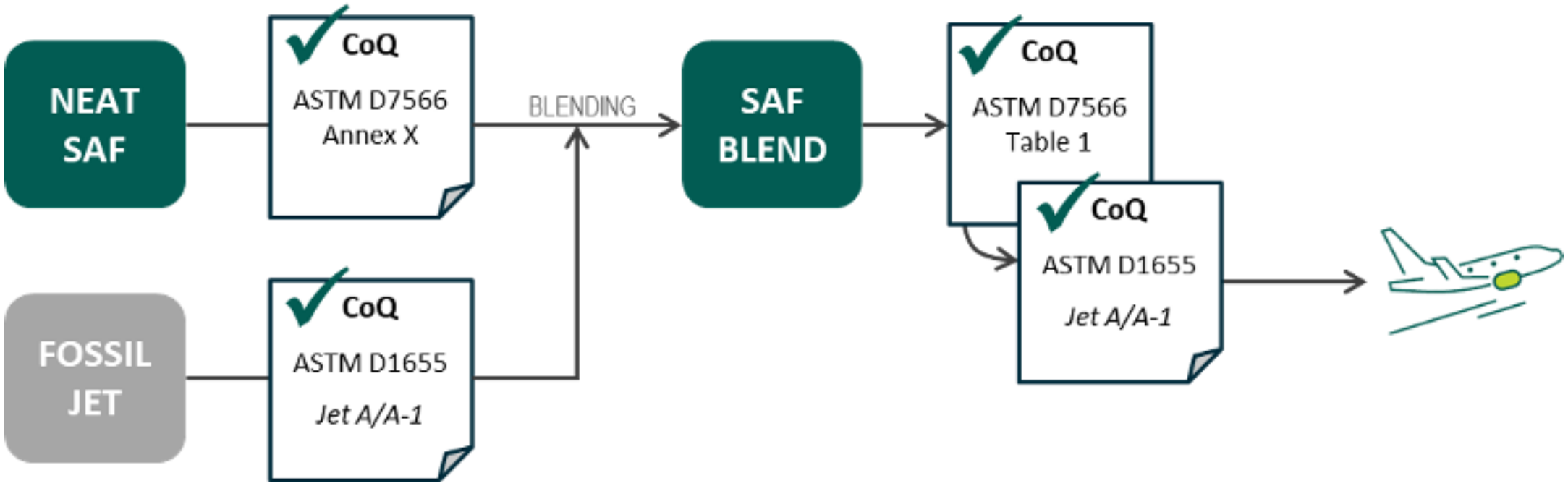
Key insights

- Initially HEFA leads due to current infrastructure, but availability of oily bio-feedstocks and waste lipids will limit capacity additions by 2025
- From 2026 growth will be driven by advanced feedstocks and waste gases, with some PtL-FT facilities coming online.
- From 2030 total SAF costs will rise from FOAK (first-of-a-kind) PtL-FT plants and then decrease as technologies mature
- By 2040 biological feedstock constraints become more prominent, and PtL-FT SAF facilities will dominate additional capacity

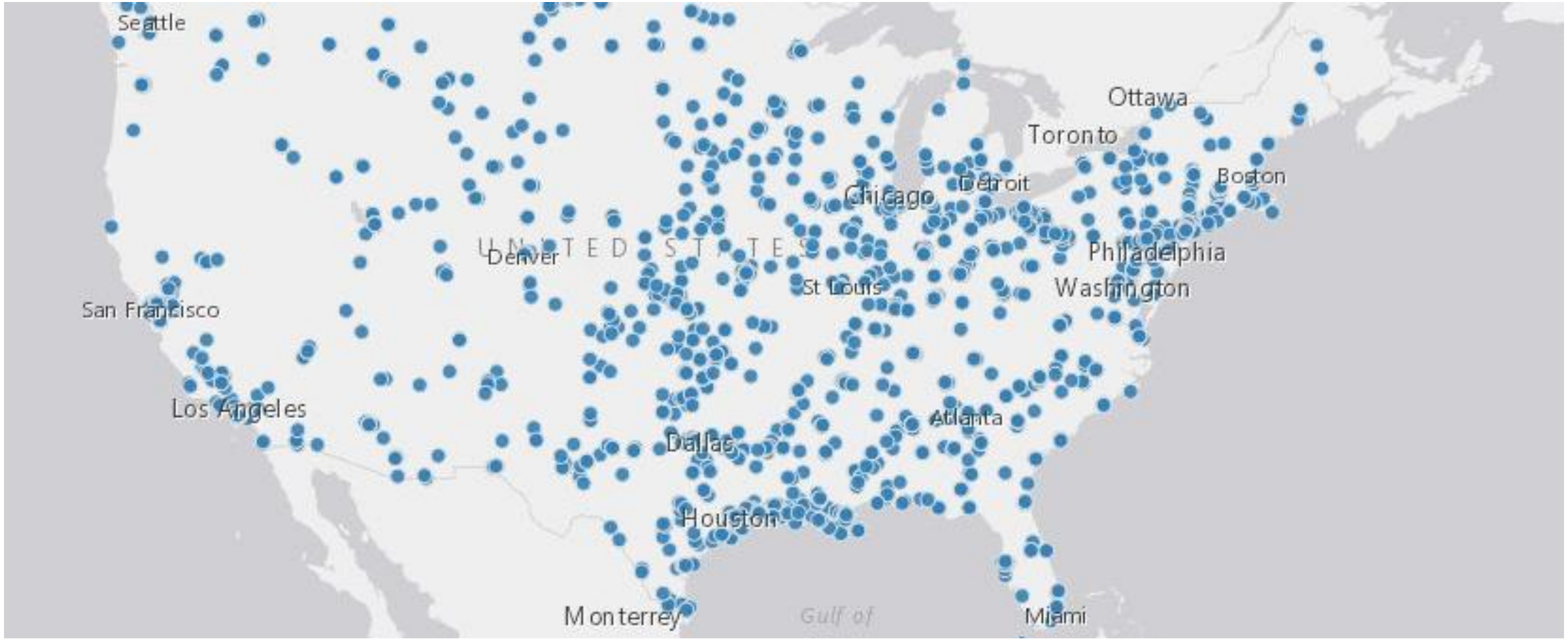
1. Capacity additions are an outlook based on the Aggressive Sustainable Fuel development scenario in ATAG's Fueling Net Zero report, where limited advances are made in non-SAF decarbonisation technologies
2. Municipal solid waste, woody biomass and agricultural wastes

Sources: PA analysis; ATAG Waypoint 2050

ASTM certification



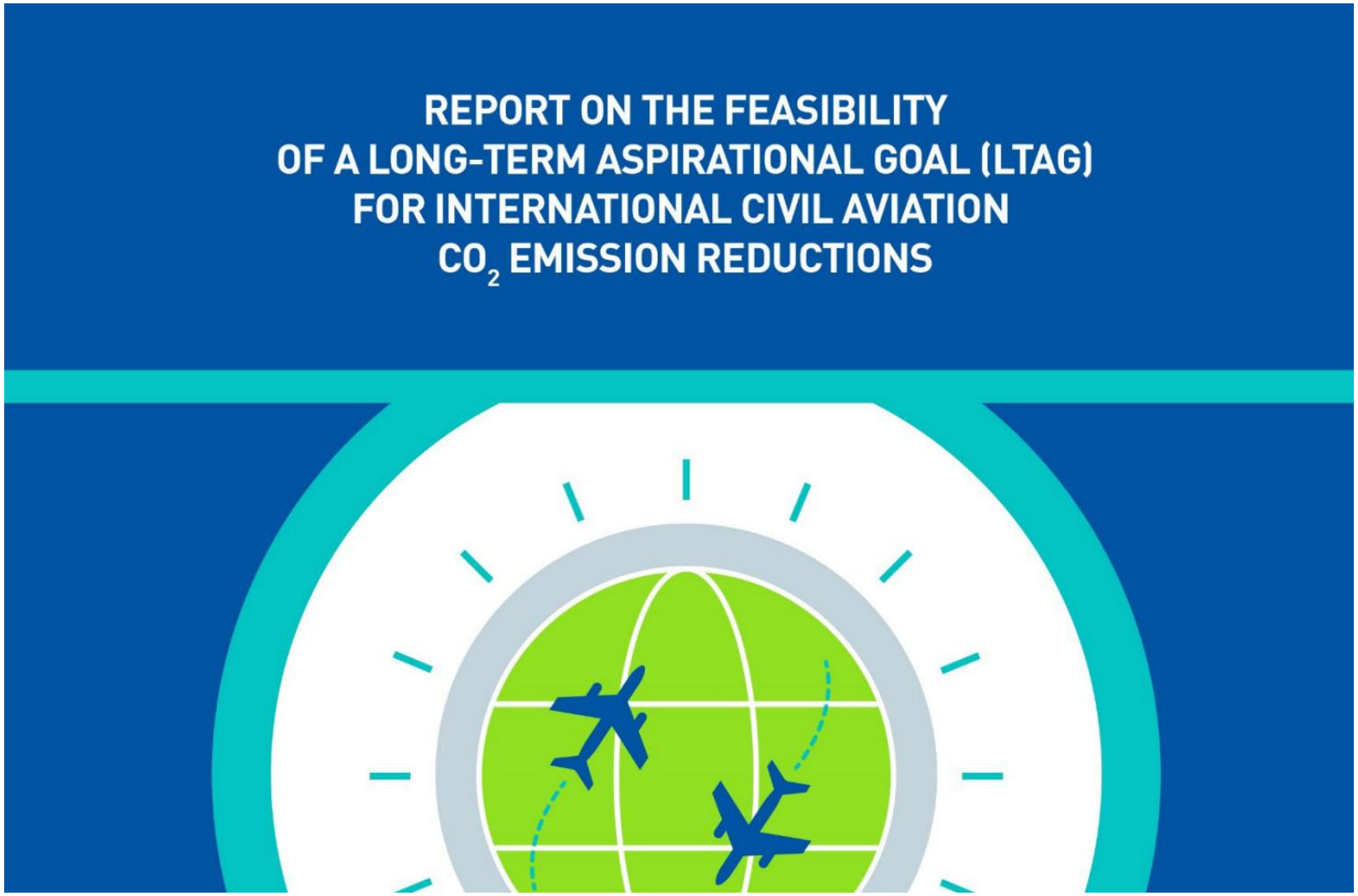
SAF Blending and certification – jet fuel terminals



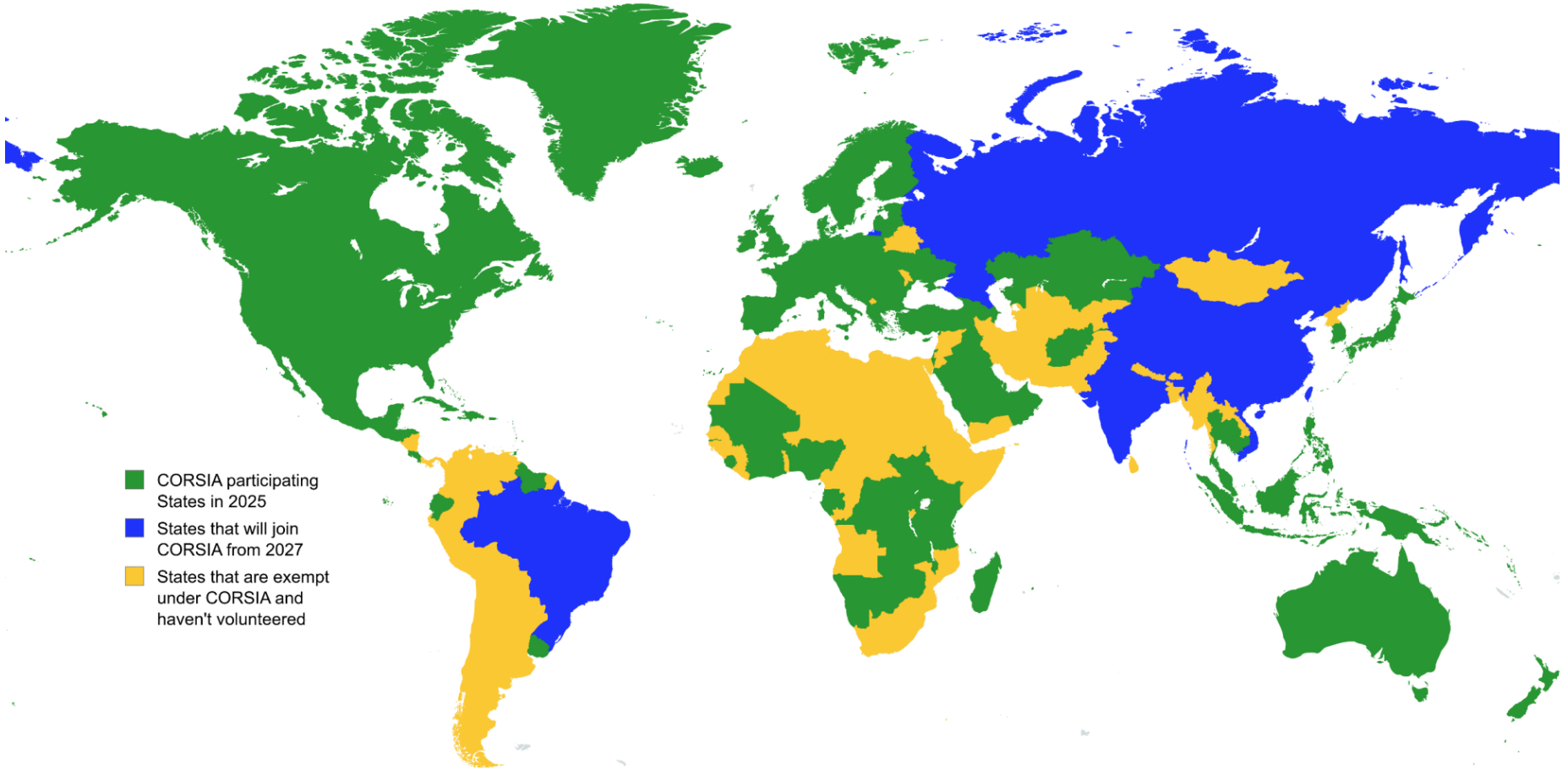
Product pipelines and SAF delivery

International Civil Aviation Organization - ICAO

ICAO - Long-term aspirational goal - 2022



Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) - and CORSIA eligible fuels https://www.icao.int/corsia-eligible-fuels



ICAO – Diplomatic Conferences on Alternative Fuels

First Conference on Aviation and Alternative Fuels – Rio de Janeiro, 2009 – set the groundwork for a regulatory framework

Second Conference on Aviation and Alternative Fuels – Mexico City, 2017 – considered the feasibility of a goal

Third ICAO Conference on Aviation and Alternative Fuels – Dubai, 20-24 November 2023 – adopted the ICAO Global Framework for Sustainable Aviation Fuels (SAF), Lower Carbon Aviation Fuels (LCAF) and other Aviation Cleaner Energies, to facilitate the global scale up in the development, production and deployment of SAF, LCAF and other aviation cleaner energies toward the sector's cleaner energy transition. ICAO and its Member States strive to achieve a collective global aspirational Vision to reduce international aviation CO2 emissions by 5 per cent by 2030, through the use of SAF, LCAF and other aviation cleaner energies, compared to zero cleaner energy use.

https://www2023.icao.int/environmental-protection/Documents/SBSTA59_ICAO%20subsmission_Final2.pdf

US SAF policy and regulation overview - carrots

Renewable Fuel Standard (RINs)

SAF is eligible for RINs (D3, D4, D5, and/or D7, all pathway dependent) through the Renewable Fuel Standard federal program. Fuels with more energy content generate more RINs, where baseline for energy content comparison is ethanol. One gallon of ethanol generates one D6 RIN, but more energy-dense fuels can generate more RINs; this comparison is known as a fuel's "equivalence value."

IRA SAF Tax Credit

The **Inflation Reduction Act (IRA)** set forth new tax credits for SAF in support of President Biden's goal of producing 3 billion gallons of SAF in the US by 2030. This two-phase tax credit is broken into two timelines:

- **July 2025**: with the passing of the "One Big Beautiful Bill Act" (OBBBA), President Trump changed the Clean Fuel Production Credit.
  - First, the CFPC expiration has been extended by two years, from 2027 to December 31, 2029.
  - Second, the credit rate for all eligible liquid fuels, including SAF, has been capped at $1 per gallon. This change reflects alterations to the credit calculation and emissions accounting applicable to nearly all liquid fuels.

Low Carbon Fuel Standard

State Low Carbon Fuel Standards (LCFS) provides markets for SAF procurement, and it is expected that SAF will continue being directed into state markets where LCFS-type programs and financial incentives exist (California, Oregon, and Washington). There are several states considering implementing similar LCFS-type programs including Minnesota, New York, New Mexico, and Colorado.

State Tax Incentives

Several states across the country have SAF tax incentives that encourage state-specific use and production of SAF. At the time of this report, four states have SAF specific tax incentives. Other states with LCFS programs have made SAF an eligible fuel for LCFS credits (California). Oregon considers SAF importers and producers to voluntarily meet state targets of carbon intensity reduction by 2035, and Washington has both a SAF-specific incentive and an LCFS program. Kentucky introduced a SAF incentive in 2022 (yet to be passed), and Colorado attempted to advance a SAF incentive, but the measure failed in 2023.

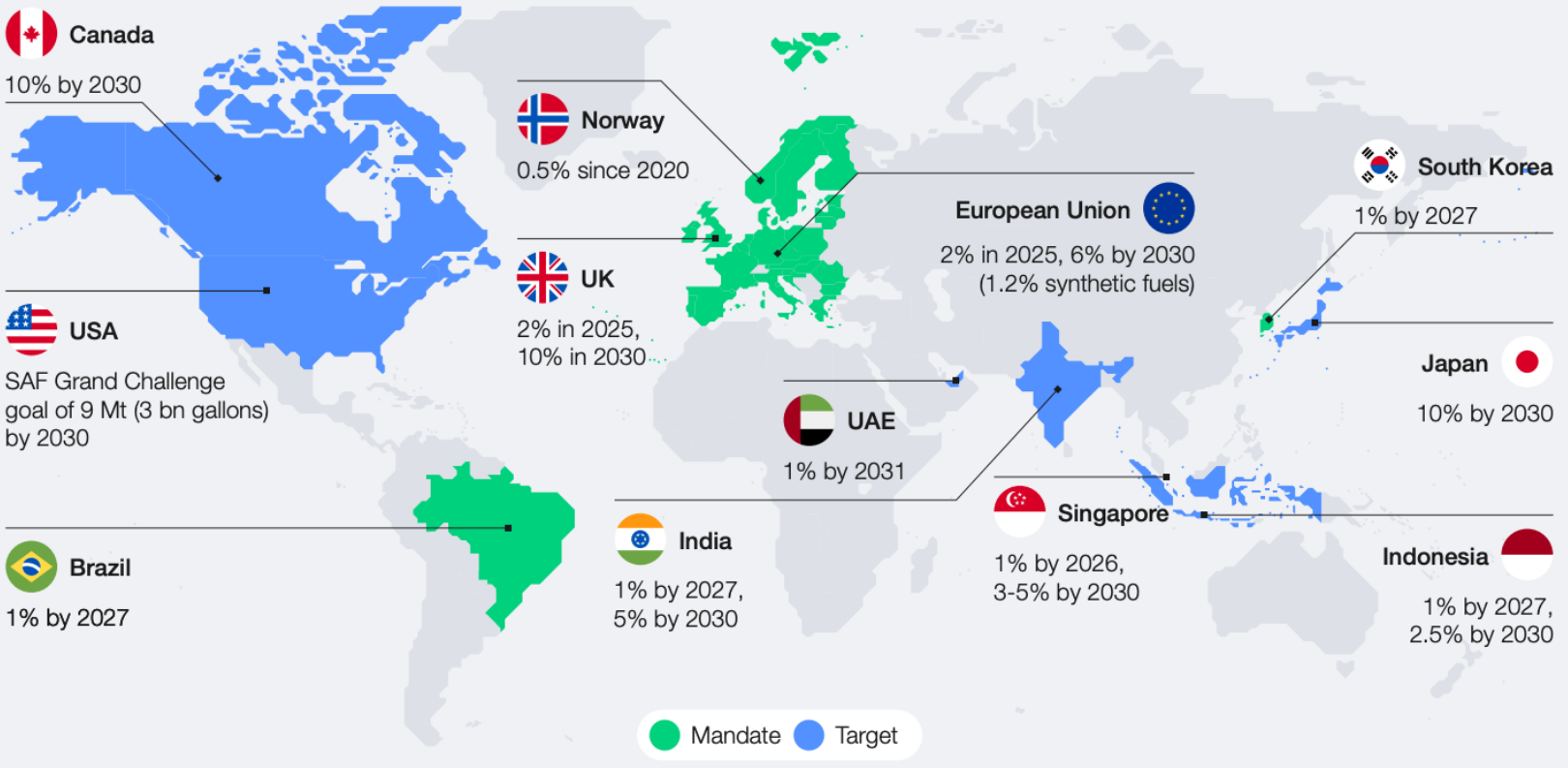
EU Mandates - guarantee demand – sticks (with a little bit of carrot)

Regulation / policy	Description	Impact on SAF		Impact on eSAF (fuels from renewable power)	
EU SAF mandate (ReFuelEU Aviation)	From 2025, fuel producers must ensure share of SAF in jet fuels should be 2%, increasing to 34% in 2040 and 70% by 2050. Applies to all flights departing from EU airports. Some countries with more ambitious mandates.	**Increased demand**	Demand guarantee for SAF; pushes airlines to commit to SAF contracts	**Increased demand**	Includes sub-mandate for eSAFs: 1% of jet fuel (2030), 15% (2040) & 35% (2050)
EU Emissions Trading Scheme (ETS)	Sets cap on total annual amount of GHG emissions. Reduction in allowances given to the aviation industry to 2030, free allowances eliminated by 2026. Increases cost of buying and using jet fuel with lower SAF blends	**Increased demand**	Airline operators must ensure they uplift sufficient SAF to keep carbon costs low	**Increased demand**	High emissions savings from eSAFs pathways makes them more attractive
Energy Taxation Directive (ETD)	Proposed increase on fossil jet fuel tax from €1.2 per GJ in 2022 to €10.8 per GJ in 2033. Decreases cost difference between pure jet fuel and SAF-blended fuels	**Increased demand**	Reduce cost competitiveness of fossil jet, shifting demand to SAF	**Increased demand**	Advanced biofuels and e-fuels will benefit from a zero tax rate for 10 years
Renewable Energy Directive (RED) III	29% renewable energy out of all energy supplied to transport or 14.5% GHG reduction (2030 target). Scope expanded to include fuel supplied to aviation. Cap on food- / feed-based biofuels & waste oils continued.	**Increased supply**	SAF key to achieving RED III targets	**Increased supply**	Sub targets and multipliers for eSAFs and cap on food-/feed-based fuels

Regulations directly constraining demand or supply are unlikely to be put into place, however limitations on importation or the use of certain biomass-based pathways feedstocks may begin to be introduced and drive up prices

Source: European Commission

Mandates around the world – World Economic Forum



Note: Data accurate as of October 2024.

Sources: Various.[4]

Bankability – PA Consulting Research – Cacophony to Symphony

The SAF market is expected to skyrocket from $7 million in 2018 to nearly $26 billion by 2030 - but, the industry remains far from achieving the scale and collaboration needed to make SAF work at a global level.

Bankability means different things to different people – investors want risks to be manageable, producers want clarity of feedstock supply and customers purchaser agreements, airlines want lower costs, and everyone wants regulatory certainty. Airports can help bring all these things together.

Our upcoming research explores why scaling SAF isn't just a technical problem, it's a whole-systems problem requiring a whole-systems response.

Based on a survey of over 500 SAF specialists across the aviation ecosystem, the report will share insights into what it will take to close the gap between ambition and action – from regulatory reform and smarter risk sharing, to transforming operating models and rethinking the role of airports.

04

SAF around the world – who’s making it / who’s using it?

What is SAF?

SAF is a LCLF alternative to CAF. SAF is produced from renewable and sustainable sources and can reduce CO_2 emissions by up to **80 per cent on a lifecycle basis** relative to fossil kerosene (CAF).

Sustainable sources

LCLF produced from **non-fossil fuel sources through several processes** using agricultural and biological feedstocks and power-to-liquid (PtL) fuel that do not compete with food, land and water use or deplete natural resources.

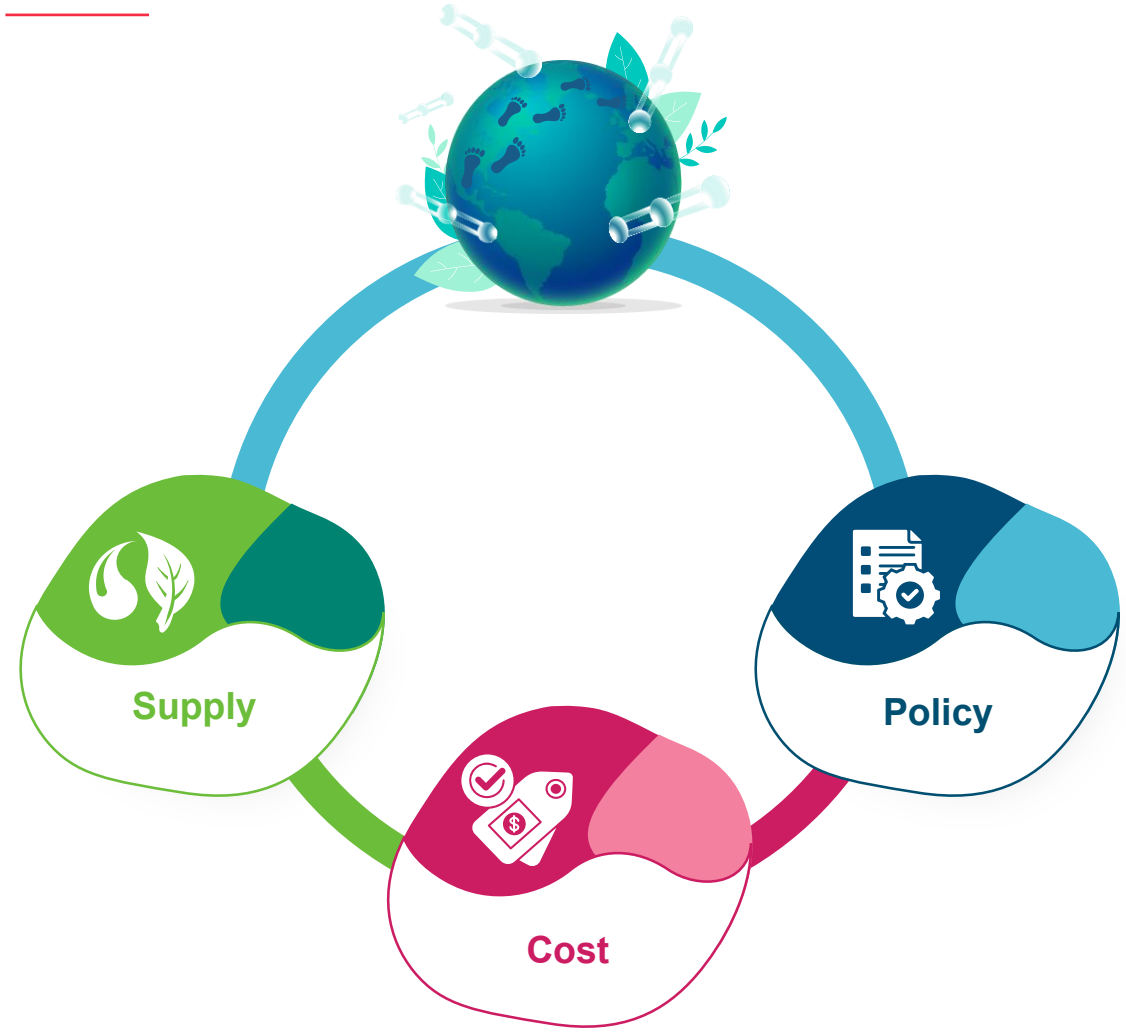
Alternative fuels

Alternative to traditional (fossil-based) CAF that **can be blended with conventional kerosene** (Jet A/Jet A-1) in **ratios of up to 50%** and does not require modifications to existing commercial aircraft or engines contributing towards CO_2 emission reduction obligations under ICAO's CORSIA (MBM).

Compatible, safe

Drop-in fuel that meets the same regulatory/technical requirements for use in commercial aircraft as CAF (ASTM D1655) and can be supplied/distributed through existing airport fuelling infrastructure.

SAF trilemma



Supply

Limited, accounting for 0.3-0.5% of total CAF use

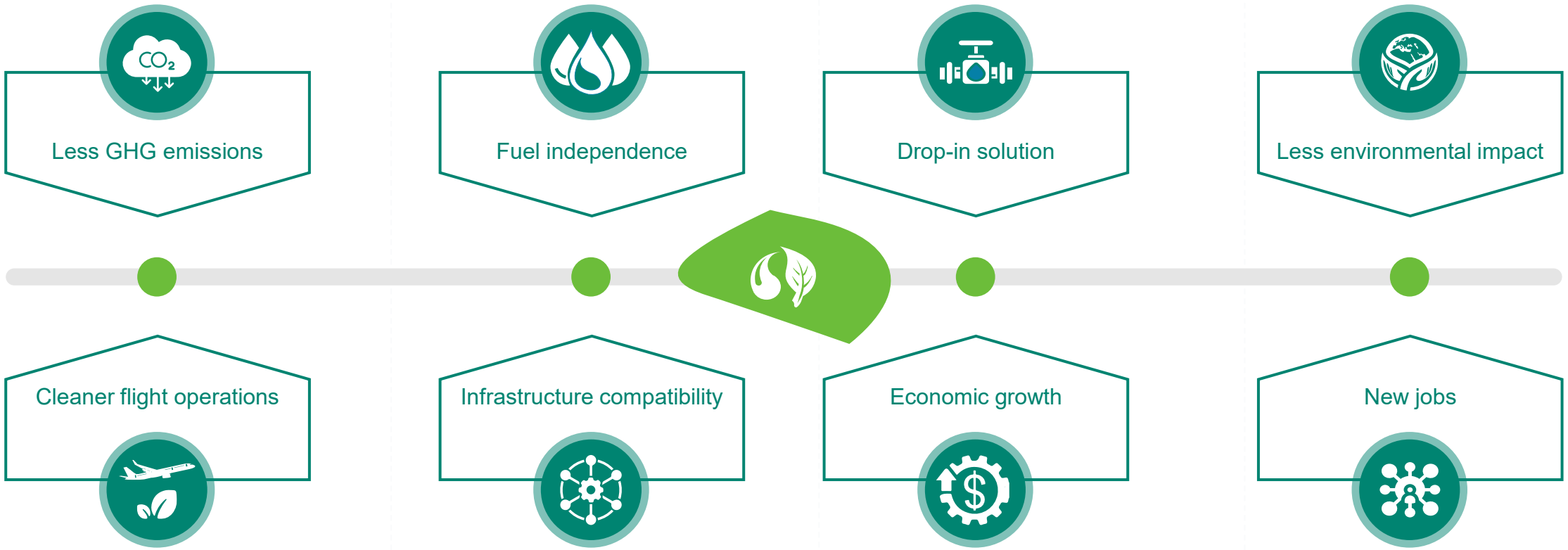
Cost

SAF is approx. 3-5 times more expensive compared to CAF

Policy

Patchwork landscape with wide-ranging incentives/mandates driving investment and the pace of scale-up

SAF benefits case



Challenges and solutions

Challenges

Supply
limited feedstock availability and approved pathways

Cost
3-5 times more expensive than CAF (Jet A-1)

Blend
ratio capped at 50:50 by ASTM

Access
barriers to fuel logistics, transport, airport fuel infrastructure

Policy
inconsistent to stimulate supply-chain development and investment

Solutions

R&D
invest in the development of 2nd/3rd generation feedstocks

ROI certainty
establish a strategic framework of incentives/mandates

Certification
harmonize the chain of custody to decouple environmental attributes

Book & Claim
improve the traceability of SAFc purchases and corporate reporting

Collaborate
work closely with key supply-chain partners to deploy/scale-up SAF

Note: A non-exhaustive listing of challenges and opportunities in creating the right conditions, defining roles across a dynamic supply-chain and scaling in a fast-evolving SAF landscape based on PA research and analysis

Cleaner, greener in formation

ACI

Airport Carbon Accreditation Programme

Launched 2009

(7 levels of accreditation)

638 accredited airports, including 62 US airports

CANSO

Environment Accreditation Programme

Launched 2022

(5 levels of accreditation)

9 accredited ANSPs

IATA

Environmental Assessment Program

Launched 2013

(3 levels of accreditation)

32 airlines registered in the program (currently no US airlines are registered)

9 registered ground handlers

5 registered airports, including 1 US airport (BFI)

Source: ACI, CANSO and IATA website information as of 27 August 2025

Airport Carbon Accredited: spotlight on US airports

638 accredited airports

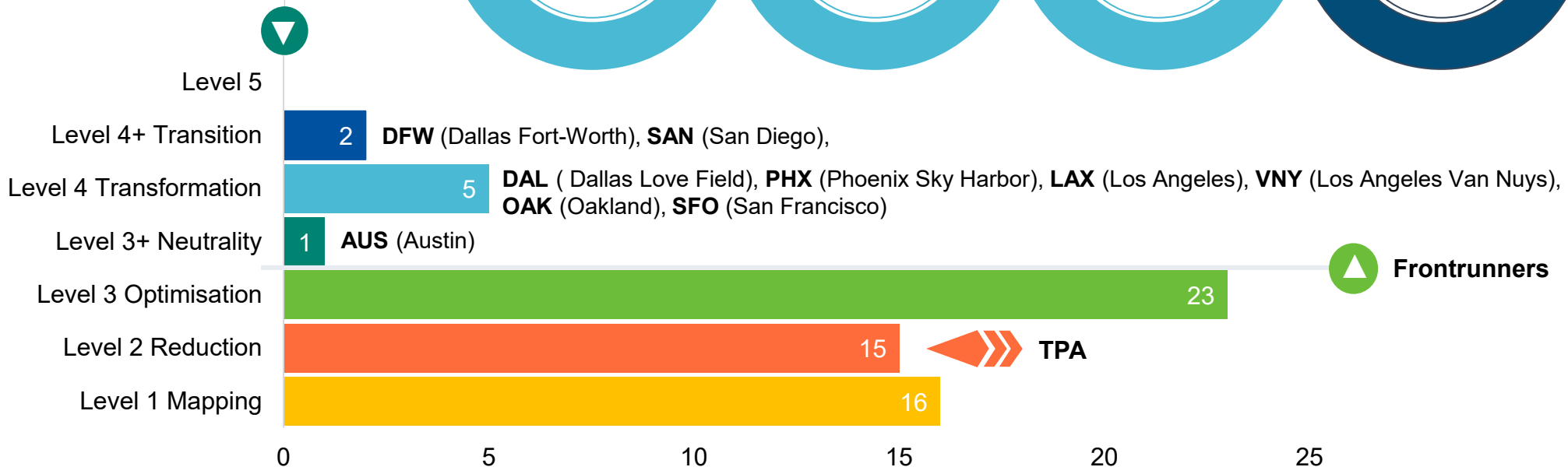
97 countries across the world

54.8% of global air passenger traffic

62 US accredited airports

3 Florida accredited airports

airport carbon accreditation



Source: ACI Airports Carbon Accreditation Programme's online portal as of 27 August 2025

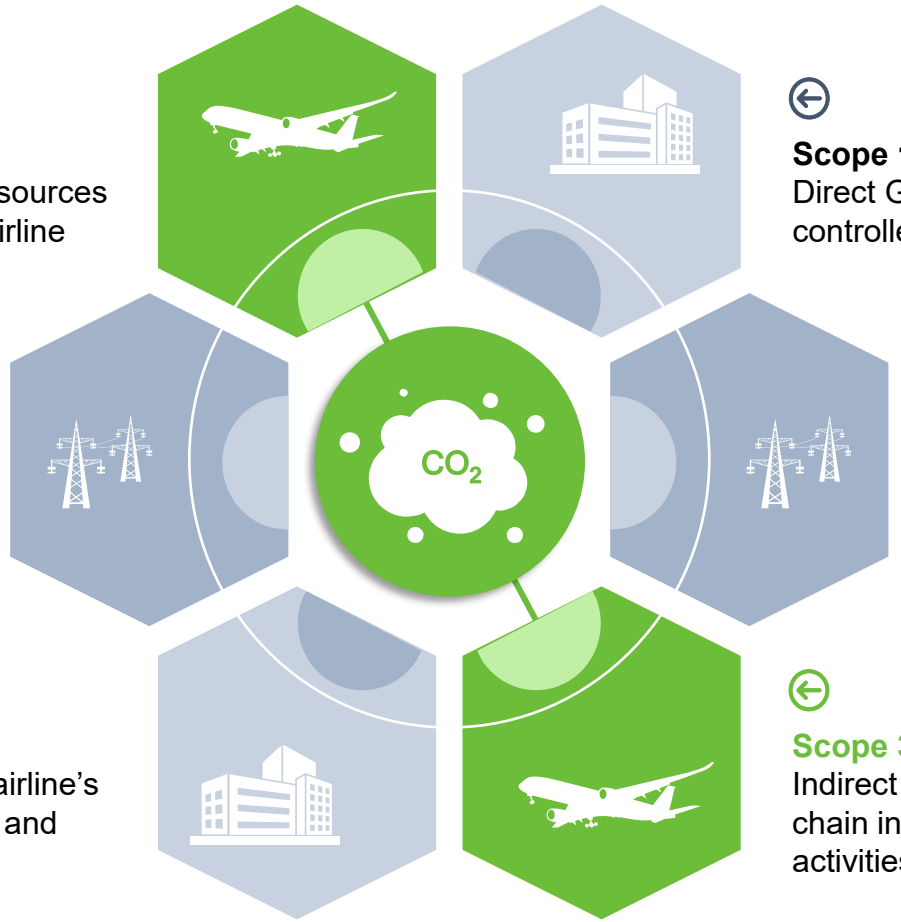
Airline-Airport emissions scope boundaries

Airline

Scope 1
Direct GHG emissions from sources controlled or owned by the airline (i.e., **full flight emissions**)

Scope 2
Indirect GHG emissions from the consumption of purchased energy (mostly grid electricity)

Scope 3
Indirect GHG emissions in the airline's value chain including upstream and downstream activities



Airport

Scope 1
Direct GHG emission from sources controlled or owned by the airport

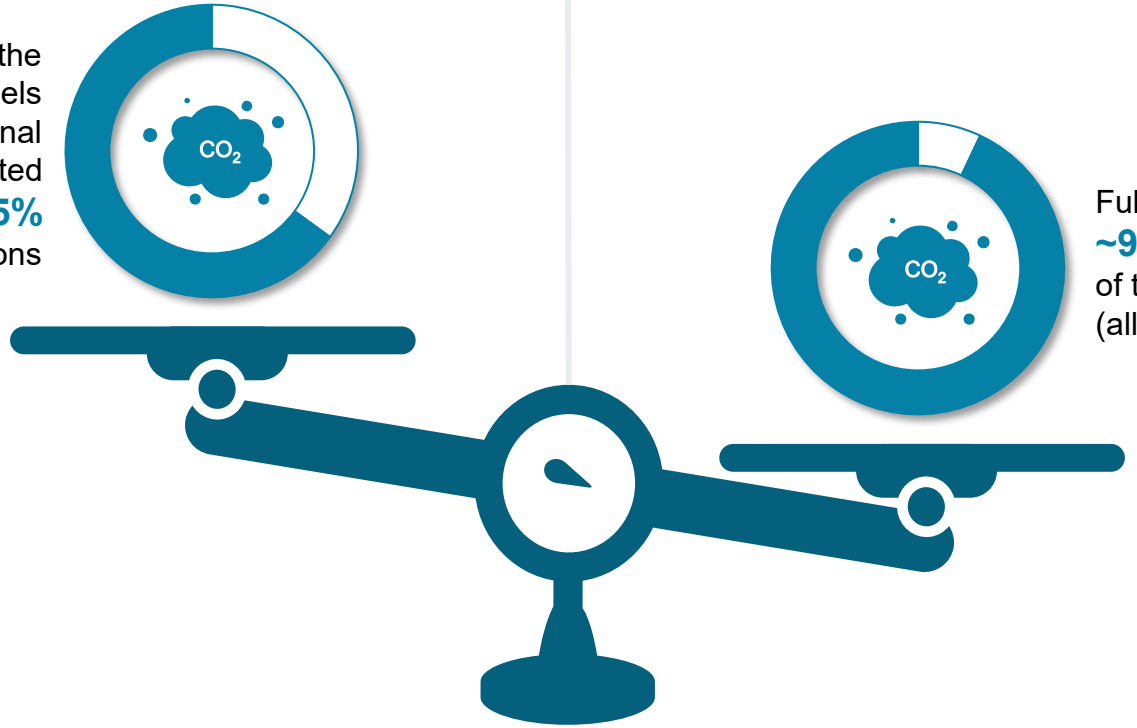
Scope 2
Indirect GHG emissions from the consumption of purchased energy (mostly grid electricity)

Scope 3
Indirect GHG emissions in the airport's value chain including upstream and downstream activities (i.e., **CAT 11 full flight emissions**)

2024 airline-Airport full flight emissions apportionment

Airline

Full flight emissions from the combustion of CAF and other fuels from domestic and international operations represented
~65%
of total reported GHG emissions



Airport

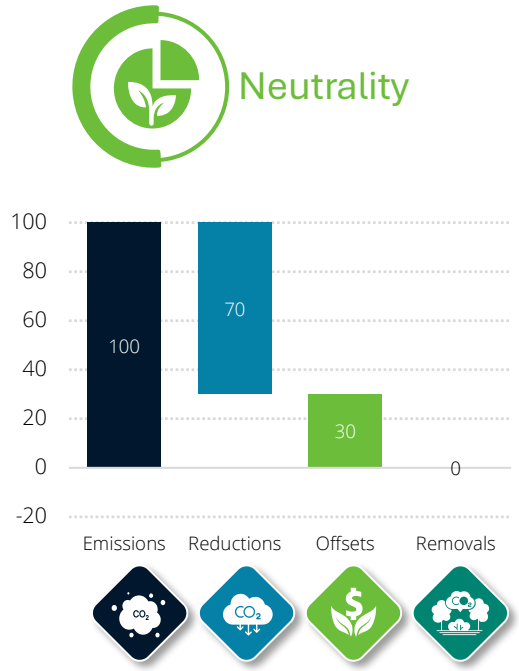
Full flight emissions represented
~93%
of total reported GHG emissions
(all Scopes 1+2+3)

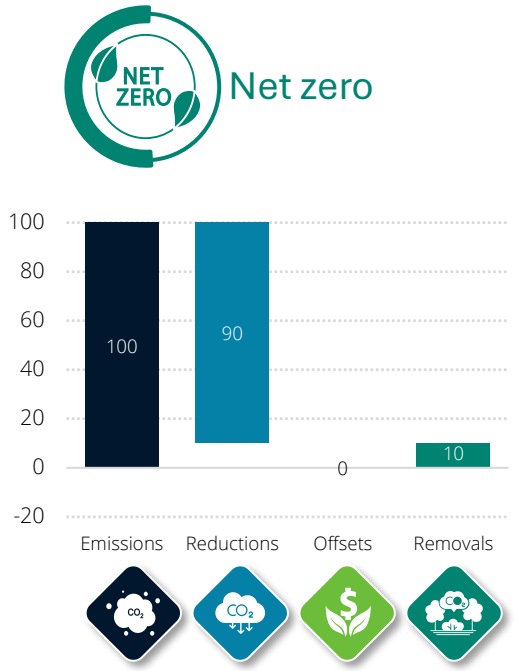
Source: Annual Reports 2024 published by The Qantas Group and Sydney Airport

Net Zero backgrounder

Net zero

According to the IPCC, Net Zero Carbon Emissions are achieved *"when anthropogenic CO_2 emissions are balanced globally by anthropogenic CO_2-removals over a specific period."* It requires that the maximum feasible reductions of CO_2e emissions are first made, and any residual emissions are balanced by an equal volume of carbon removals.





GHG reductions and offsets

GHG reductions and removals

Airport Net Zero scales

On-airport cogeneration plant and standby power gensets

Airport bus and vehicle fleet

Airport HVAC plant

Stationary fuel combustion

Transport fuel combustion

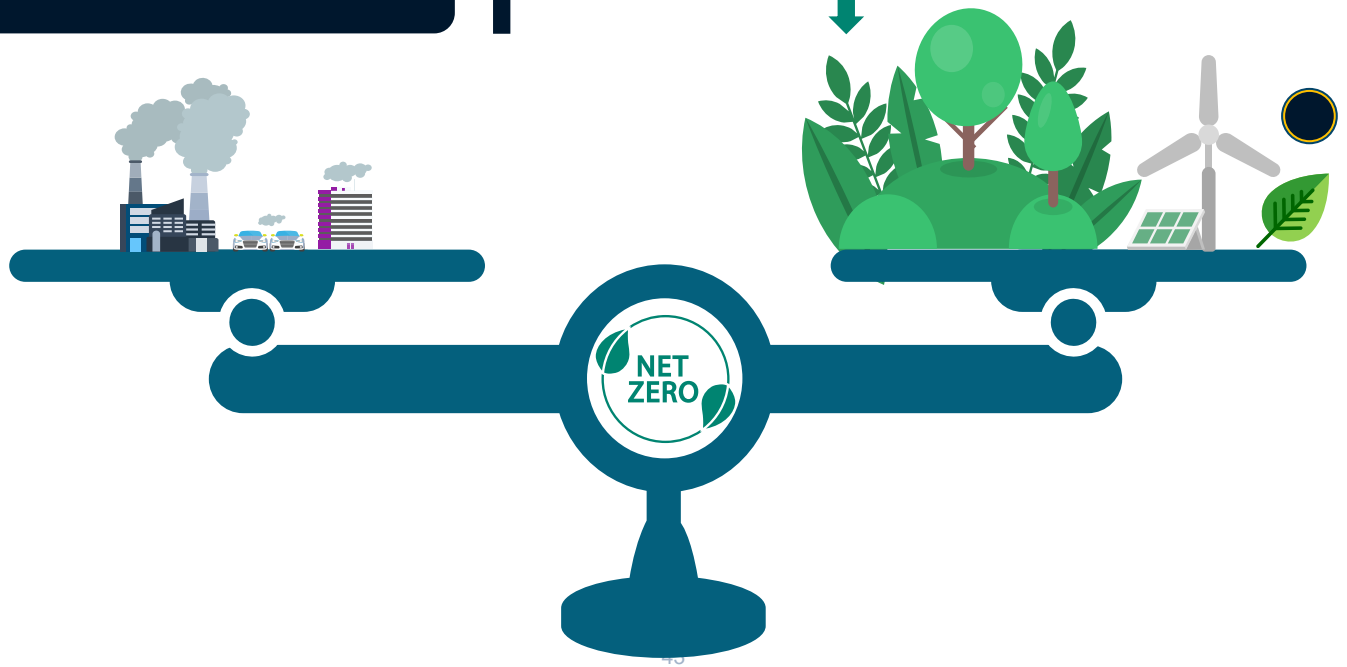
Fugitive refrigerants

Eligible removal credits

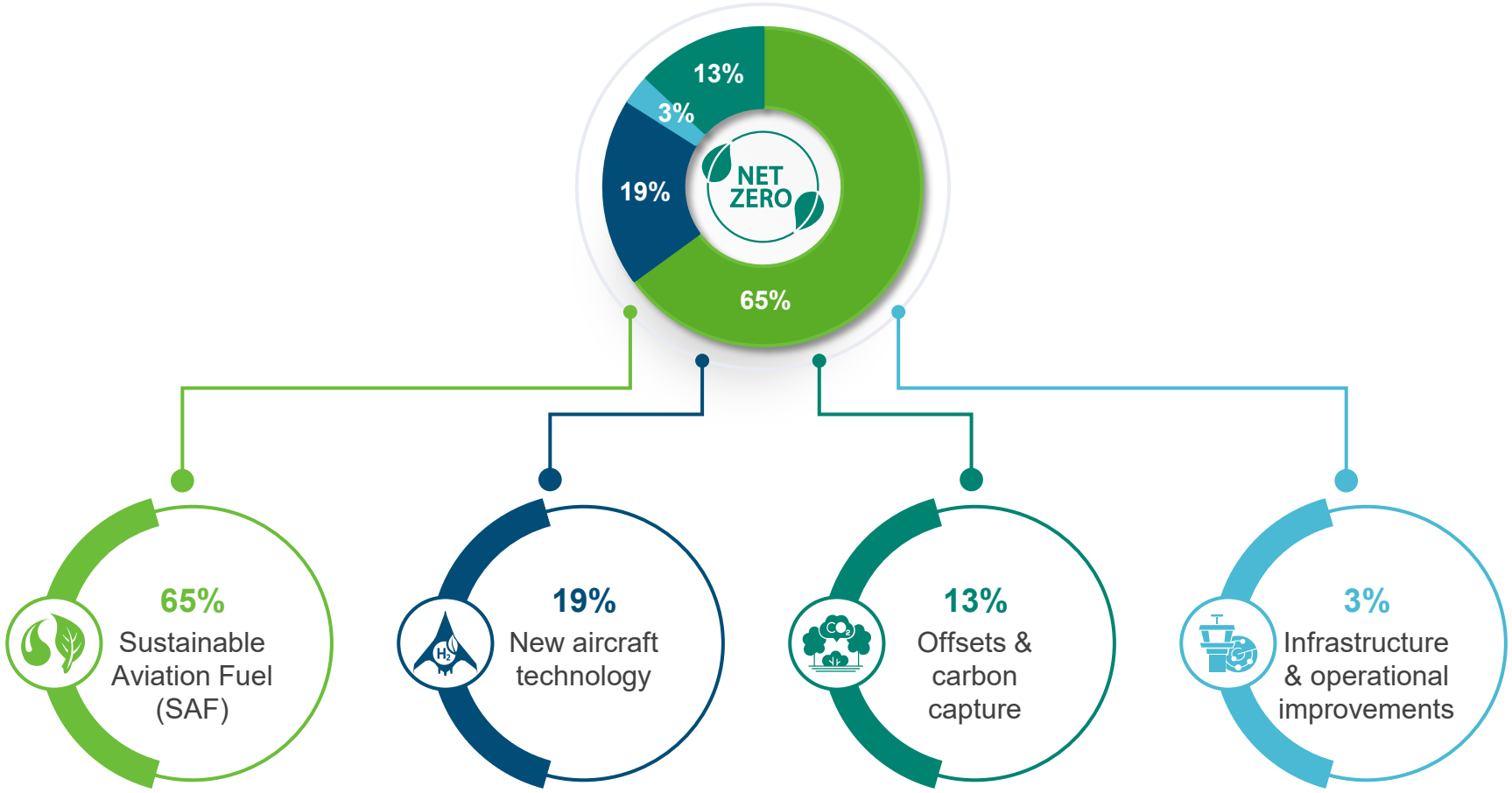
Nature-based removal

Airport to purchase high integrity credit units

Airport to invest in blue, green or teal carbon removal project



Aviation Net Zero 2050

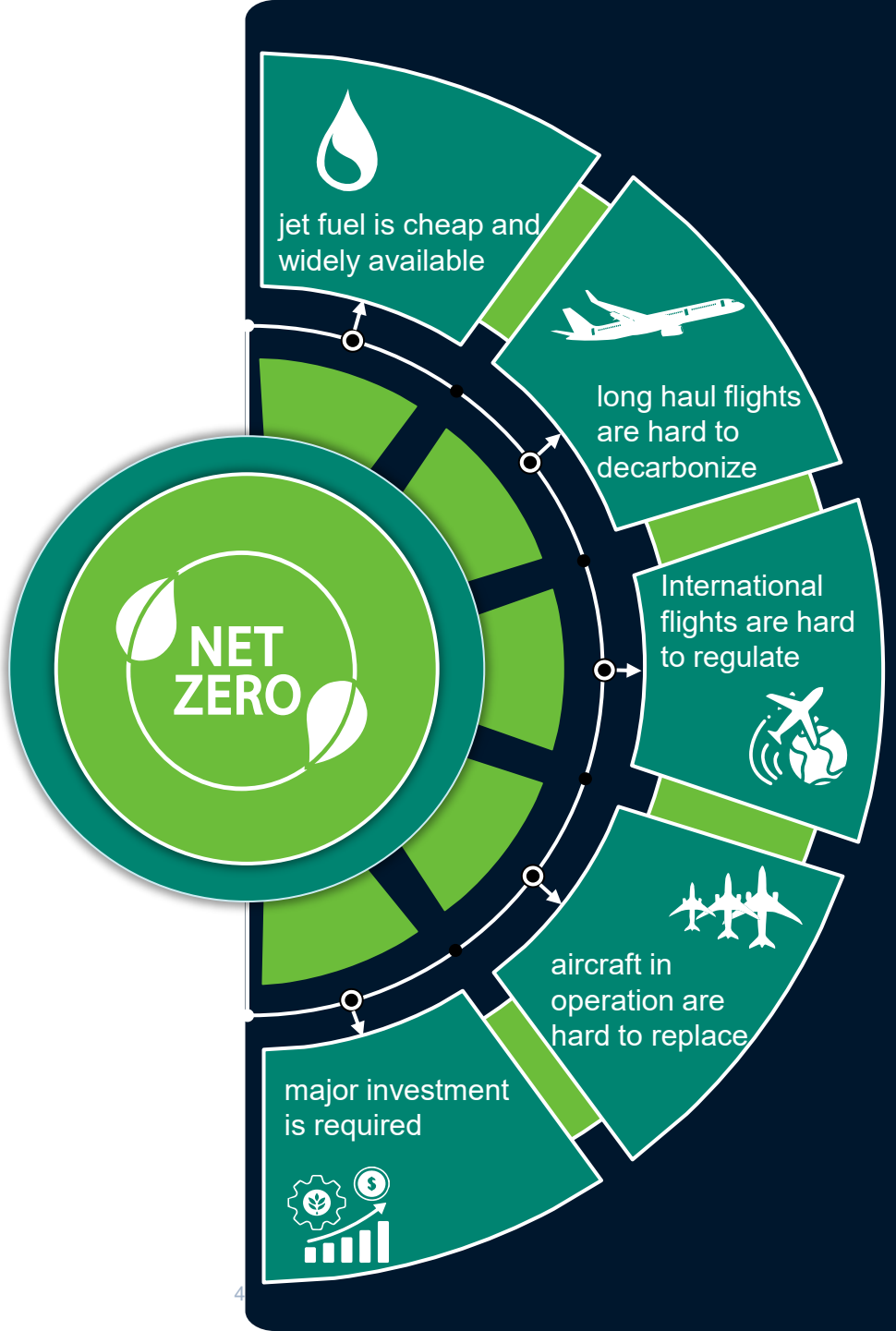


Source: IATA Net Zero 2050, Fly Net Zero Fact Sheets (various) accessed on 27 August 2025 (Net Zero Resolution (iata.org)

Airlines’ future flight investment priorities

- Fleet renewals
- SAF
- Network optimisation
- Eligible carbon credits and removals
- Operational efficiency
- New aircraft propulsion technology

Cleaner skies of tomorrow



The SAF fact file

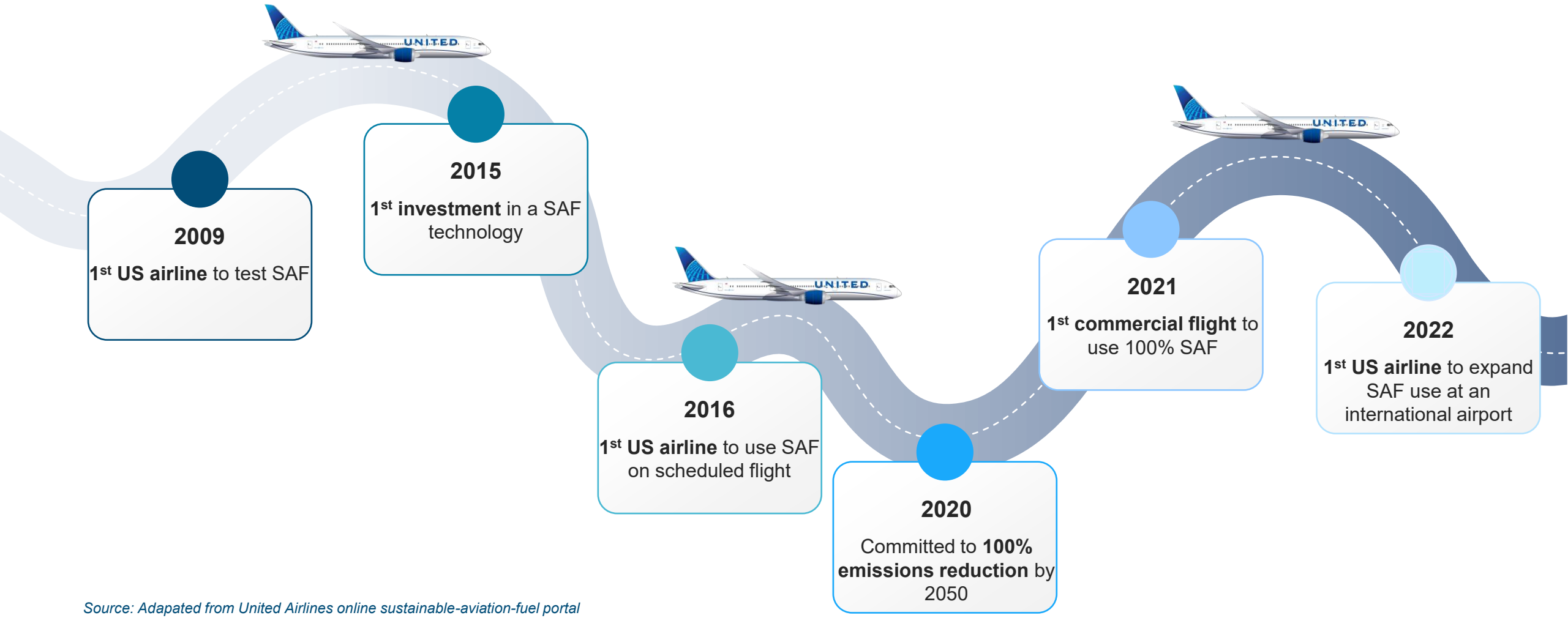
11	**SAF production pathways** approved by ATSM International
98	**airports** distributing SAF
81	**airlines** with agreements to uplift SAF
2.1	**Mt SAF production volume** estimated accounting for 0.7% of total airline fuel consumption (2025)
$45	**billion** in **SAF purchase agreements** that have uplifted SAF
1	**Mt SAF production volume** or 1.3 billion litres (2024)
0.45	**million commercial flights** that have uplifted SAF (2024)

Source: Air Transport Action Group's (ATAG) online facts-figures portal on 27 August 2025

Airlines uplifting SAF (worldwide selection, not exhaustive)

Note: A non-exhaustive representation of selected airlines either currently uplifting SAF or committed to uplifting SAF to achieve publicly declared targets on their respective future SAF fuel mix (various public sources)

United’s SAF story so far …



Source: Adapated from United Airlines online sustainable-aviation-fuel portal

Virgin Atlantic's 16-year SAF pursuit

2008
World's 1st airline to use SAF

2018
World's 1st commercial flight to use blended SAF

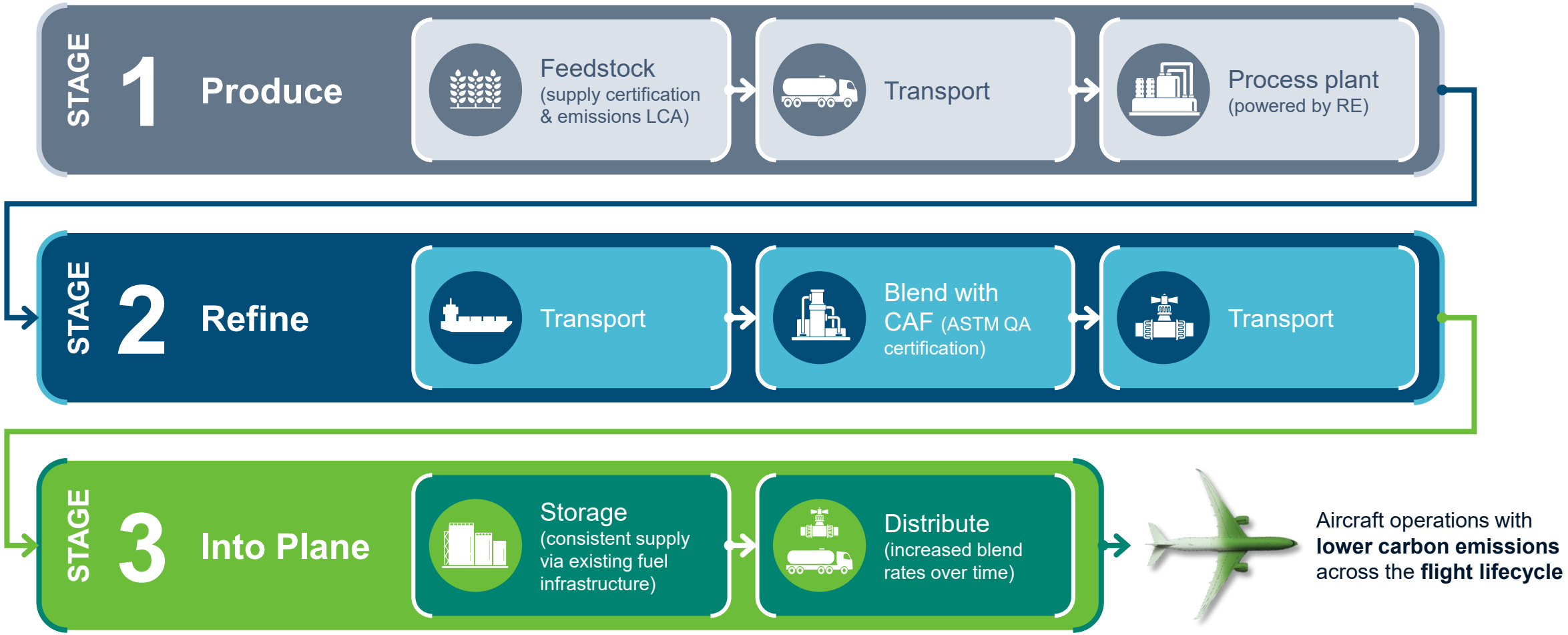
2023
Flight100
1st Transatlantic flight to use 100% SAF

2024
UK Govt. **SAF Mandate** enacted

2024
Concluded **4 Corporate SAFc** agreements

Source: Virgin Atlantic's 2024 Annual Report and other information from the online 'Business for good' portal

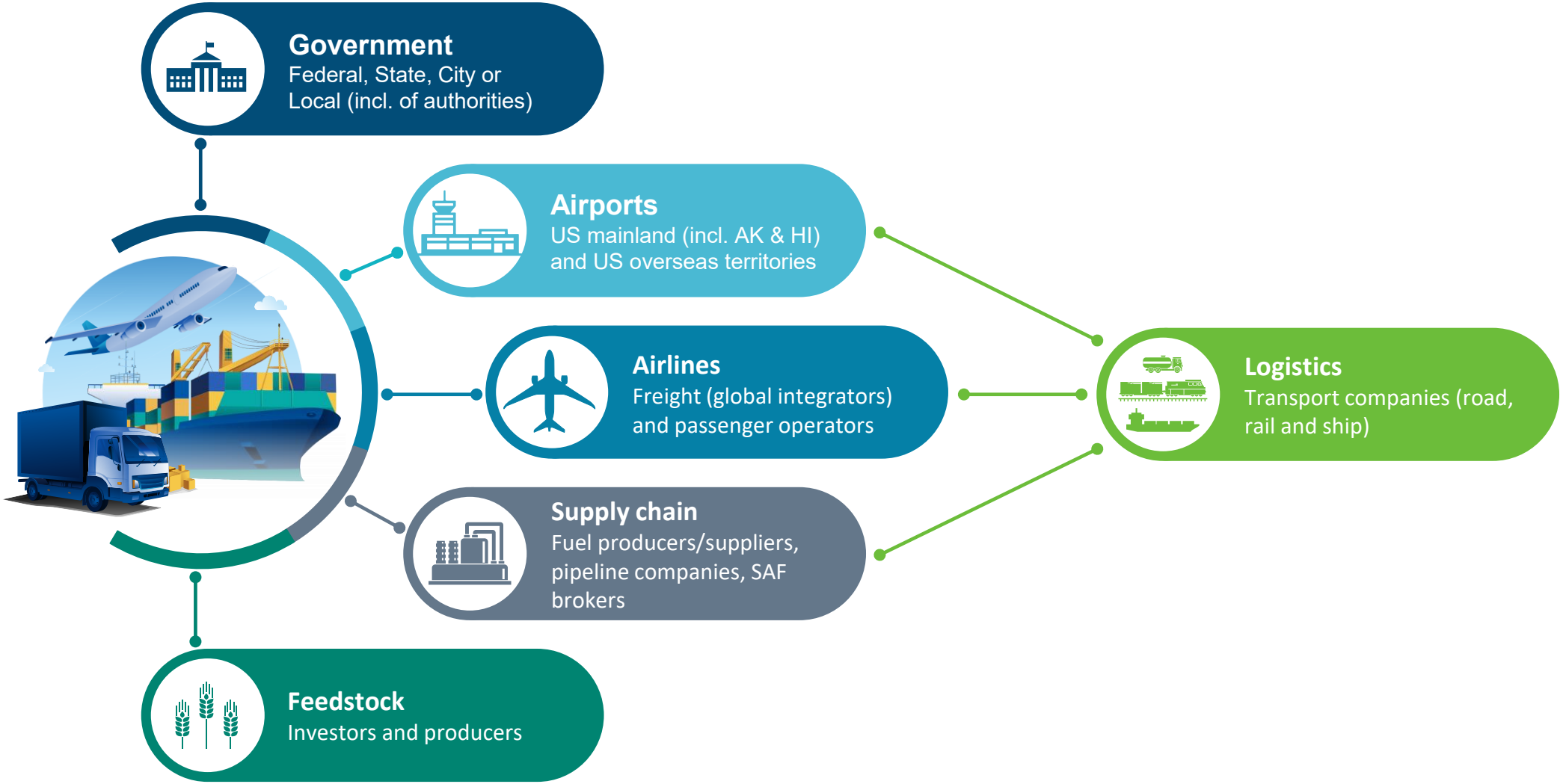
Schematic SAF process map



Aircraft operations with **lower carbon emissions** across the **flight lifecycle**

1. *LCA: lifecycle assessment*
2. *QA: quality assurance*
3. *RE: renewable energy*

The players

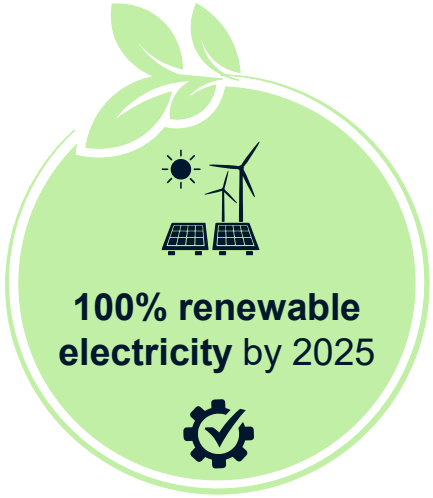


SAF users: airline focus

	Passengers uplifted (2024 or latest reporting year)	SAF target (uplift % of total fuel mix)	SAF uplift (2024 % of total fuel mix)	SAF carbon abatement (2024 tCO_2e mitigated)	SAF partners (current or known)	Net Zero target (reduction against 2019)
	211 million	10% by 2030	~0.07%	24,634 tCO_2e	Aemetis, Eneos, Gevo Inc., Neste	Net Zero by 2050
	46 million	10% by 2030	2.7%	350,000 tCO_2e	Aemetis, EcoCeres, Infinium, Phillips 66, Twelve	Net Zero by 2050
	47.3 million	1% by 2025	~0.1% (2023)	14,559 tCO_2e (2023)	Neste	Net Zero by 2050
	51.8 million	10% by 2030 60% by 2050	0.2%	23,645 tCO_2e	Aemetis, Ampol, bp QF SAF Coalition	Net Zero by 2050
	140 million	10% by 2030	~0.2%	Not disclosed	LanzaJet, Marathon, Neste, Phillips 66, Prime, Valero, Velocys	Net Zero by 2050
	174 million	10% by 2030	0.3%	126,174 tCO_2e	Cemvita, Neste, Phillips 66, Twelve, World Energy	Net Zero by 2050

 Source: Various Airline Annual and Sustainability Reports 2024 and other published data noting that information is subject to change through new disclosures, SAF partnerships and uplifting

Above and beyond at SYD



through behind-the-meter solar PV generation and renewable Power Purchase Agreements

operational Scope 1 and 2 emissions only

uplift by 2050

Key measures:

- Demand-side policy measures (LCLF standards)
- Supply-side policy measures (SAF tax credits)
- SAF project and R&D funding

Source: SYD (Sydney Airport) Annual Report 2024

The Flying Kangaroo: interim climate action target selection

25% net CO_2e

reduction from 2019 levels by 2030

operational Scope 1 and 2 emissions onl)

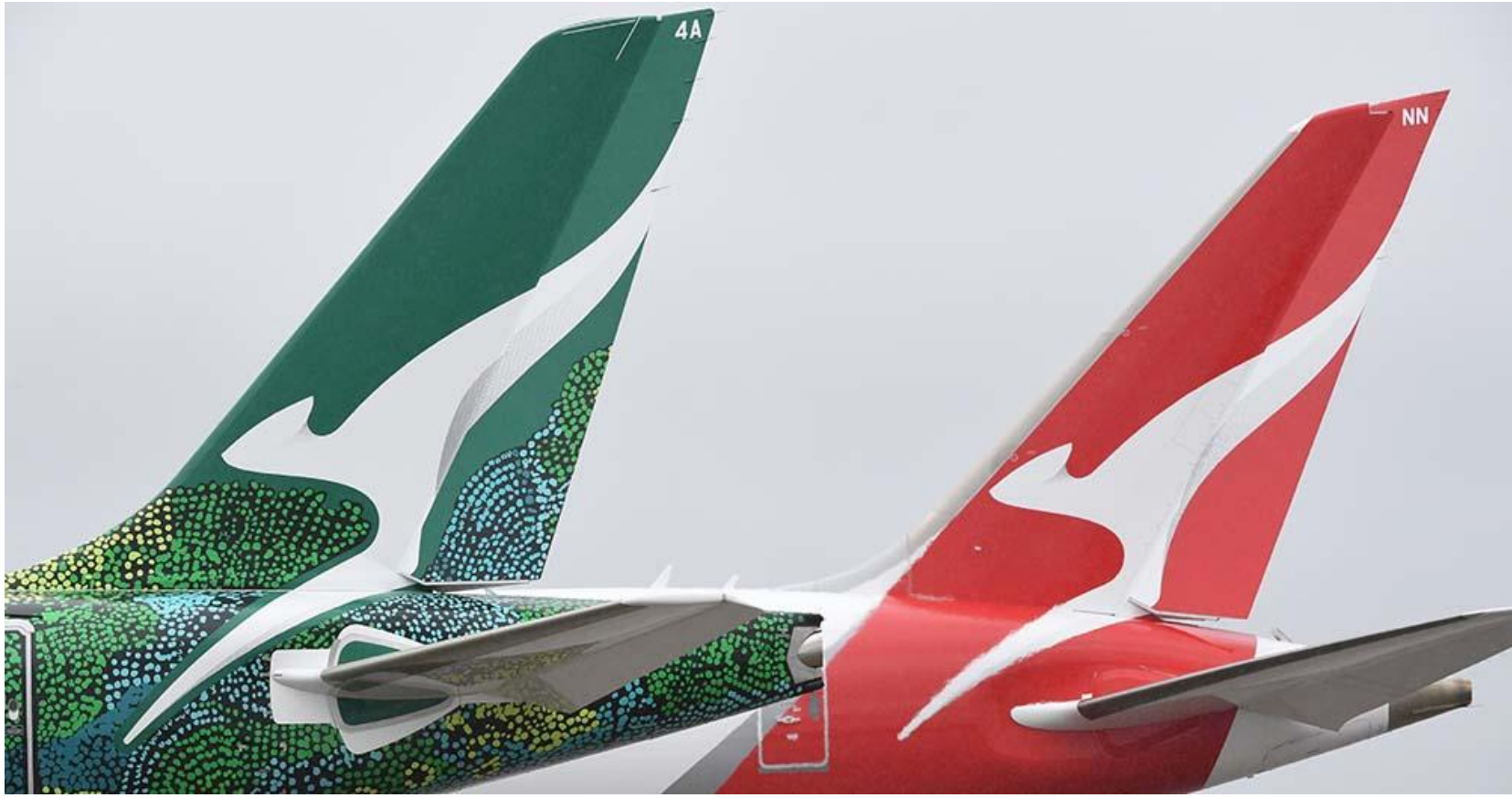
10% SAF

in overall fuel mix by 2030

increasing to 60% by 2050

Net Zero

by 2050 commitment



Source: The Qantas Group Sustainability Report 2024 and Qantas Group images

By the numbers: Qantas 2024

11,456,418 tCO_2e
DOM/INT aircraft emissions

DOM: domestic
INT: international

4,520,502,000 L
aircraft fuel consumption

L: litres

9,991,377 L
SAF uptake volume

L: litres

0.2%
SAF proportion of total fuel mix

23,645 tCO_2e
SAF carbon abatement

87.4 $kgCO_2e$
per 100 RTKs

RTK: Revenue Tonne Kilometre(s)

Source: Qantas Group Sustainability Report 2024 and The Qantas Group image

Soaring high together: SAF lands at SYD

The headlines:

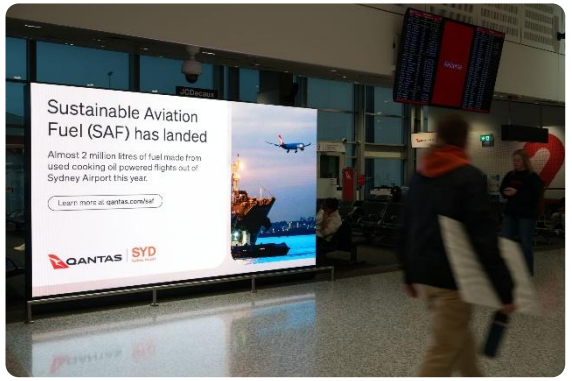
- **Ampol-Qantas-SYD collaboration** and other Qantas SAF Coalition Partners
- **2 million litres** (or 526,316 US gallons rounded, or 1,600 t) of neat biogenic SAF (HEFA) shipped from Malaysia to Kurnell Refinery, Sydney for blending with CAF
- **Blended SAF dropped into** Ampol pipeline and transferred to SYD fuel system
- **Distributed across the airport** by Skytanking Australia (fuel storage/hydrant system manager)
- **18%** blend ratio

Source: SYD Community Hub/SAF, May 23, 2025

SYD SAF week

- **SAF week**
- 8-22 August 2025
- Launched by SYD

Awareness raising campaign on SAF and its benefits for aviation



AV feeds looped into display screens throughout SYD terminals with posters in public areas

Intensive series of **roundtables** held with key stakeholders and supply chain

Source: SYD SAF Week images

SAF impact: by the numbers (high-level example)

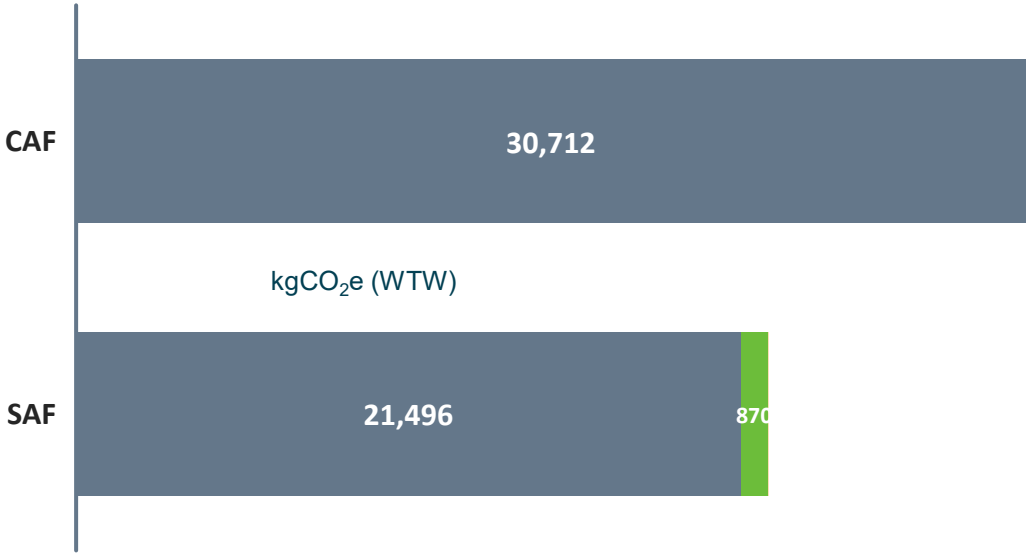
Route
BOS-TPA

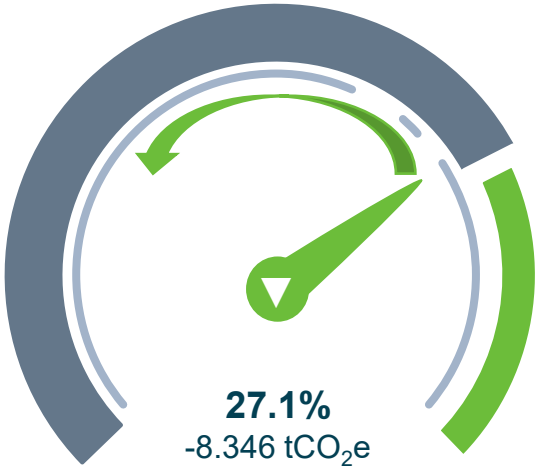
Flight distance
1,185 nm (1,907 km)

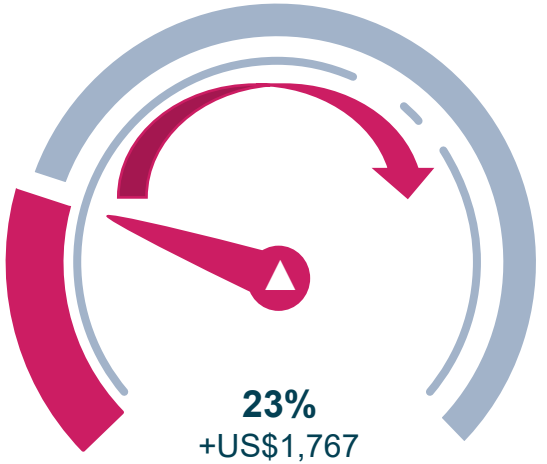
Aircraft
A320 operated by JetBlue

Fuel burn
7,998 kg (~8 t)

Fuel intensity
175 kg/Pax

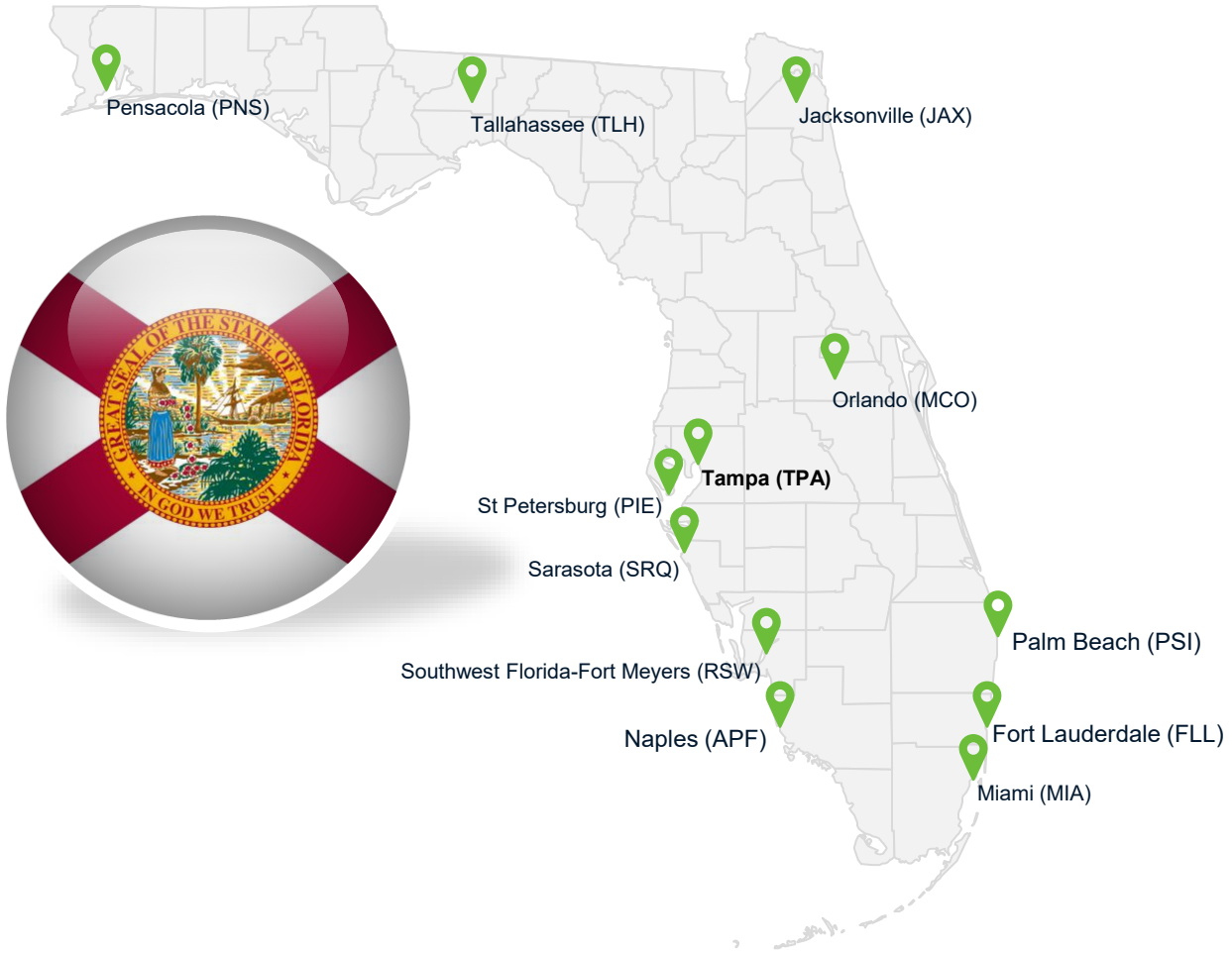






Assumptions: Recognised methods and fuel conversion factors (CAF/SAF) used to calculate 'well-to-wake' (WTW) CO_2e values. A 30% SAF uplift was applied with pricing based on a conservative 3:1 unit escalation of equivalent CAF (expressed in US$). An average jet fuel price was sourced from the IATA Jet Fuel Price Monitor in US$/t.

Florida airports can lead the SAF transition



Land availability
large tracts available for feedstock growth and production

Raw materials
diverse mix of feedstocks and raw materials

Renewable energy
significant opportunities for RE generation and storage

Infrastructure
mature multi-modal transport system and logistics hubs

Pipelines
integrated network of pipelines to supply and distribute SAF

05

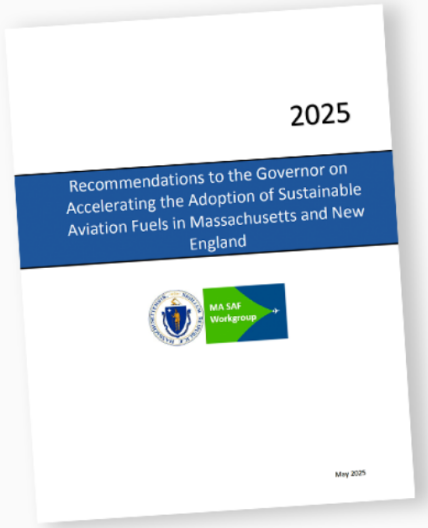
SAF in the US – a case study from Massport

It started with a report …

SAF Report

The SAF Working Group released ta report outlining five key recommendations to enable early SAF delivery to regional airports and lay the groundwork for a developing a regional SAF industry:

1. Undertake a regional logistics planning study
2. Create a Massachusetts and New England Region SAF Hub
3. Identify and market existing state programs and initiatives targeting greenhouse gas, emissions reduction, climate tech, and economic development to support SAF
4. Enact legislation to fund a tax credit for SAF
5. Convene a Regional SAF Alliance, inclusive of the six New England states and New York



5 June 2025 - workshop

Regional SAF Workshop

Over 130 industry leaders, policymakers and stakeholders from across Massachusetts and New England came together on June 5, 2025 at the U.S. DOT Volpe Center to explore practical steps for advancing technology and policies to support SAF development and deployment. The workshop featured expert speakers, panels, and hands-on working sessions that explored practical solutions for advancing SAF technology, policy, and deployment in our region. Together, participants identified next steps and reaffirmed their shared commitment to harnessing New England's unique strengths to drive the transition to sustainable aviation fuel.

The energy, ideas, and partnerships sparked at the SAF workshop are propelling us forward as we work to make SAF a reality for the region.

The SAF value chain is complex with a range of stakeholders playing a key role in current industry development

SAF value chain and current industry developments

Source: PA analysis

Next steps – working groups with clear outcomes

Regional Strengths

- Robust innovation ecosystem
- Promising feedstock and logistical advantages
- Strong policy momentum, with state-level climate mandates and tax incentives
- Growing market demand, corporate climate commitments, and public interest
- Scale-Up Potential

Key Actions

- Build and formalize a SAF coalition
- Advocate for supportive policies at state and regional levels.
- Expand research, data collection, and knowledge-sharing
- Develop innovative financing mechanisms
- Invest in infrastructure, technology, and clean tech accelerators
- Launch targeted campaigns to promote and raise awareness about the benefits of SAF

06

Bringing SAF to Tampa / Florida

Bringing Ingenuity to Life.

About PA.

We believe in the power of ingenuity to build a positive human future.

As strategies, technologies, and innovation collide, we create opportunity from complexity.

Our diverse teams of experts combine innovative thinking and breakthrough technologies to progress further, faster. Our clients adapt and transform, and together we achieve enduring results.

We are over 4,000 strategists, innovators, designers, consultants, digital experts, scientists, engineers, and technologists. And we have deep expertise in consumer and manufacturing, defence and security, energy and utilities, financial services, government and public services, health and life sciences, and transport.

Our teams operate globally from offices across the UK, Ireland, US, Nordics, and Netherlands.

PA. Bringing Ingenuity to Life.

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