

The background of the slide is a composite image. On the left, a tall, modern building with a grid-like facade of windows rises vertically. In the center, a white commercial airplane is shown in flight against a clear blue sky. On the right, there are green, leafy tree branches reaching into the frame from the top and bottom.

CENA SAF-Outlook 2025-2030: Volumes, Technologies and Markets for Sustainable Aviation Fuels

Léonie Lauer

Recent Progress in SAF Research
Monitoring of SAF R&D,
demonstration projects and production deployment

03.12.2025

Agenda

1 About CENA Hessen

2 Development of SAF production volumes

3 Attainability of EU quotas

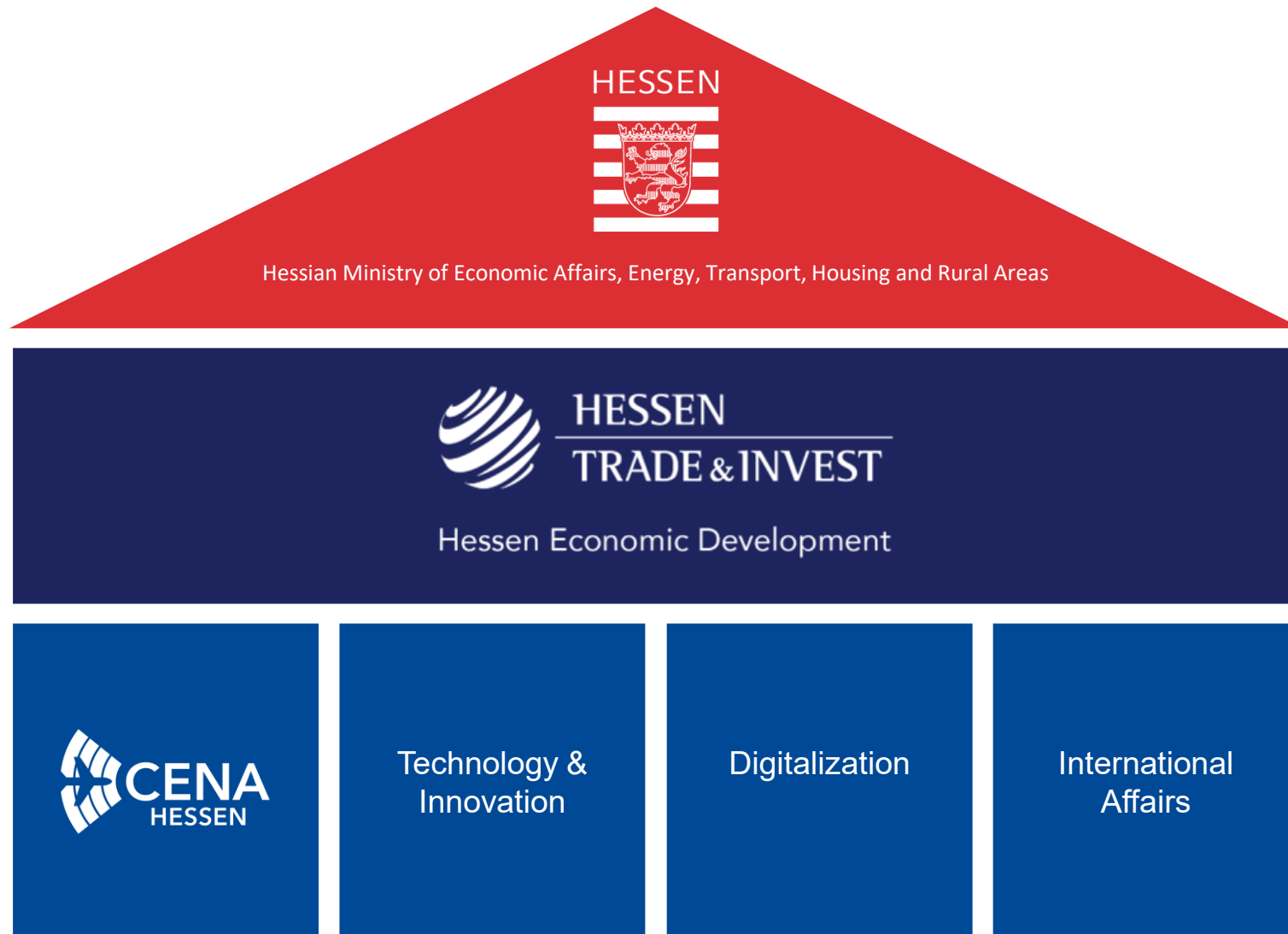


1 | About CENA Hessen



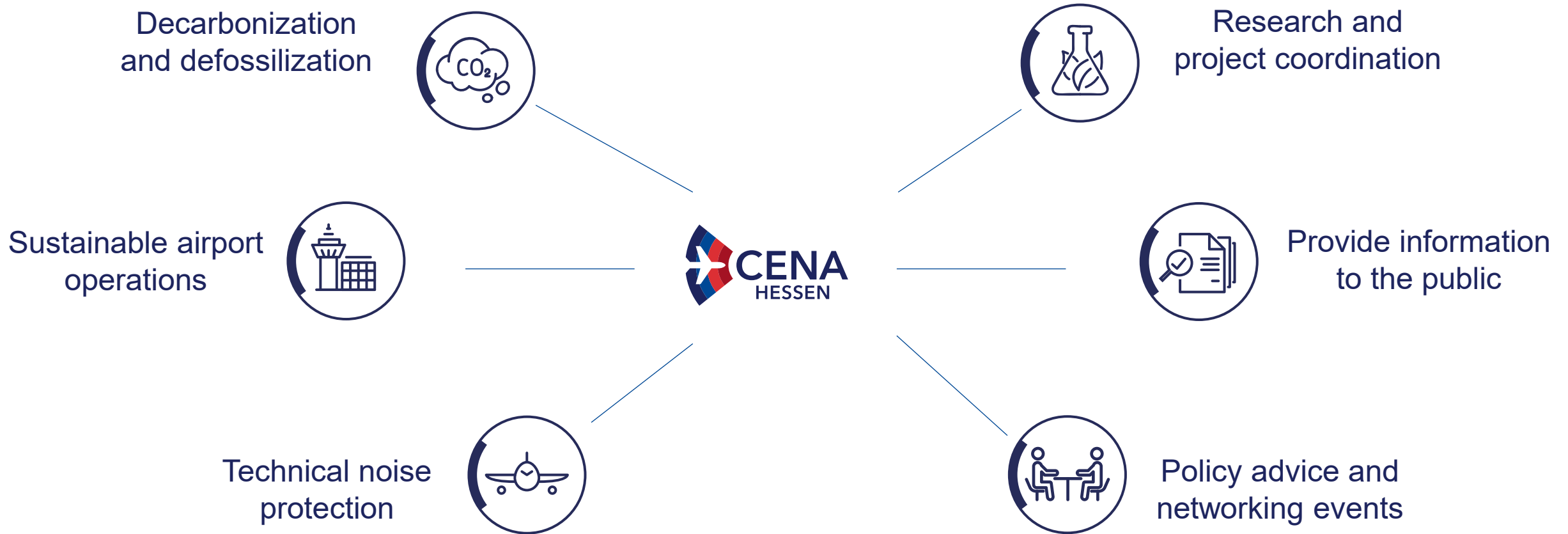
The Competence Center of Hessen Trade & Invest

CENA Hessen



A catalyst for innovation in aviation

Research center & policy advice



2 | Development of SAF production volumes



CENA SAF-Outlook 2025-2030

Yearly analysis of volumes, technologies and markets for Sustainable Aviation Fuels

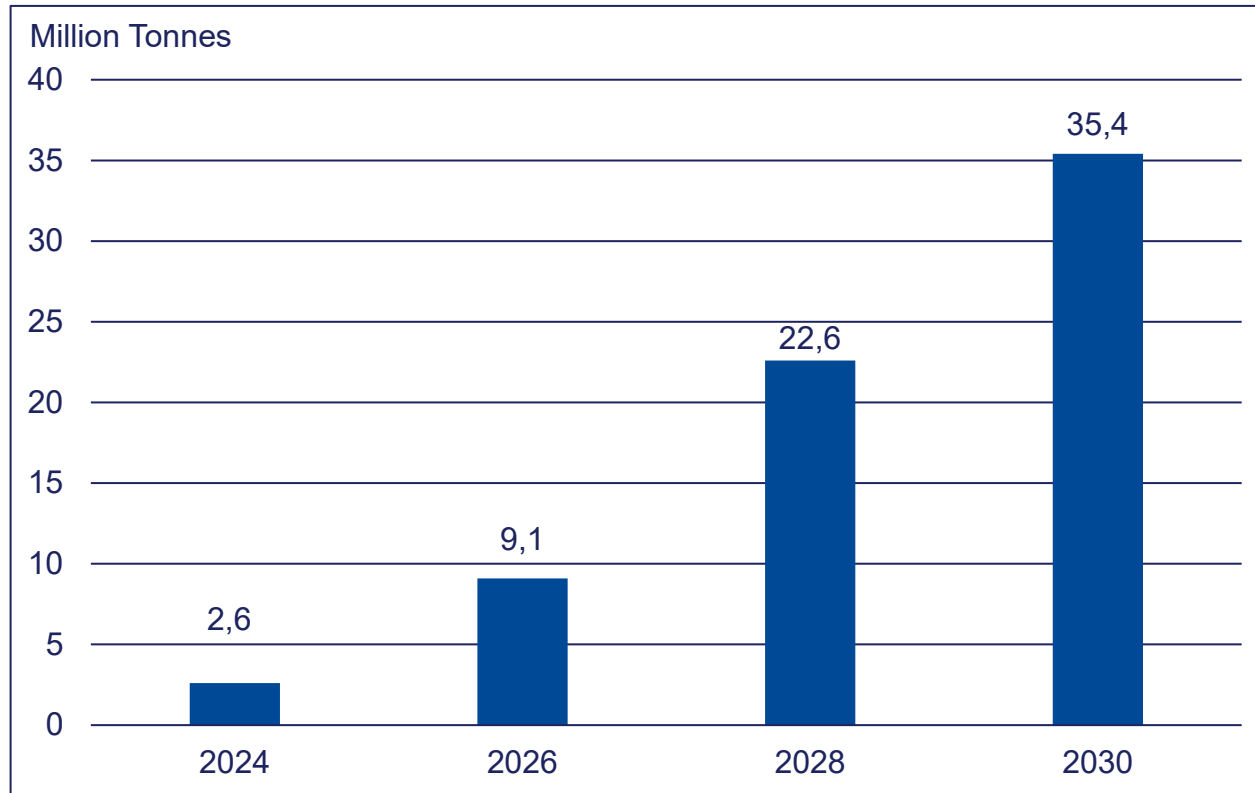
- Production volumes
- Types of SAF
- Status of projects
- Feasibility of the ReFuelEU Aviation quota
- SAF demand versus domestic production



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Around 35 MT SAF announced worldwide for 2030

Announced SAF production volumes worldwide for 2024 to 2030



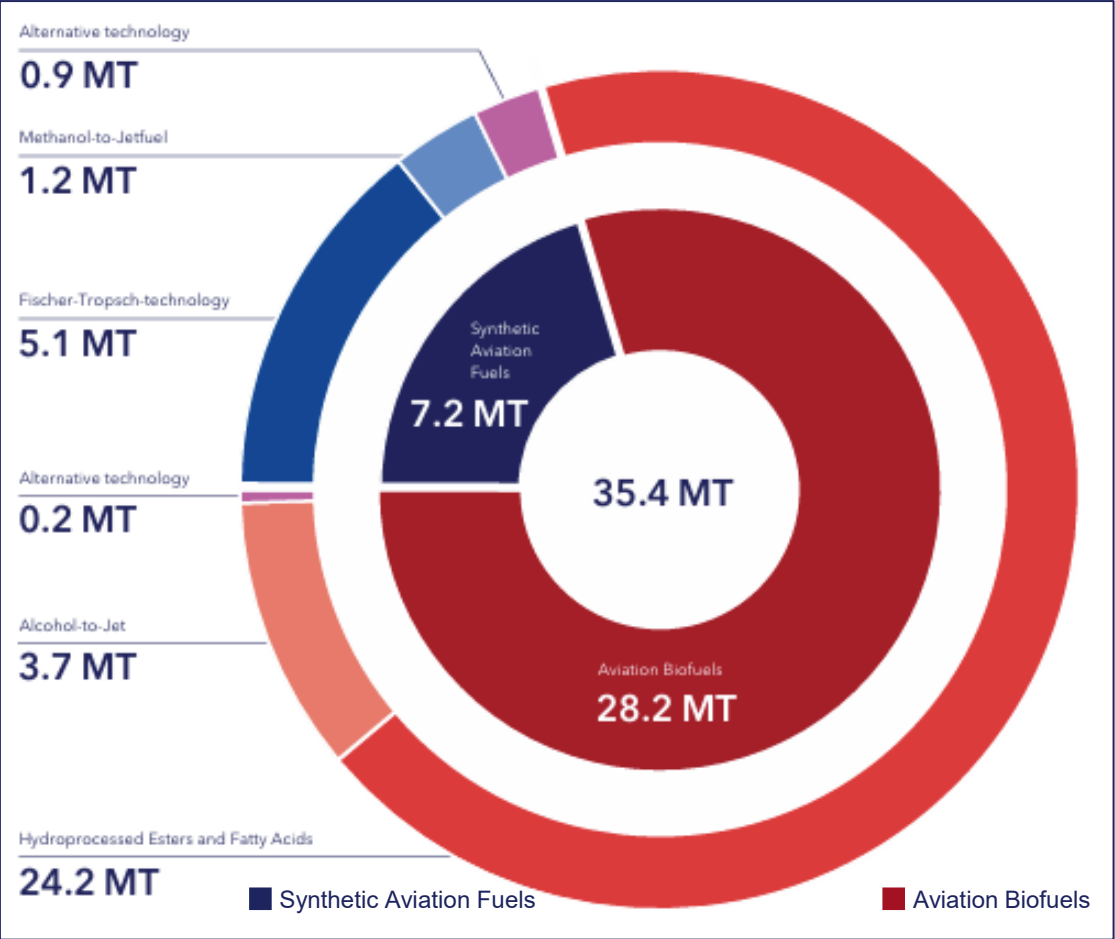
Source: CENA SAF-Outlook 2025

- 265 SAF projects worldwide
- One-third of projects in Germany or the US
- Development of forecast volumes compared to SAF Outlook 2024: +5.4 MT
 - Asia: +3 MT
 - North and South America: +2 MT each
 - Europe: -1.5 MT

80% of the announced SAF volumes are biofuels

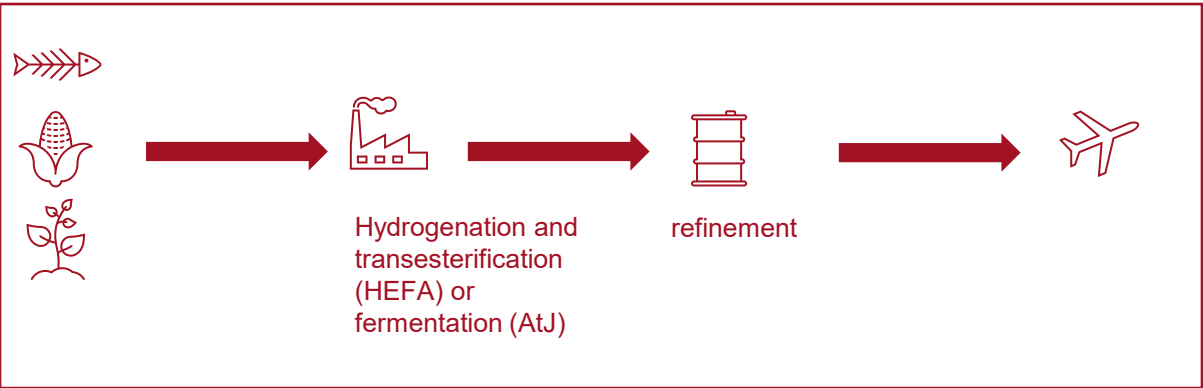
Announced production volume by technology for 2030

Announced production volume by technology in 2030

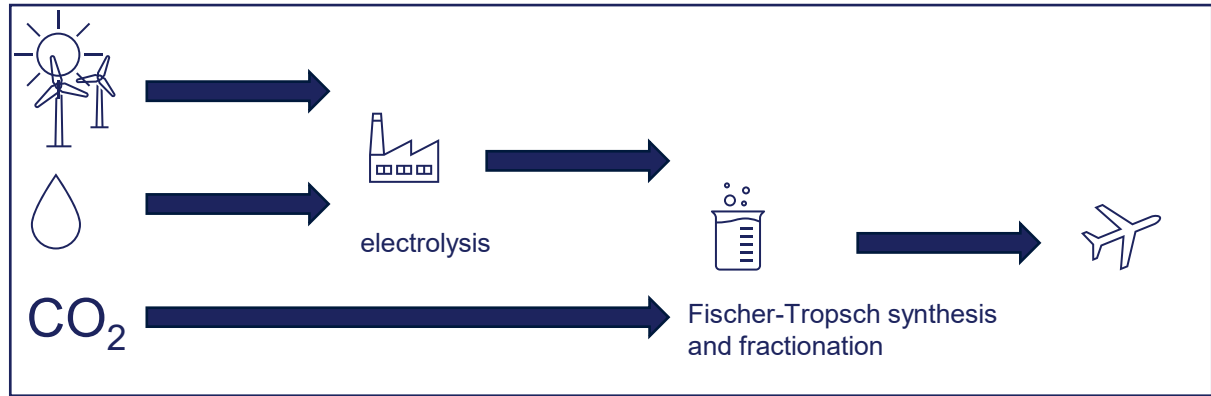


Source: CENA SAF-Outlook 2025

Aviation Biofuels

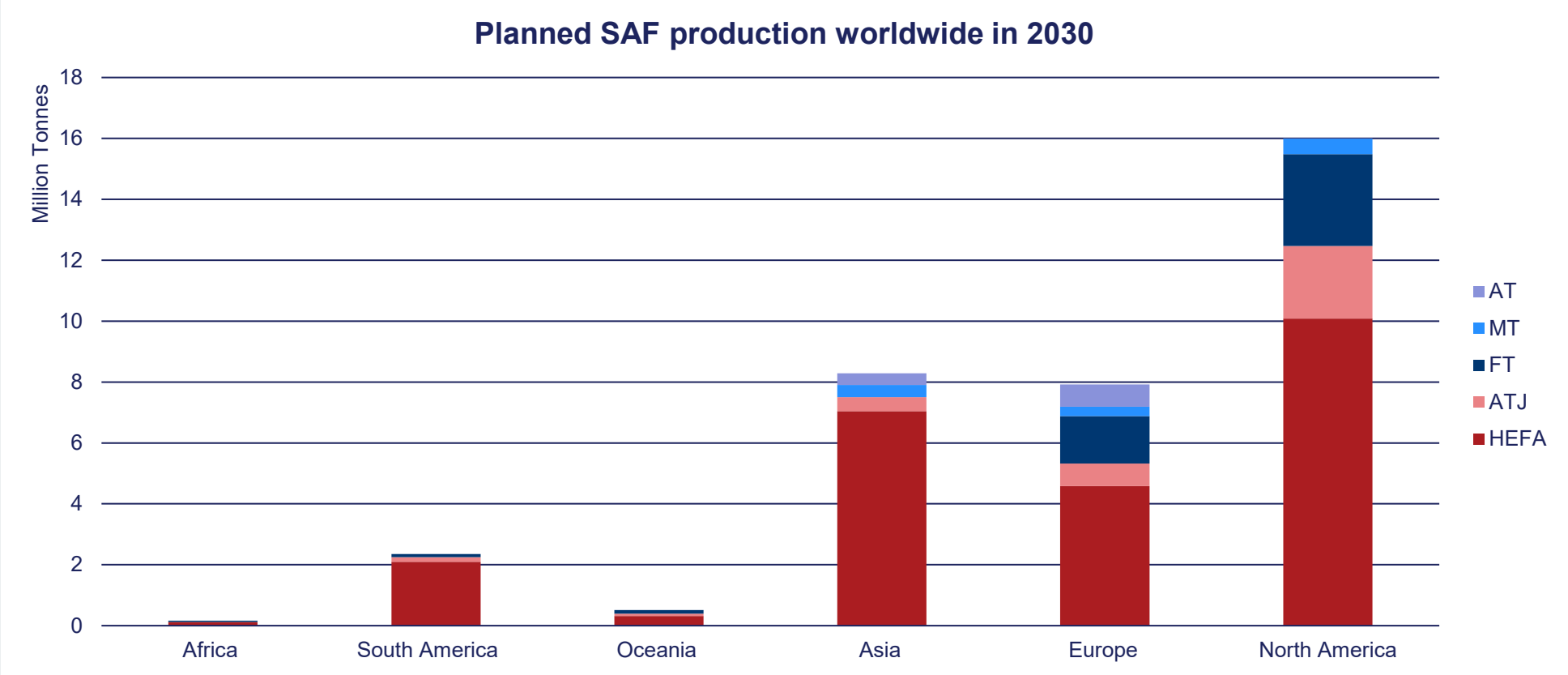


Synthetic Aviation Fuels (e-Fuels)



Biofuels dominant, e-fuels strong in America and Europe

Around 45% of SAF production in North America by 2030

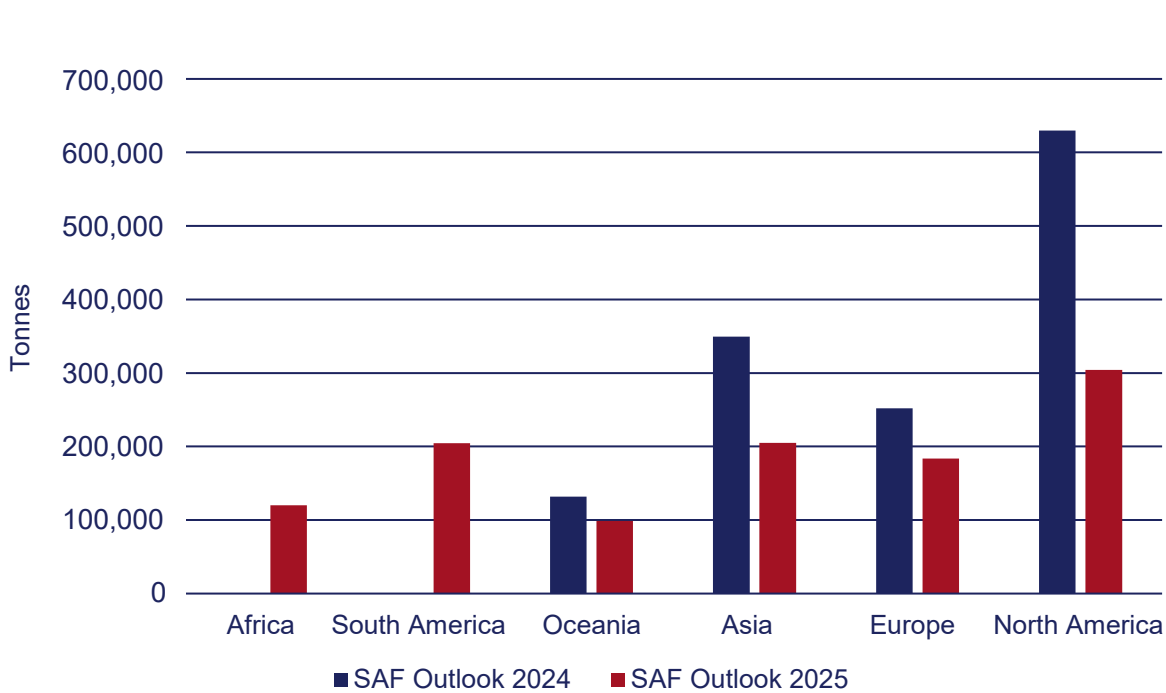


Source: CENA Hessen

More projects – but smaller plants

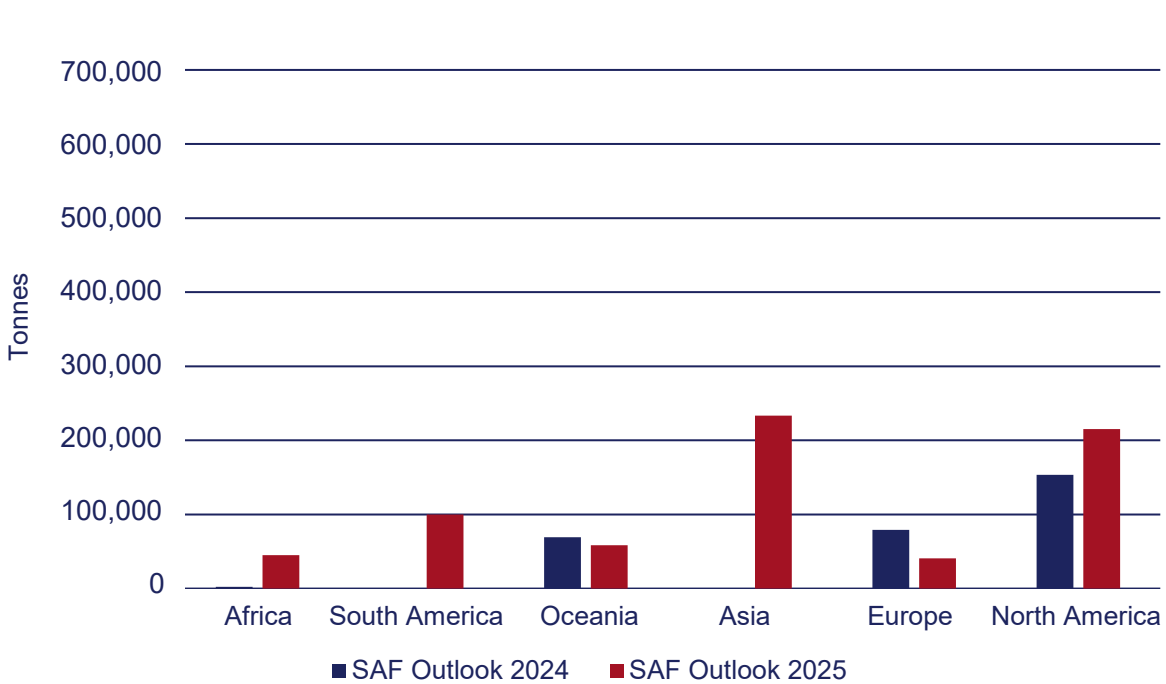
Development of average project size for 2030

Bio-SAF



Source: CENA Hessen

e-SAF



Source: CENA Hessen

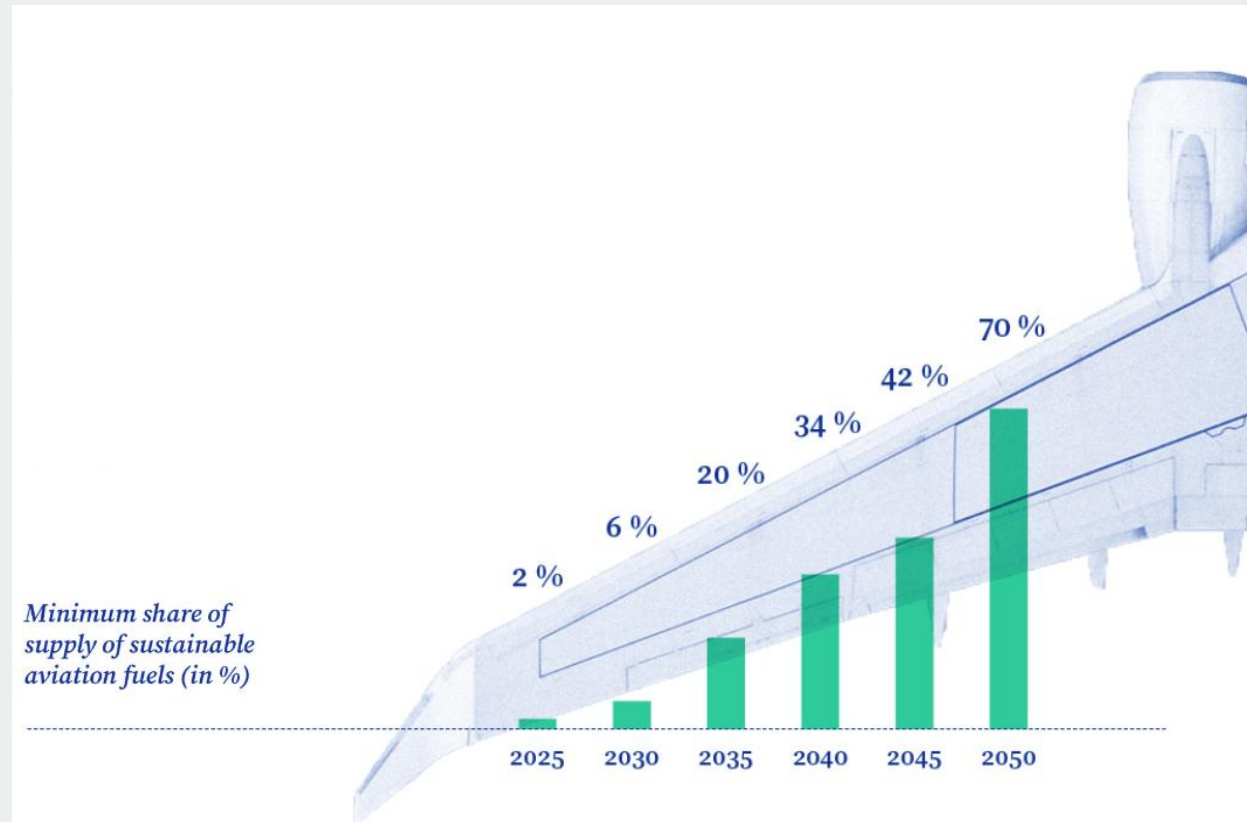
3 | Attainability of EU quotas



RefuelEU Aviation

Climate policy targets for decarbonizing aviation

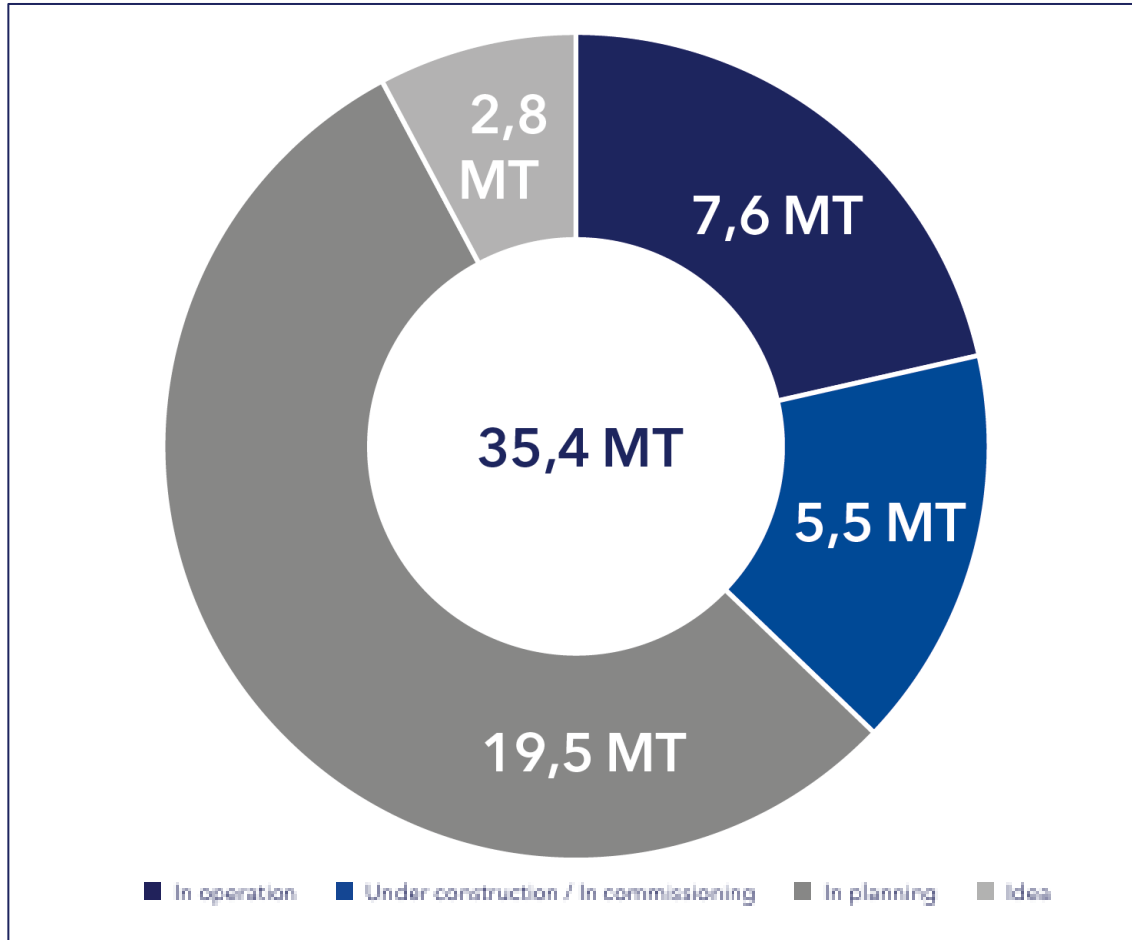
- **SAF quota from 2025:** Aviation fuel suppliers are obliged to blend the prescribed proportion of SAF into the total aviation fuel at airports. In Germany, these include BP, Shell, OMV, TOTALENERGIES, VARO, etc.
- **Anti-tankering rule:** At least 90% of an aircraft operator's annual aviation fuel requirements must be refueled at an airport within the EU each year.
- **Flexibility mechanism:** Until 2034, aviation fuel suppliers may calculate the blended SAF share as a weighted average of the total aviation fuel they supplied at airports in the Union during the reporting period.



Source: <https://www.consilium.europa.eu/en/infographics/fit-for-55-refueleu-and-fueleu/>

37% of quantities from projects with high development status

Announced production volume by project status in 2030

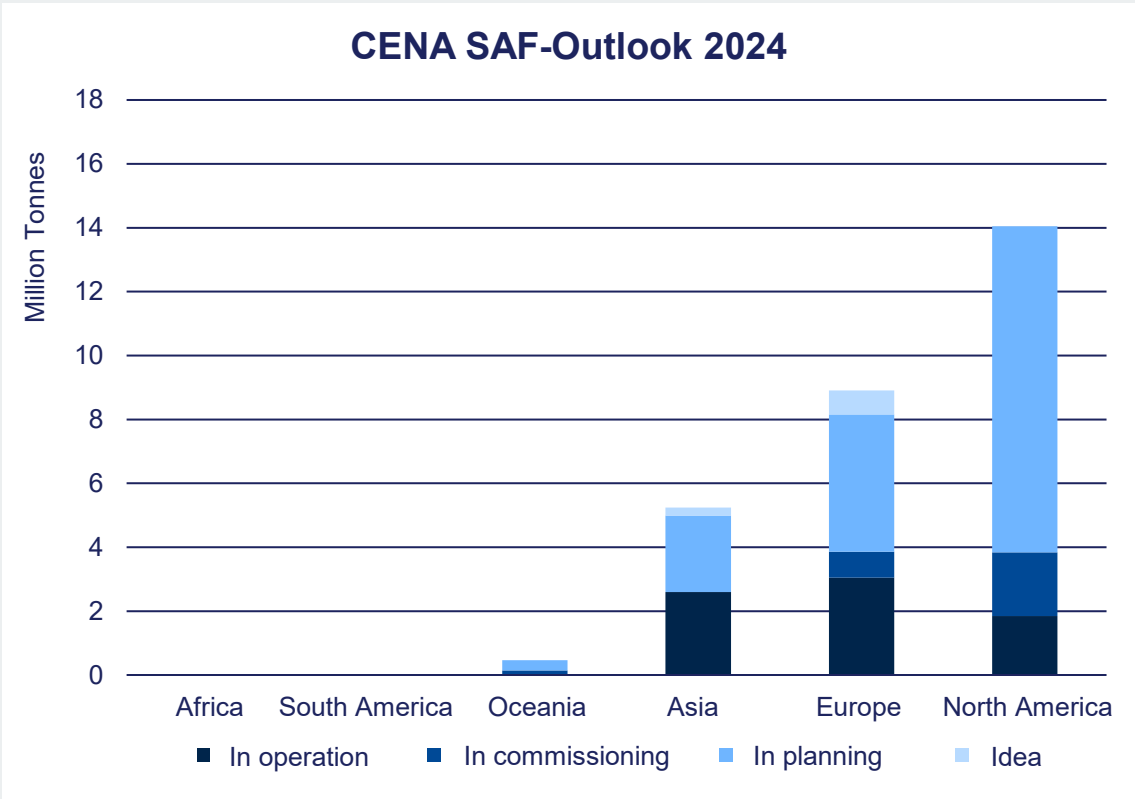


Source: CENA SAF-Outlook 2025

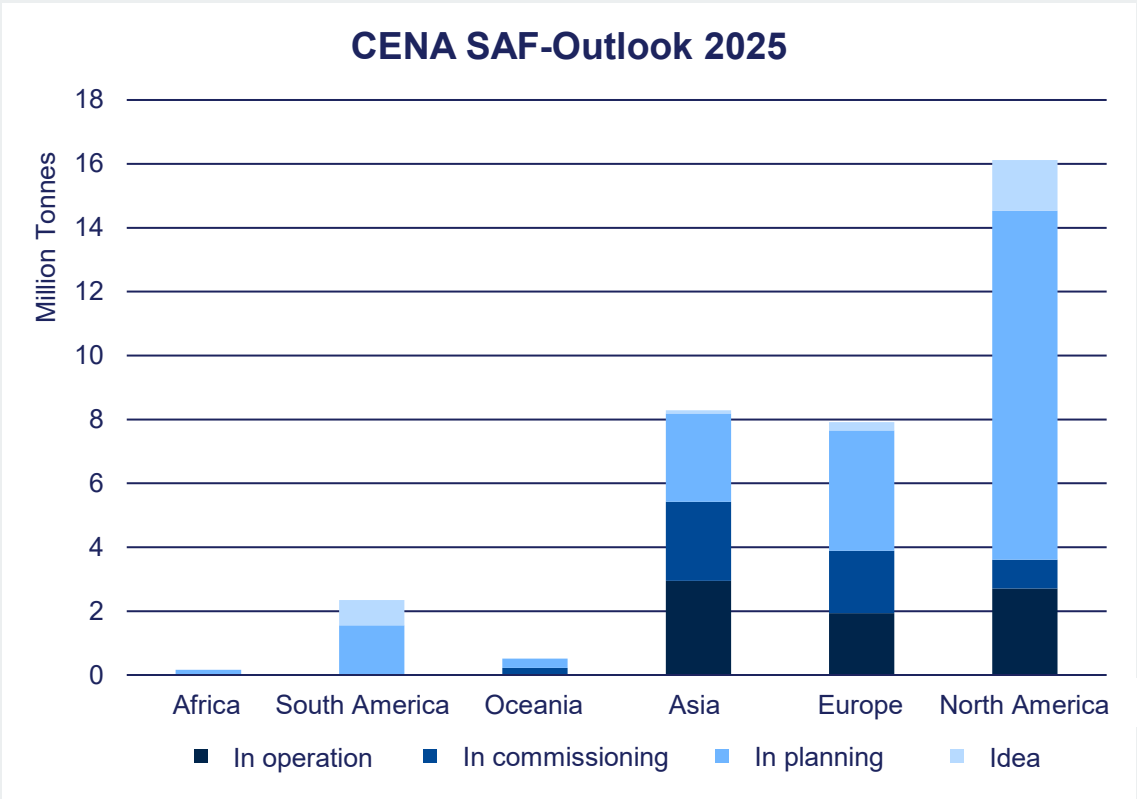
Global project development positive, but declining in Europe



Project status development for 2030



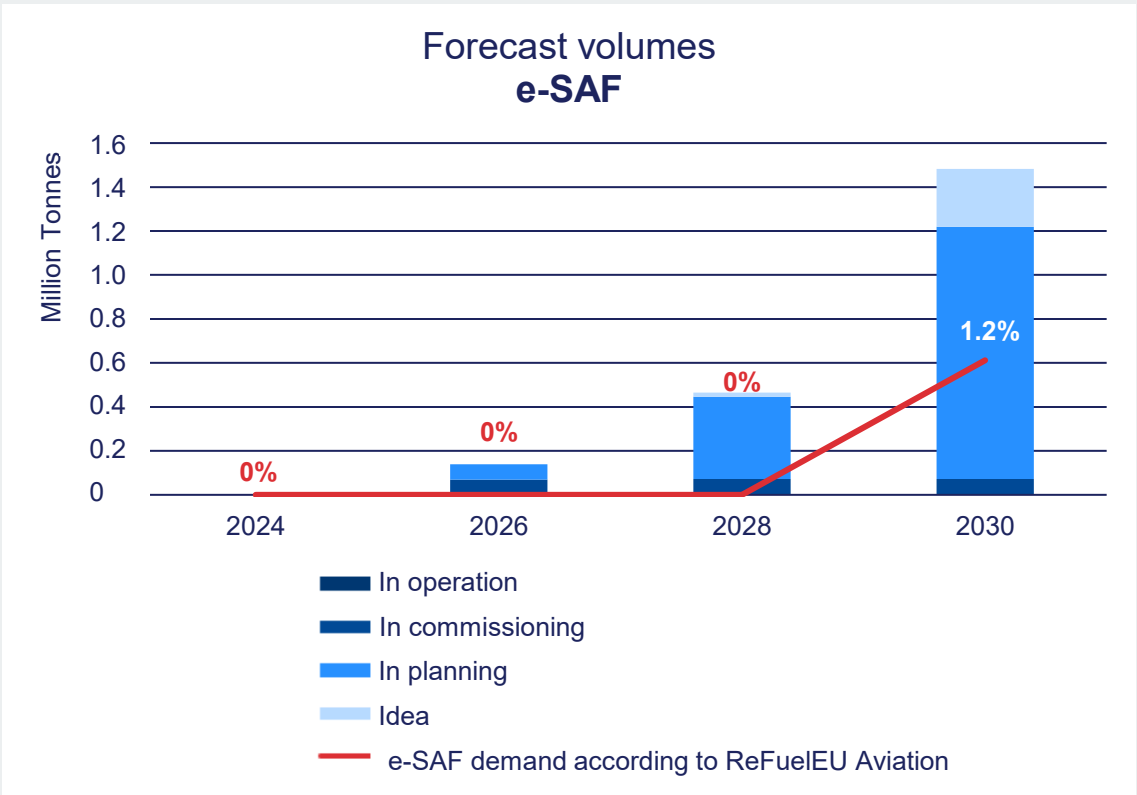
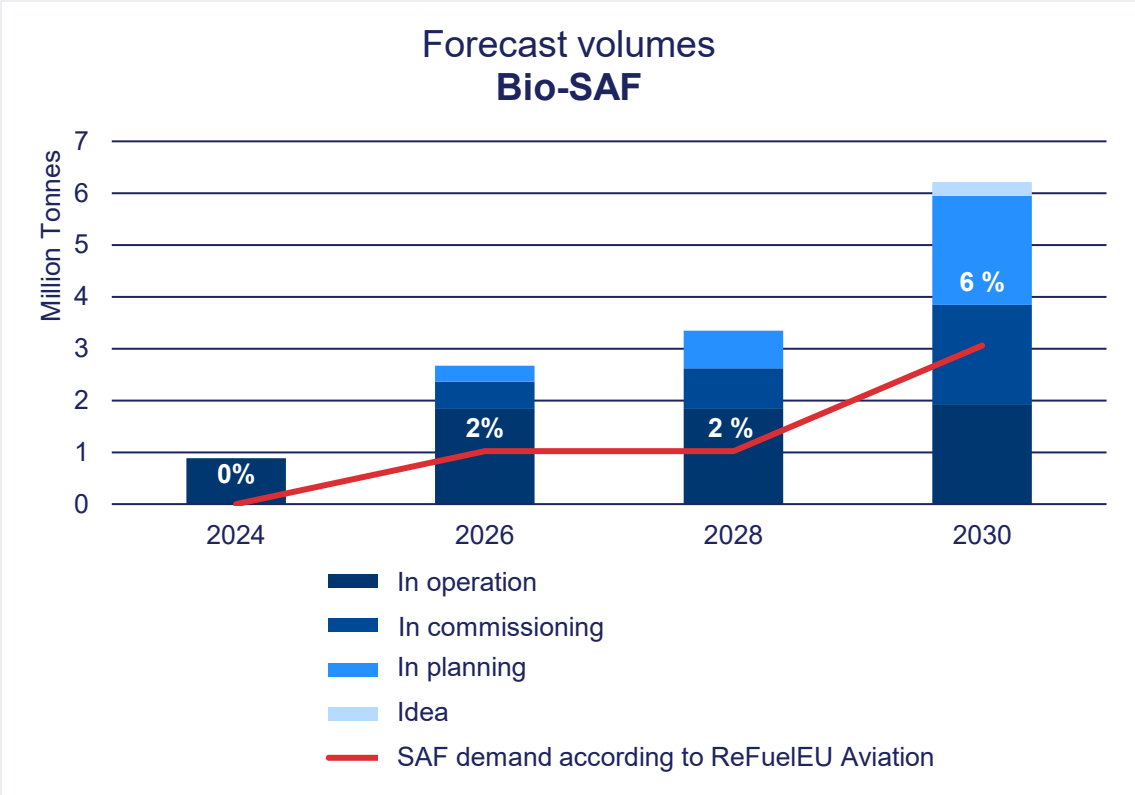
Source: CENA Hessen



Source: CENA Hessen

EU quota achievable through biofuels, e-SAF not guaranteed

ReFuelEU Aviation SAF quotas in the context of production capacity within the EU



Demand based on European SAF and sub-quota, assuming an annual aviation fuel demand of 51 million tonnes

Thank you.

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