



2024 ICAO LTAG STOCKTAKING

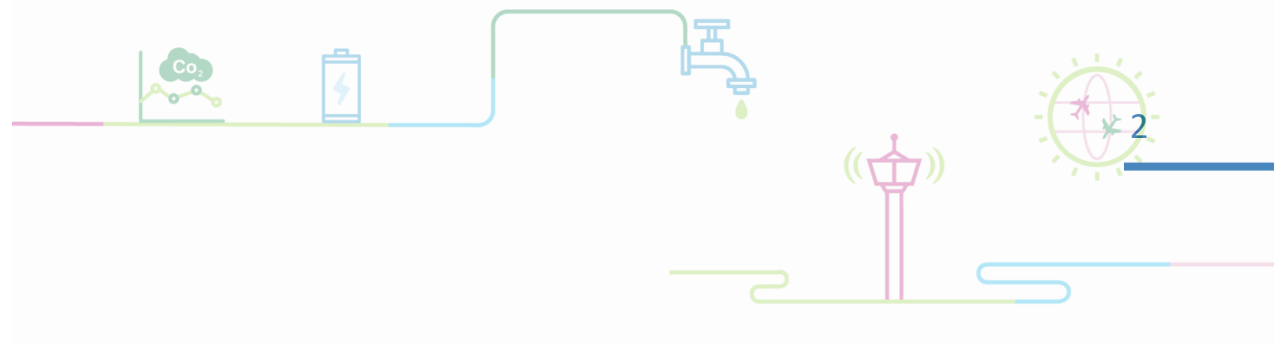
7 — 10 OCTOBER 2024

ICAO HEADQUARTERS, MONTREAL, CANADA



2024 ICAO LTAG STOCKTAKING

7 ——— 10 OCTOBER 2024



Jane Hupe

Deputy Director Environment
International Civil Aviation Organization (ICAO)

Scene Setting by ICAO



LTAG Stocktaking caps off yet another busy but fulfilling 2024 in the ICAO Environment event calendar



2024 ICAO LTAG STOCKTAKING
7 — 10 OCTOBER 2024
ICAO HEADQUARTERS, MONTREAL, CANADA

The graphic features a white background with green and blue line-art icons of a wind turbine, trees, a gear, and a battery. A stylized airplane icon is at the top right. The text is in a bold, green, sans-serif font.

In tandem with numerous key ICAO developments in environmental protection in recent years, Stocktaking has come a long way...



39th ICAO Assembly

Historic agreement of global MBM: CORSIA →



Further CORSIA developments

- Adoption of Annex 16, Vol IV
- ACT-CORSIA with more than 130 States

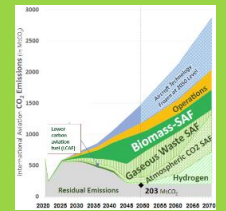


41st ICAO Assembly

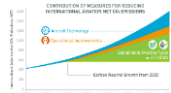
- Collective LTAG of net zero carbon emissions from international aviation by 2050
- Need for monitoring progress



Launch of ACT-SAF



2010



37th ICAO Assembly

Adoption of two global aspirational goals

- CNG2020
- 2% annual fuel efficiency improvement

2016



CAAF/2

- 2050 ICAO Vision
- Progress monitored through "Stocktaking"
- CAAF/3 to quantify ICAO Vision

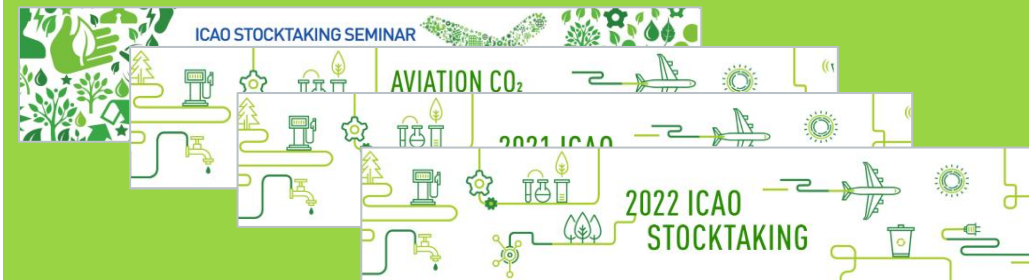
New CO₂ standard for aircraft

2017

2018

2019

Commencement of annual Stocktaking Events



2022

In establishing the momentum and monitoring of progress towards net-zero carbon emissions for international aviation

July 2023



2023 Stocktaking followed with pre-CAAF/3 Policy and Finance Consultation Sessions

- Integrating consultations on financing into Stocktaking agenda

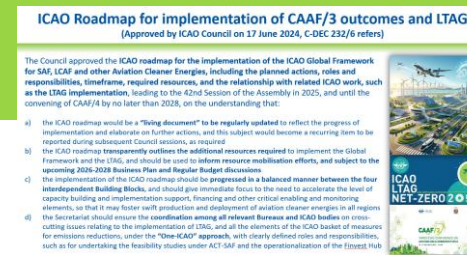
November 2023



CAAF/3

- Global Framework for SAF, LCAF and other aviation cleaner energies
- Collective global aspirational goal to reduce CO₂ emissions in international aviation by 5% by 2030, compared to zero cleaner energy use

June 2024



ICAO Roadmap for the implementation of CAAF/3 outcomes, and LTAG

- 4 Building Blocks with planned actions, roles/responsibilities, timeframe, resources needed
 - ✓ Policy and Planning
 - ✓ Regulatory Framework
 - ✓ Implementation Support
 - ✓ Financing

October 2024



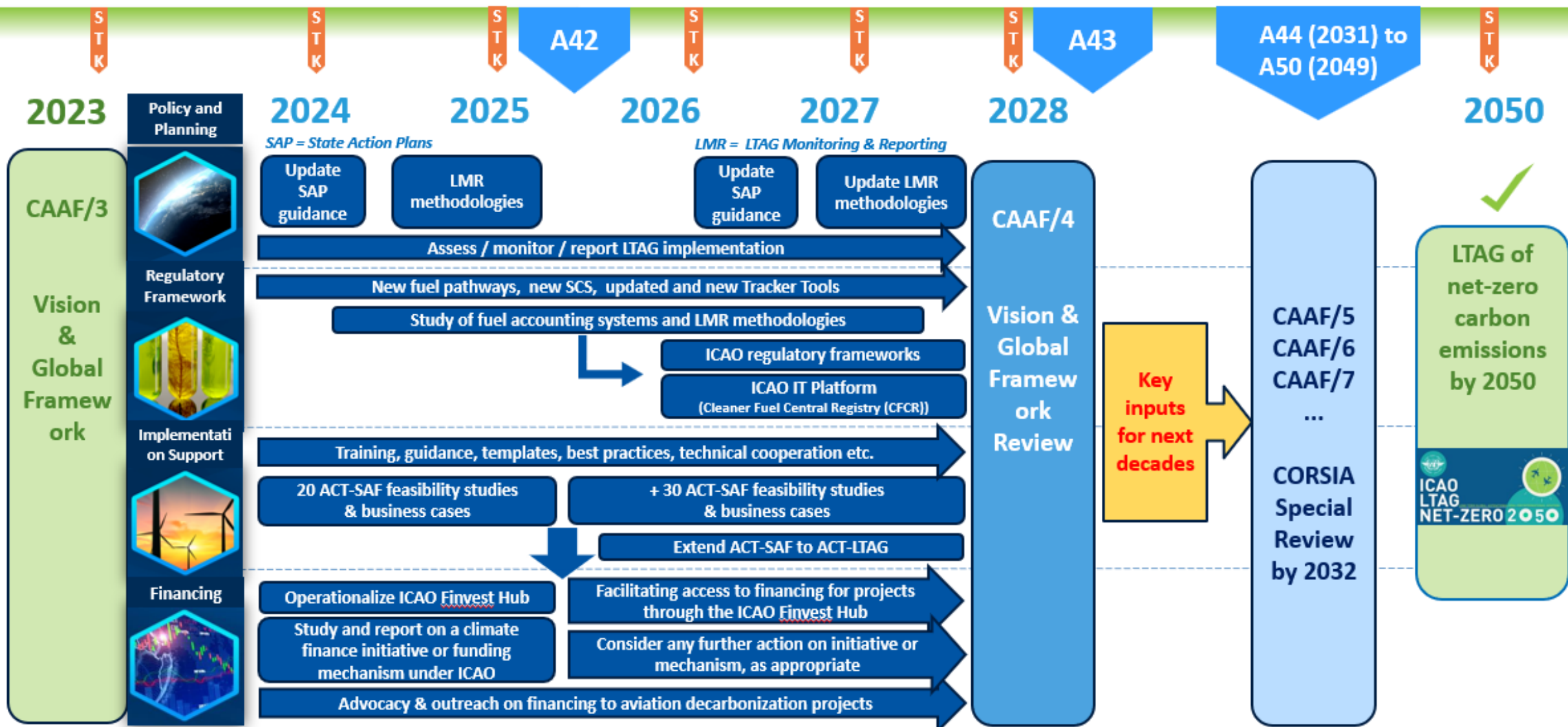
ICAO Roadmap for implementation of CAAF/3 outcomes and LTAG



Aviation needs to be on track to deliver the green energy transition!

Key deliverables in ICAO Roadmap highlighted for implementation of CAAF/3 outcomes and LTAG

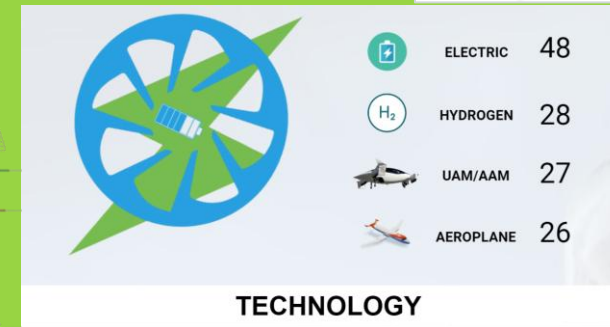
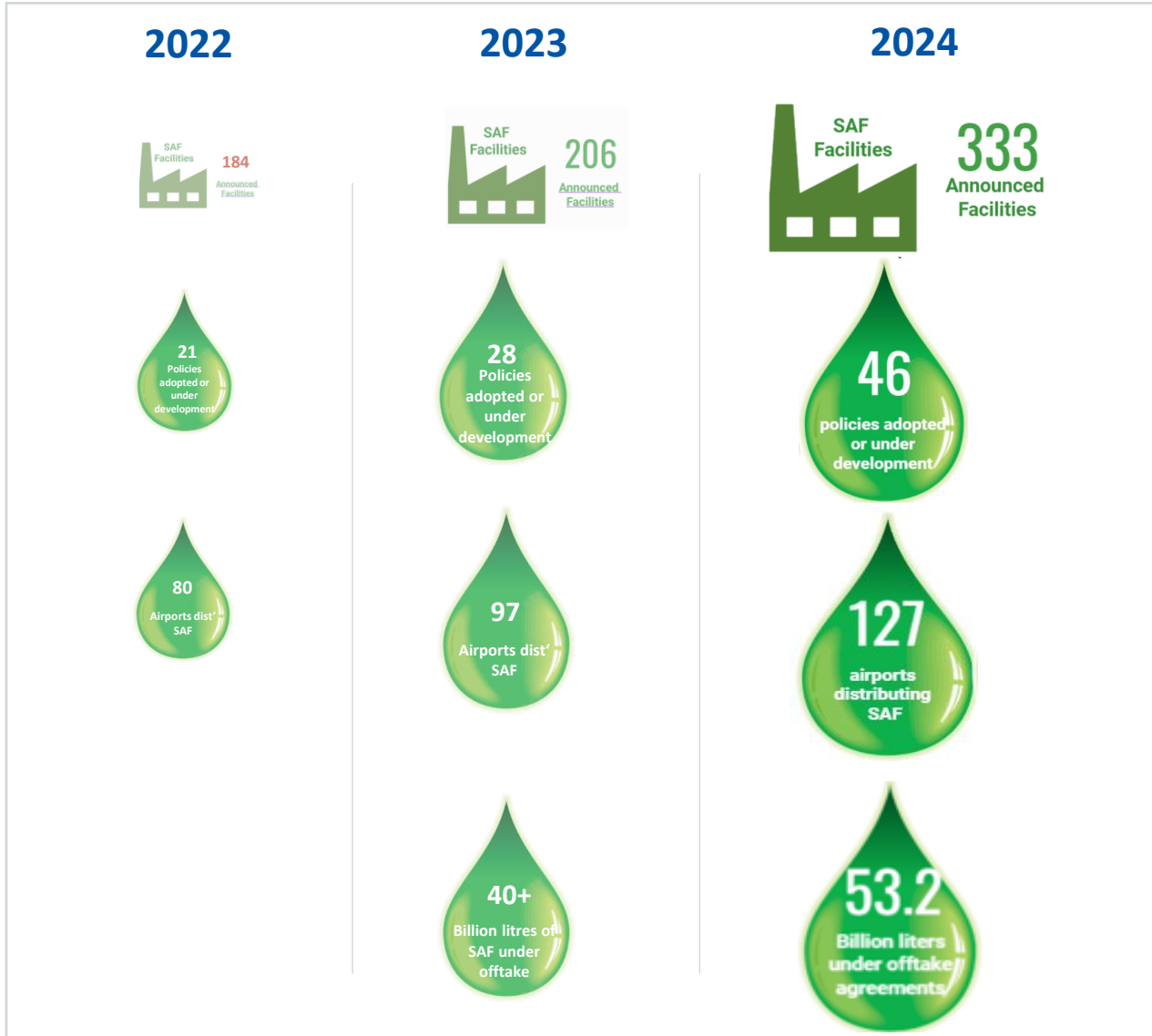
STK = Annual LTAG Stocktaking events



Stocktaking ensures that we are on track as we monitor our progress in the ICAO Roadmap

2024

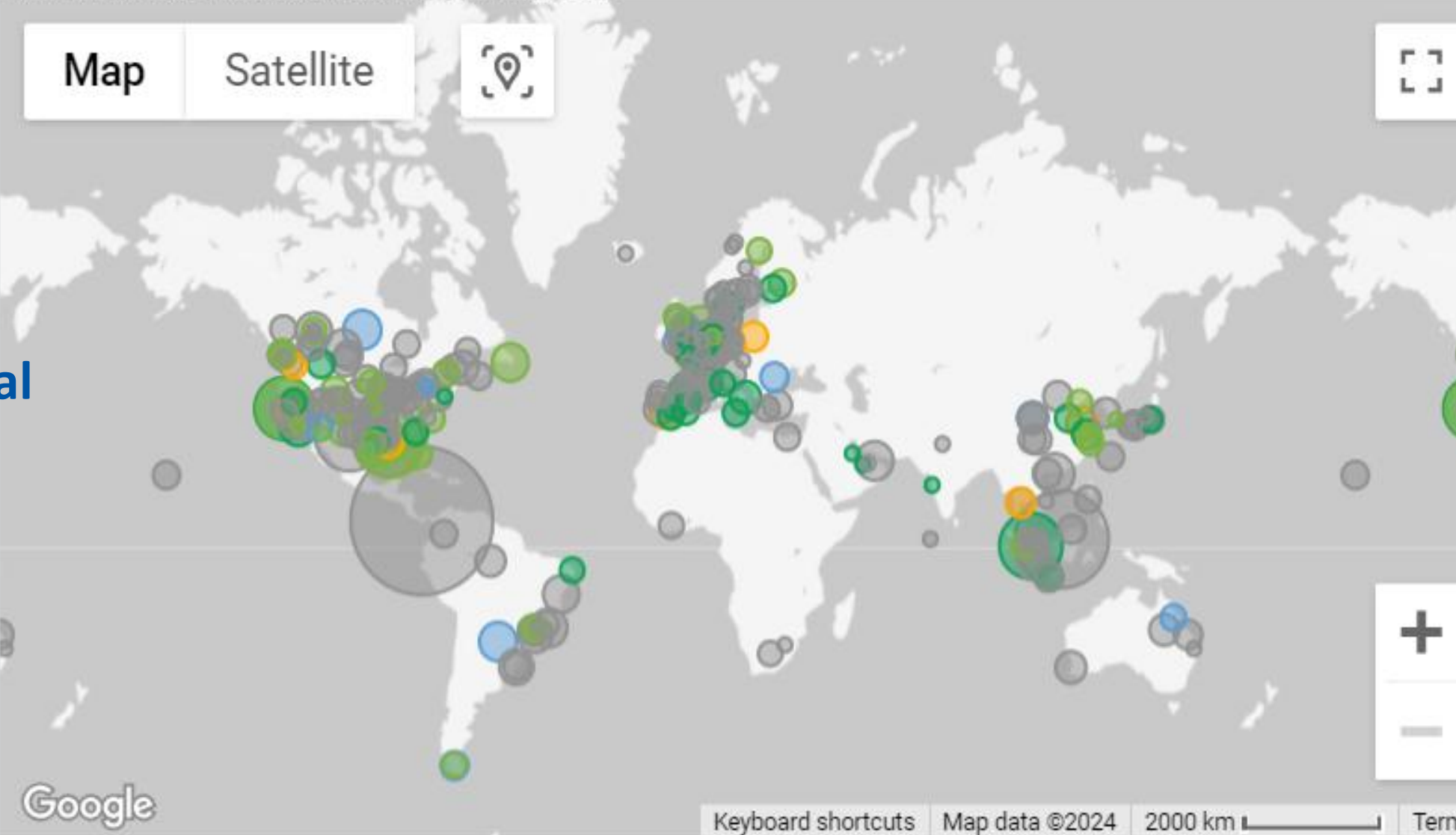
(Additional information tracked)



ICAO tracker of SAF facilities

This tracker provides information on facilities (existing and announced) that could produce Sustainable Aviation Fuels.

Note: capacity numbers refer to total capacity, including SAF and other renewable fuels. ICAO does not actively verify the status of announcements made in the past. Contact officeenv@icao.int to suggest the inclusion of information



Scaling up SAF production globally, in all regions, is crucial to the sector's **LTAG** ambition



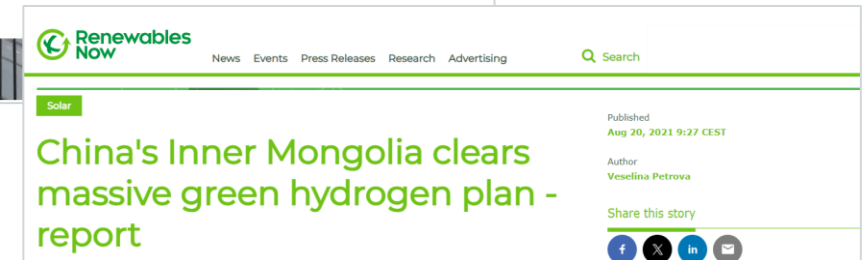
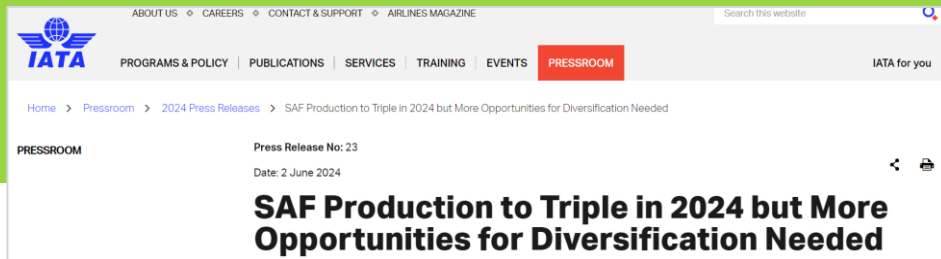
Capacity (ML/year)
0.0 • ● 9.8K

Facility Status

- 1 - Initial Announcement
- 2 - Front End Engineering Design (FEED)
- 3 - Under construction
- 4 - In service - producing other renewable fuels
- 5 - In service - producing SAF

Scaling up SAF production globally, in all regions, is crucial to the sector's **LTAG** ambition

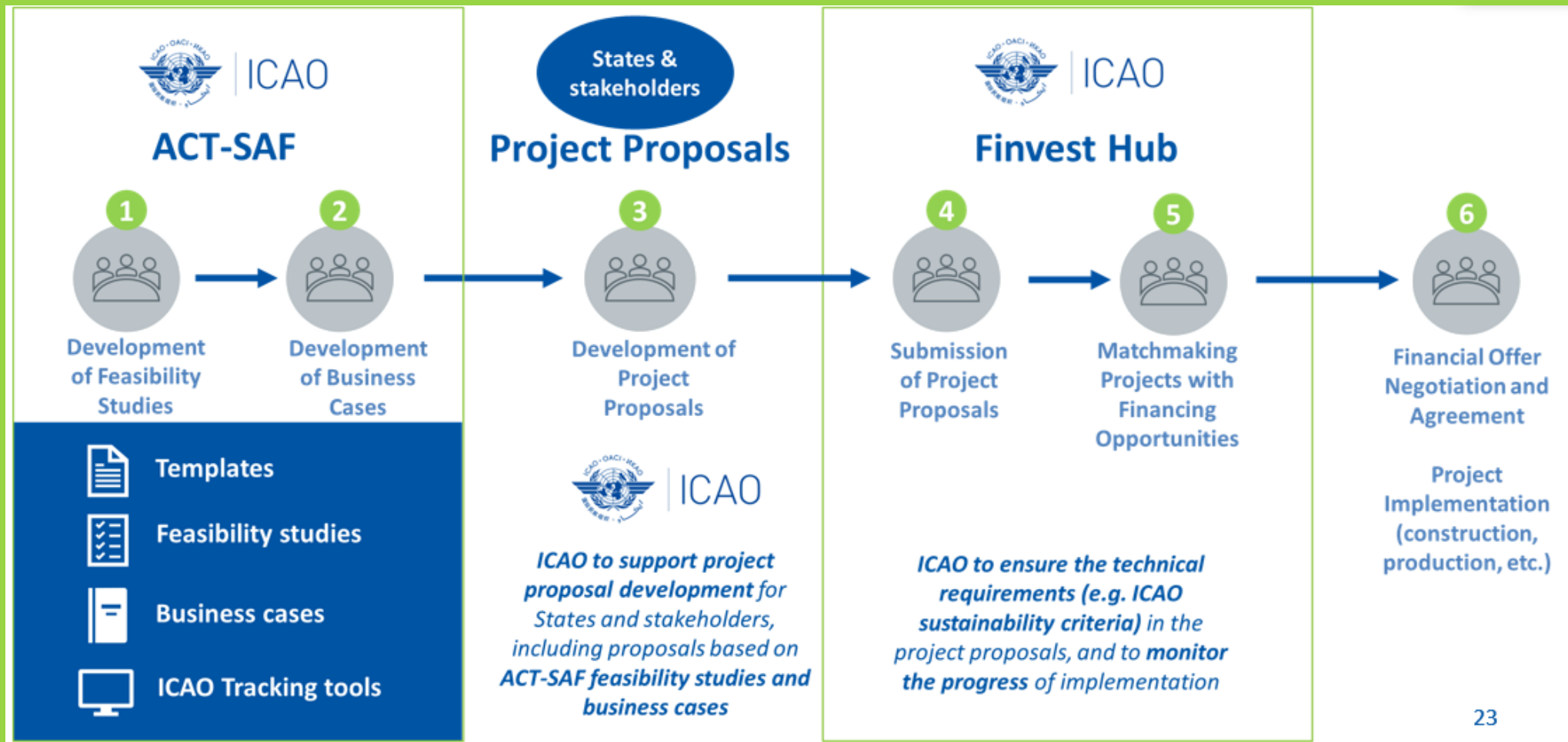
- Supporting policies, and opportunities for diversification needed
- Major announcements in SAF development and support



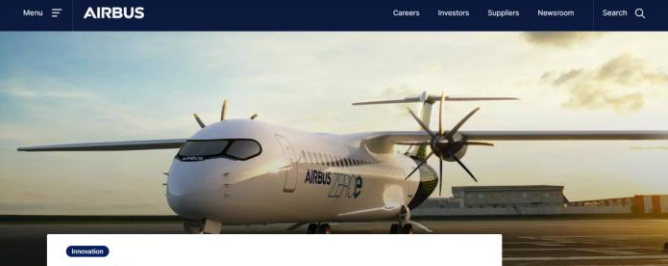
- **Financing challenges remain**
 - Cumulative investments from fuel suppliers of around USD 3,200 billion by 2050 required in the scaling up of fuels in support of LTAG net-zero

In aspiring to have production sites in all ICAO regions before CAAF/4, implementation support and financing is key

- **FINVEST Hub** to facilitate enhanced access to public and private investment capacities and funding from financial institutions (with a focus on developing States and States with particular needs)
- Consider **establishment of a climate finance initiative or funding mechanism** under ICAO



Collaboration with our stakeholders is key to ensuring progress for the ICAO Roadmap




ZER0e
Towards the world's first hydrogen-powered commercial aircraft

Home | Who we are | What we do | Sustainability | News and insights | Business customers | Investors | Careers at Shell



Decarbonising aviation

Aviation connects people, cultures and businesses around the world and is fundamental to the global economy. But the industry is also one of the fastest growing sources of greenhouse gas emissions. In 2021, it accounted for around 2% of energy-related carbon dioxide (CO₂) emissions. Shell is taking action to help the aviation industry reach net zero by 2050.



Sustainable aviation

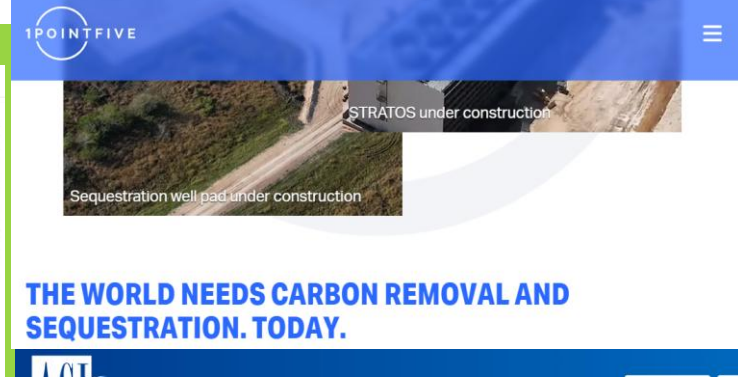
Air traffic is expected to grow by 4% per year over the next 20 years. To reconcile this growth with the sector's net zero goal by 2050, airlines and airports will need to switch to sustainable aviation fuel. Power-to-Liquid fuels are the most promising pathway – but not yet readily available in the market.



Net Zero Roadmaps

IATA's Net Zero roadmaps provide step-by-step detailing of critical actions for aviation to achieve net zero CO₂ by 2050. They address aircraft technology, energy infrastructure, operations, finance, and policy.

The roadmaps are the first detailed assessment of the key steps necessary to accelerate the transition to net zero by 2050. Together, they show a clear direction and will evolve as we dig deeper to set interim milestones on the way to net zero. The roadmaps are aimed at airlines, but also for governments, suppliers, and financiers. "The roadmaps are a call to action for all aviation's stakeholders to deliver the tools needed to make this fundamental transformation of aviation a success with policies and products fit for a net-zero world." Willie Walsh, IATA's Director General.



1POINTFIVE

STRATOS under construction

Sequestration well pad under construction

THE WORLD NEEDS CARBON REMOVAL AND SEQUESTRATION. TODAY.



ACT WORLD AIRPORTS COUNCIL INTERNATIONAL

#All4one Aviation Ecosystem



CASCADe

The Boeing Cascade Climate Impact Model

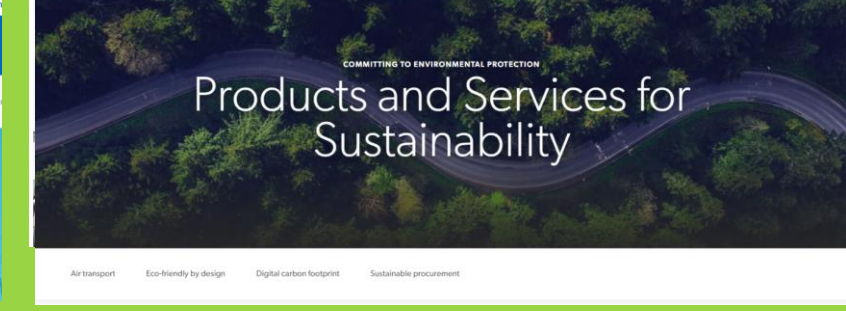
Learn. Engage. Evaluate.

Explore possibilities for aviation to decarbonize to inform and drive action

Switch to a larger screen to use Cascade

Home / Financial Sector / Transport

Brazil to Invest \$1.1 Billion to Accelerate SAF Production



THALES Building a future we can all trust

Home / Global / Corporate Responsibility / Environment

Products and Services for Sustainability

COMMITTING TO ENVIRONMENTAL PROTECTION

Air transport | Eco-friendly by design | Digital carbon footprint | Sustainable procurement



INSTRUCTIONS TO DOWNLOAD THE EVENT APP:

1. Scan the QR code using your phone or use the following link:
<https://scoocs.co/icao-app/>
2. Select the app download button according to your device
3. Download the **ICAO Connect app**
4. Enter the email you used to register for this event, create a password and click **“Sign Up”**
5. Fill in your networking profile and click **“Continue”**
6. Once logged in, look for:
2024 ICAO LTAG Stocktaking Event on Aviation CO₂ Emissions Reductions



ACCESS ICAO PUBLIC WIFI

Network: **Public@Intl. Civil Aviation**

Password: **ICAO80th**

Sponsored by



Shell Aviation



LTAG Stocktaking programme covers all in-sector CO₂ emissions reductions, with a focus on SAF, LCAF and other aviation cleaner energies



Day 1 – 7 October	Day 2 – 8 October	Day 3 – 9 October	Day 4 – 10 October
<p>Session 1: High level Panel: Innovation and partnerships as key drivers of aviation cleaner energy transition and the achievement of the LTAG</p>	<p>Session 3: Operational improvements to achieve the LTAG</p>	<p>Session 5: SAF, LCAF and Cleaner Energies – Part 3: Policies and Partnerships</p>	<p>Session 8: Implementation support - Part 2: Challenges and opportunities in achieving the LTAG</p>
	<p>Session 4: Airports and Infrastructure</p>	<p>Session 5: SAF, LCAF and Cleaner Energies – Part 4: Sustainable Certification</p>	<p>Session 9: Financing – Part 1: ICAO FINVEST Hub</p>
<p>Session 2: Aircraft technologies – Part 1: Latest innovations to achieve the LTAG</p>	<p>Session 5: SAF, LCAF and Cleaner Energies – Part 1: Overview of ICAO Global Framework adopted by CAAF/3</p>	<p>Session 6: Monitoring progress towards the LTAG, through accounting methodologies</p>	<p>Session 9: Financing – Part 2: Financing the aviation cleaner energy transition</p>
<p>Session 2: Aircraft technologies – Part 2: Start-Up Session</p>	<p>Session 5: SAF, LCAF and Cleaner Energies – Part 2: Latest developments on feedstocks, pathways and technologies</p>	<p>Session 7: Monitoring progress towards the LTAG, through State Action Plans</p>	<p>LTAG Stocktaking Closing Session: Just Transition</p>
<p>Session 2: Aircraft Technology – Part 3: Policies & Partnerships</p>		<p>Session 8: Implementation support – Part 1: ICAO ACT-SAF Programme</p>	
<p>Special Session on Hydrogen use in aviation</p>			

ACT-SAF Connect – Side Event on 11 October



11 October

Roundtable 1 – Taking Stock of the ACT-SAF Training Series – Launch of Season 3

Roundtable 2 – Feasibility Studies to support aviation cleaner energy transition

Roundtable 3 – Post-Feasibility Studies – Towards SAF production projects

- Assistance, Capacity Building and Training for SAF (ACT-SAF) provides support for States in various stages of SAF development and deployment
- Close to 200 Partner States and Organizations
- Side event is an opportunity for ACT-SAF Partners to gather in-person for the first time to discuss, and further progress the programme
- Open to all Stocktaking participants

Appreciation

AIRBUS

 GOLD SPONSOR



Shell Aviation

 SILVER & APP SPONSOR



 SILVER SPONSOR



 GOLD SPONSOR

ExxonMobil

 LANYARD SPONSOR

VariFlight[®]

 SILVER SPONSOR



Thank You

