

# **SUSTAINABLE AVIATION FUELS**

## Regulatory Framework and Compliance

9th Athens Conference on European Energy Law and Policy | Panel II – Technological Innovation & Advanced Energy Systems  
12 December 2025 | Dr. Lisa Kappler

# Agenda

Gleiss Lutz



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**Sustainable Aviation Fuel**

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**International Agreements**

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**ReFuelEU-Aviation, Regulation (EU) 2023/2405**

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# Sustainable Aviation Fuel

## Definitions

### CORSIA Eligible Fuel - Definition

#### Sustainable Aviation Fuel (since 1 January 2024)

- Renewable or waste-derived; fulfilling sustainability criteria
- Greenhousegas (GHG) emissions reductions of at least 10%
- Various other goals, e.g.: land/biodiversity conservation, protection of human/labour rights

#### Lower Carbon Aviation Fuel

- Fossil-based aviation fuel
- Includes fossil-fuel and SAFs mixtures
- At least 10% reduction of greenhouse gases



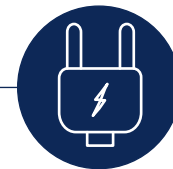
### EU - Definition

#### Sustainable Aviation Fuel

- Article 3 para. 7 of the EU-Regulation 2023/2405:
  - Synthetic aviation fuels
  - Aviation biofuels
  - Recycled carbon aviation fuels

#### Synthetic aviation fuels

- Renewable fuels made from non-biological material

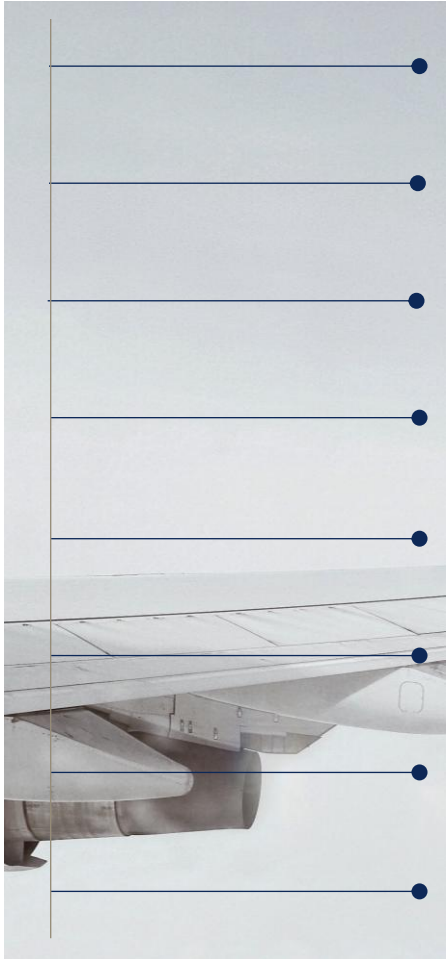


# International Agreements

**C** Carbon  
**O** Offsetting  
and  
**R** Reduction  
**S** Scheme  
for  
**I** International  
**A** Aviation

- The Carbon Offsetting and Reduction Scheme for International Aviation (**CORSIA**) was adopted in 2018 by the International Civil Aviation Organisation (ICAO) to reduce aviation greenhouse gas emissions
  - Aim to achieve carbon-neutral growth in the aviation sector from 2020 and climate neutrality by 2050
  - 65% of emissions ought to be eliminated through the use of SAFs
- From 2021-2026 voluntary participation, from 2027 mandatory participation for all UN member states
- Implementation of reporting duties
  - Applies to all airline operators with annual emissions >10.000 tons of CO<sub>2</sub>
- Implementation of offsetting mechanisms
  - Applicable to all flights in between party states

# ReFuelEU-Aviation, Regulation (EU) 2023/2405 (1/3)

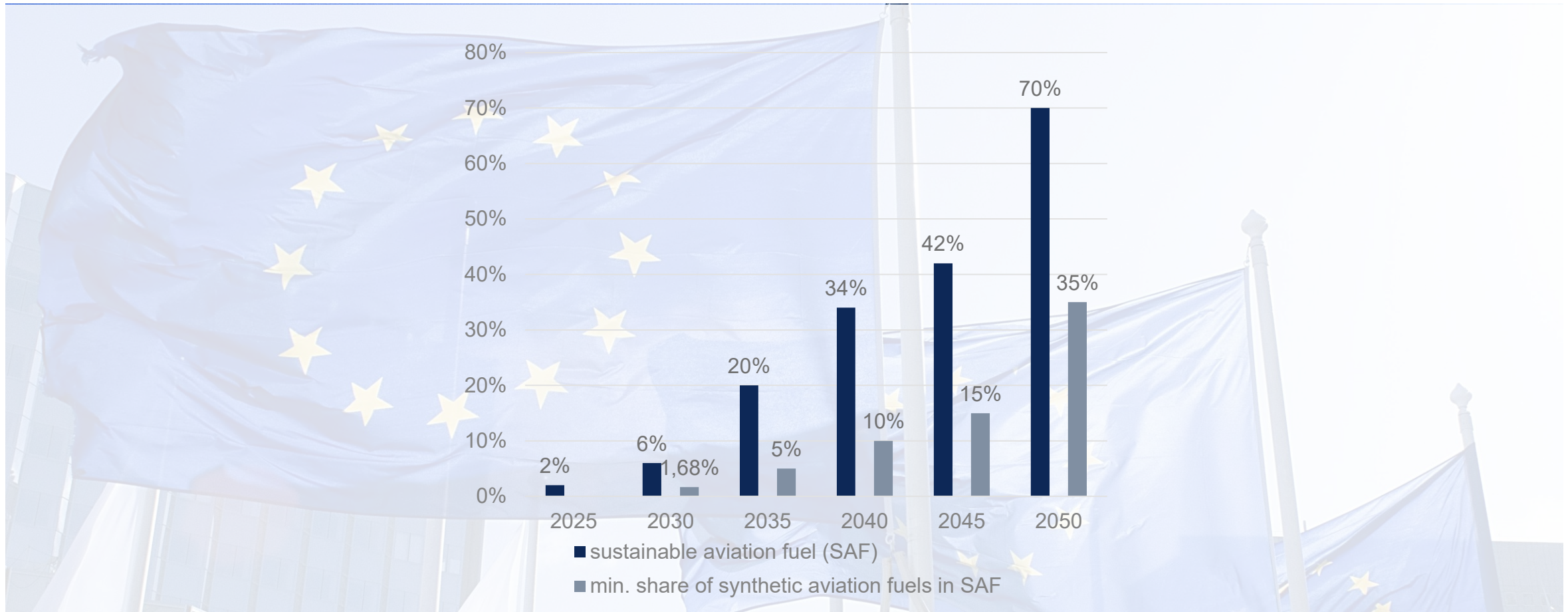


- The ReFuelEU-Aviation Regulation entered into force on 1 January 2025 as part of the European Green Deal
- Legislative aim: decreasing carbon footprint of aviation sector and developing industry for sustainable aviation fuels
- It sets **mandatory requirements** for the use of SAF – not only incentives like CORSIA
- Establishing **minimum SAF blending requirements** for aviation fuel suppliers (Art. 4 para. 1 subpara. 1 + Annex I) – **see next slide**
- **Refueling obligation** for aircraft operators in the Union (Art. 5)
- **Obligation** of airport managing body to facilitate the access to SAF (Art. 6)
- Enforcement of rules on penalties applicable to infringements of Art. 4 - 6 (Art. 12)
- **Since 2025:** EU label for the environmental performance of flights



# ReFuelEU-Aviation, Regulation (EU) 2023/2405 (2/3)

SAF blending requirements, Art. 4 para. 1 subpara. 1 and Annex I



# ReFuelEU-Aviation, Regulation (EU) 2023/2405 (3/3)

Market status 2024/2025 - EASA ReFuelEU Aviation Annual Technical Report

**0.6 %**

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of aviation fuel supplied to  
Union Airports in 2024 was  
SAF = 192.7 kt  
but 99 % were supplied to  
airports in only 5 member  
states

**98 %**

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of this SAF supply to Union  
airports consisted of „aviation  
biofuels“, with 81 % derived  
from used cooking oil as  
feedstock

**91 %**

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of GHG emission savings with  
SAF supply compared to  
conventional jet fuel

# Flanking EU instruments

## EU-ETS

- Since 2012, airlines must monitor, report and verify CO<sub>2</sub> emissions and surrender allowances under the European Emission Trading Scheme
- More ambitious than CORSIA due to higher carbon pricing
- Applies only to flights within the EEA, to Switzerland and the UK
- By 2026, aviation allowances will only be allocated by auctioning (phasing out of free allowances)

## Energy Taxation Directive

- No revision since 2003
- Proposal of the Commission to revise and align the current taxation of energy products with EU energy and climate politics
- Fossil fuels used as fuel for **intra-EU air transport** shall **no longer be fully exempt** from energy taxation
- The adoption requires unanimity in the Council, but the member states are currently unable to reach an agreement

## Renewable Energy Directive III

- Binding Union requiring that by 2030, at least 42.5 % of the Union's gross final consumption of energy must come from renewable sources
- Fuel suppliers must ensure a share of 29% renewable energy in transport fuels by 2030
- RED III underscores the future importance of advanced biofuels and PtL-fuels in aviation decarbonization



# Certification

## ISCC and RSB

### INTERNATIONAL SUSTAINABILITY AND CARBON CERTIFICATION (ISCC)

- Global certification system ensuring sustainable production of renewable resources and fuels
- Verifies compliance with environmental, social, and economic sustainability criteria, including GHG savings, traceability, and chain of custody
- Different certification systems for different markets:
  - ISCC CORSIA, ISCC CORSIA PLUS: specifically for SAF, comply with CORSIA requirements
  - ISCC EU: complies with criteria set by RED III
  - ISCC PLUS: applicable outside of the EU

### ROUNDTABLE ON SUSTAINABLE BIOMATERIAL (RSB)

- Most stringent certification system for sustainable biofuels and biomaterials, exceeding EU RED III and ICAO CORSIA requirements
- Standards cover a broad range of sustainability issues, including land rights, food security, labor rights, and environmental protection like soil, water, and air quality
- Different certification systems for different markets:
  - RSB Global Fuel: for fuels produced worldwide
  - RSB EU RED Fuel: for fuels produced in the EU
  - RSB CORSIA: specifically for SAF




# Key Messages

1



**SAF is the primary lever to decarbonize the aviation sector**

2



**Global agreements like CORSIA and binding European requirements for SAF use aiming to achieve climate neutrality by 2050**

3



**Certification schemes ensure sustainable fuel production, fines ensure compliance.**



**DR. LISA KAPPLER**  
ASSOCIATED PARTNER

Lautenschlagerstrasse 21  
70173 Stuttgart

T: +49 711 8997-4978

M: +49 172 7104506

E: [lisa.kappler@gleisslutz.com](mailto:lisa.kappler@gleisslutz.com)

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