

ISCC CORSIA for Sustainable Aviation Fuels (SAF)

Sustainable Aviation Fuels are gaining momentum (I)

- **SAF is a central pillar** to decarbonize the aviation sector

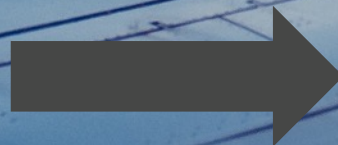
- The aviation sector is considered “hard-to-abate” and will have to rely on liquid fuels for the foreseeable future
- Power-to-liquid (PtL) SAF is a promising technology option, but large-scale application not implemented yet, and costly
- An enormous increase in SAF production will be necessary to work towards **IATA’s net-zero goal**
- 5,000 - 7,000 production facilities will be needed, requiring investment of 1,000 - 1,500 billion USD

**SAF volumes in
2020**

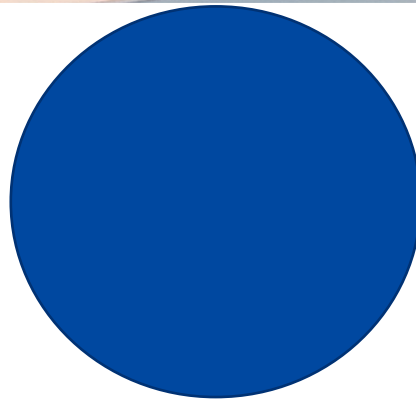


**50,000
mt of SAF**

Production scale-up
by **8,000** times
necessary

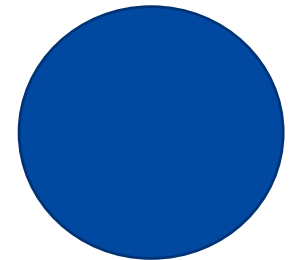


**Needed SAF volumes in
2050 to reach net-zero**



**≈ 400,000,000
mt of SAF**

For comparison:
**Projected volume of
biofuel market in 2022**



**≈ 150,000,000
mt of biofuel**

Sustainable Aviation Fuels are gaining momentum (II)



■ The voluntary market can play an important role in SAF scale-up

- The air travel of goods and employees often makes up a significant share of larger corporations' Scope 3 emissions
- Increasingly, these corporations are willing to pay a premium for the transporting airlines to use SAF
- Through this, corporate actors could help bridge the significant differential cost between SAF and conventional jet fuel



■ Regulators increasingly put their policy focus on SAF

- The global CORSIA scheme allows the use of CORSIA eligible SAF to reduce offsetting obligations
- The EU promotes the use of SAF under both its Renewable Energy Directive (EU RED) as well as through its Emissions Trading System (EU ETS)
- The EU Commission proposes a dedicated SAF mandate as part of the ReFuel EU Aviation regulation
- The US Government released a broad new set of actions focused on increasing the domestic production and utilization of SAF
- Individual countries implement or plan to implement SAF mandates

ISCC has been engaged in supporting the aviation industry in achieving its climate targets for several years now

- Several **ISCC members and system users** are active in the field of sustainable aviation and sustainable aviation fuels (SAF)
- With American Airlines, the **first major airline** recently joined the ISCC Association
- ISCC is an active member of the **CAEP Fuels Task Group** that is working on the further development of CORSIA eligible SAF and LCAF (lower carbon aviation fuels)
- ISCC was involved in a **scientific project** analysing reporting requirements in supply chains of **aviation fuel multi-blends**
- ISCC actively supports **various initiatives**, and conducts pilots in supply chain certification
- ISCC currently has 5 certificates under its **CORSIA standards**, 6 certificates covering **co-processed SAF**, 5 covering **HEFA**, and 115 covering **HVO**

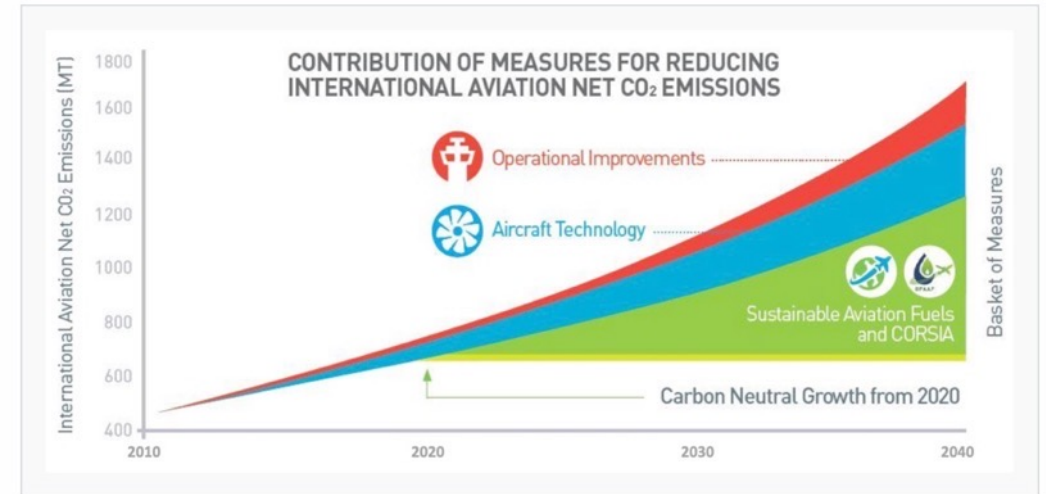
Examples



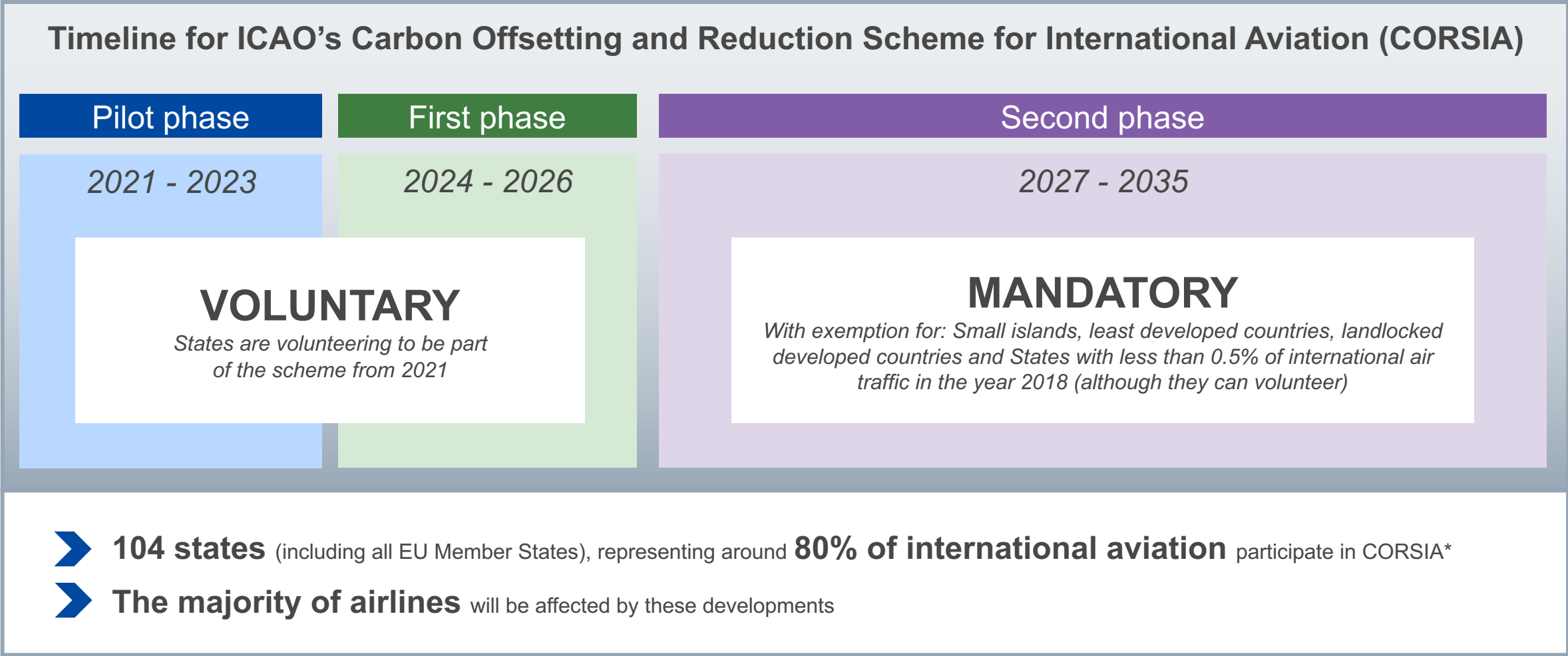
CORSIA* was agreed on by the ICAO** Council as a new global market-based measure in October 2016



Source: ICAO. <https://www.icao.int/newsroom/pages/icao-assembly-achieves-historic-consensus-on-sustainable-future-for-global-civil-aviation.aspx>



CORSIA covers the majority of international air travel and will be implemented in three phases





In November 2020, the **ISCC CORSIA** Certification System was approved by the ICAO Council.

Since then, economic operators and airlines can **demonstrate compliance with the CORSIA Sustainability Criteria for CORSIA Eligible Fuels** by applying the ISCC CORSIA Certification System.

ICAO document

CORSIA Approved Sustainability Certification Schemes

Name of the Sustainability Certification Scheme	Date of approval	Website	Applications and other Supporting Information	Application date
International Sustainability and Carbon Certification (ISCC)	18/Nov/2020	https://www.iscc-system.org/	https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-SCS-evaluation-ISCC.aspx	30/Apr/2020
Roundtable on Sustainable Biomaterials (RSB)	18/Nov/2020	https://rsb.org/	https://www.icao.int/environmental-protection/CORSIA/Pages/CORSIA-SCS-evaluation-RSB.aspx	30/Apr/2020

ISCC offers two options for certifying CEF: ISCC CORSIA and CORSIA PLUS. The systems differ in their sustainability requirements for biomass production



- **ISCC CORSIA** certification shows compliance with the CORSIA Sustainability Criteria for CEF
 - 10% lower GHG emissions on a life cycle basis compared to fossil jet
 - No biomass from high carbon stock lands for CEF production
 - Calculation of direct land use change emissions in case of land use conversion



- **ISCC CORSIA PLUS** certification shows compliance with the CORSIA Sustainability Criteria for CEF **plus** additional sustainability requirements for biomass production
- Sustainability requirements under ISCC CORSIA PLUS are divided into the **six ISCC CORSIA PLUS Principles**

The first certificates under ISCC CORSIA have already been issued. Further certifications are currently in the pipeline



ISCC CORSIA benefits from the vast experience of the existing certification systems ISCC EU and ISCC PLUS

ISCC EU



- Applicable for **biofuels inside the European Union**
- **Recognised by the European Commission** to demonstrate compliance with the EU's sustainability criteria for biofuels set out in the RED II*

ISCC PLUS



- Application for **voluntary** and certain **regulated markets**
 - Energy and biofuels outside the European Union (e.g., Japan, Australia)
 - Industrial applications
 - Food and feed markets

ISCC CORSIA is a stand-alone certification system. Combined audits with ISCC EU and PLUS are facilitated by harmonized system elements

ISCC EU



ISCC CORSIA



ISCC PLUS



Multi-stakeholder organization



Quality and risk management



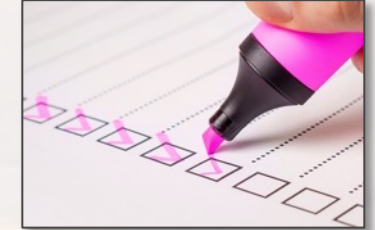
Integrity Program



Requirements for certification bodies



Requirements for conducting audits



Registration and certification process

ISCC CORSIA covers all types of raw materials that are eligible under CORSIA

Examples

Food and feed
crops



Rapeseed

Energy and short-
rotation woody
crops



Miscanthus

Agricultural and
forestry residues



Cobs

Wastes



Used cooking
oil

By-products



Palm fatty acid
distillate

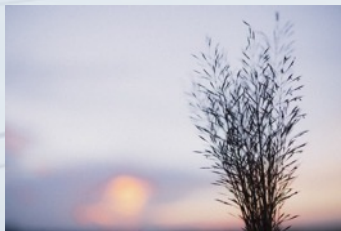
Processing
residues



Empty palm
fruit bunches



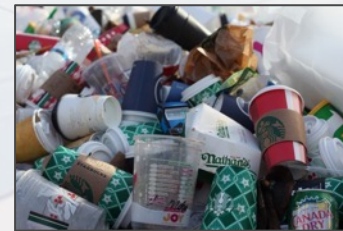
Soybean



Switchgrass



Bark



Municipal solid
waste

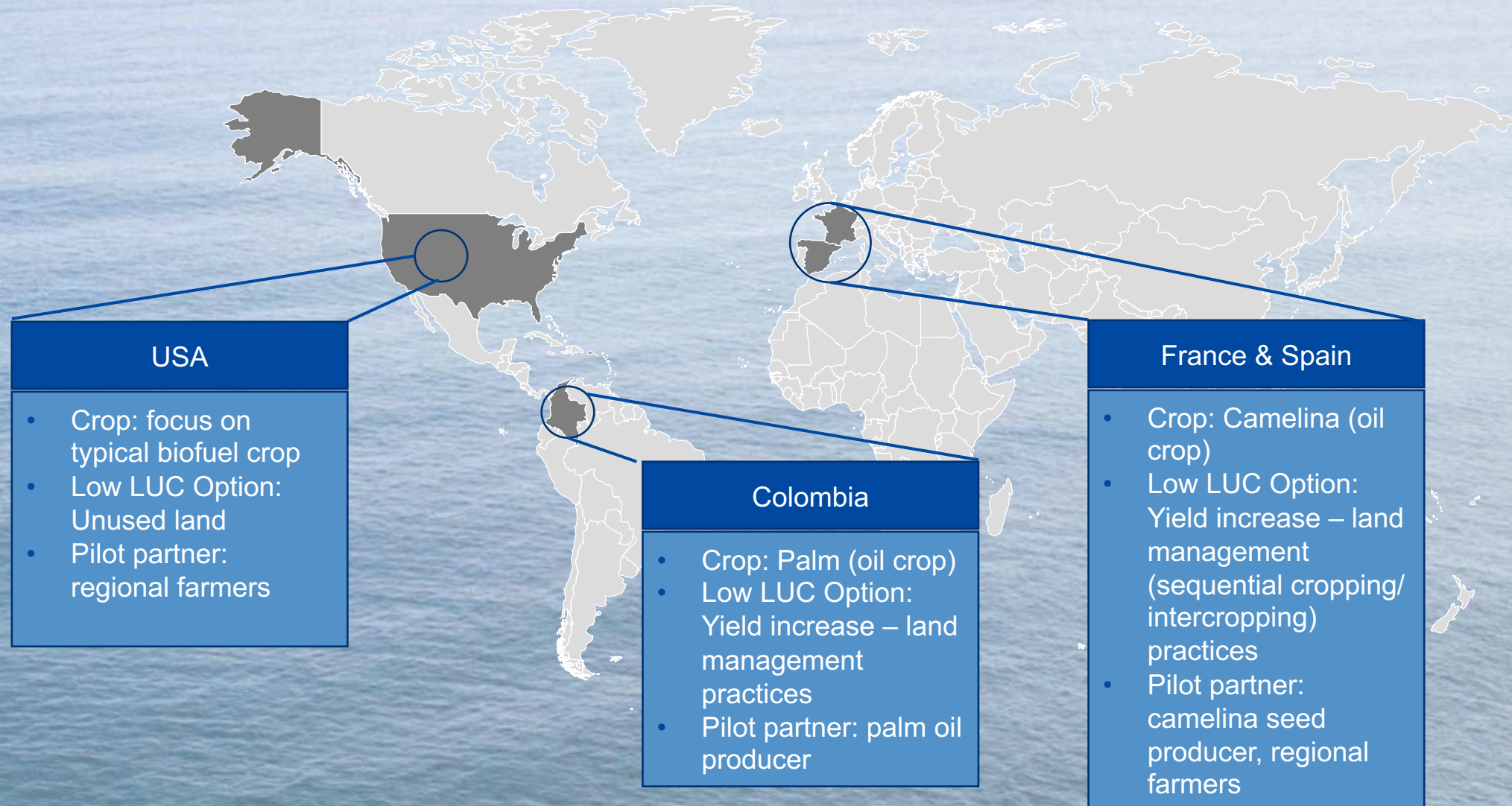


Tallow



Tall oil

Feedstocks with low LUC risk are an option to decarbonize aviation. Different low LUC risk approaches have been tested in ISCC CORSIA pilot audits





ISCC CORSIA Training

19 – 20 January 2022

Online Training Course



Content:

Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) - regulatory framework conditions

Comprehensive information about the ISCC CORSIA and CORSIA PLUS certification systems

ISCC audit requirements, reporting, traceability and chain of custody

Eligible feedstocks and materials

Life cycle assessment and verification

Low LUC risk certification



ISCC offers dedicated and comprehensive CORSIA trainings to facilitate certification

- The trainings provide **detailed insights** into a wide variety of topics around **ISCC CORSIA** and the **certification of CORSIA eligible fuels**
- Both trainings conducted so far counted over **50 participants** each
- **Participation is mandatory for ISCC auditors** who want to conduct ISCC CORSIA or CORSIA PLUS audits
- **More than 40 auditors** from 10 certification bodies have participated so far and **are in the position to conduct CORSIA audits under ISCC**
- The **target audience** also includes feedstock and fuel producers, traders, airlines, airport operators and other interested parties
- The **next training** will take place on 19 and 20 January; registration on the ISCC website is possible [here](#)



ISCC Technical Stakeholder Meeting “Sustainable Aviation Fuels”

18 November 2021

Virtual Meeting
2 – 5 pm (Central European Time)



Content:

Updates on CORSIA and
Regulatory Frameworks

Commercial Deployment of
Sustainable Aviation Fuels

SAF Sustainability Certification in
Practice

Stakeholder Discussions and
Next Steps



NEW: Technical Stakeholder Committee for Sustainable Aviation Fuels

- Following the success of last year's meeting and the growing interest in SAF, **ISCC has decided to set up a Technical Stakeholder Committee**
- The Meeting will take place on **18 November**
- **Topics** will include updates on regulatory frameworks, SAF market ramp-up and SAF sustainability certification
- **Speakers** will include ICAO, the EU COM, airlines, large SAF producers and more
- **Participation** is free of charge; last minute registration is possible on the ISCC website [here](#)



Thank you for your attention!

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