



Unlocking efuels

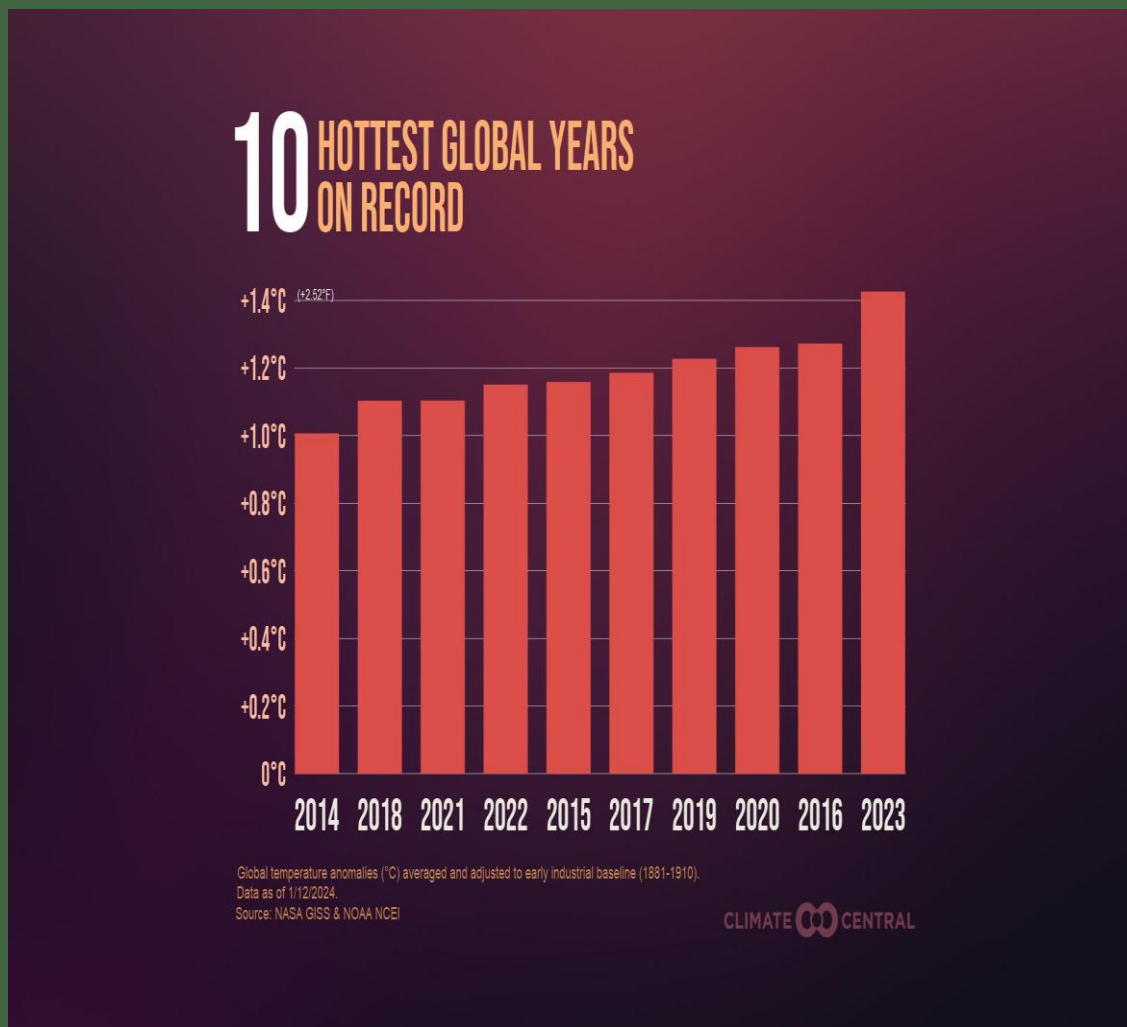
SAF Investor Conference

London, UK

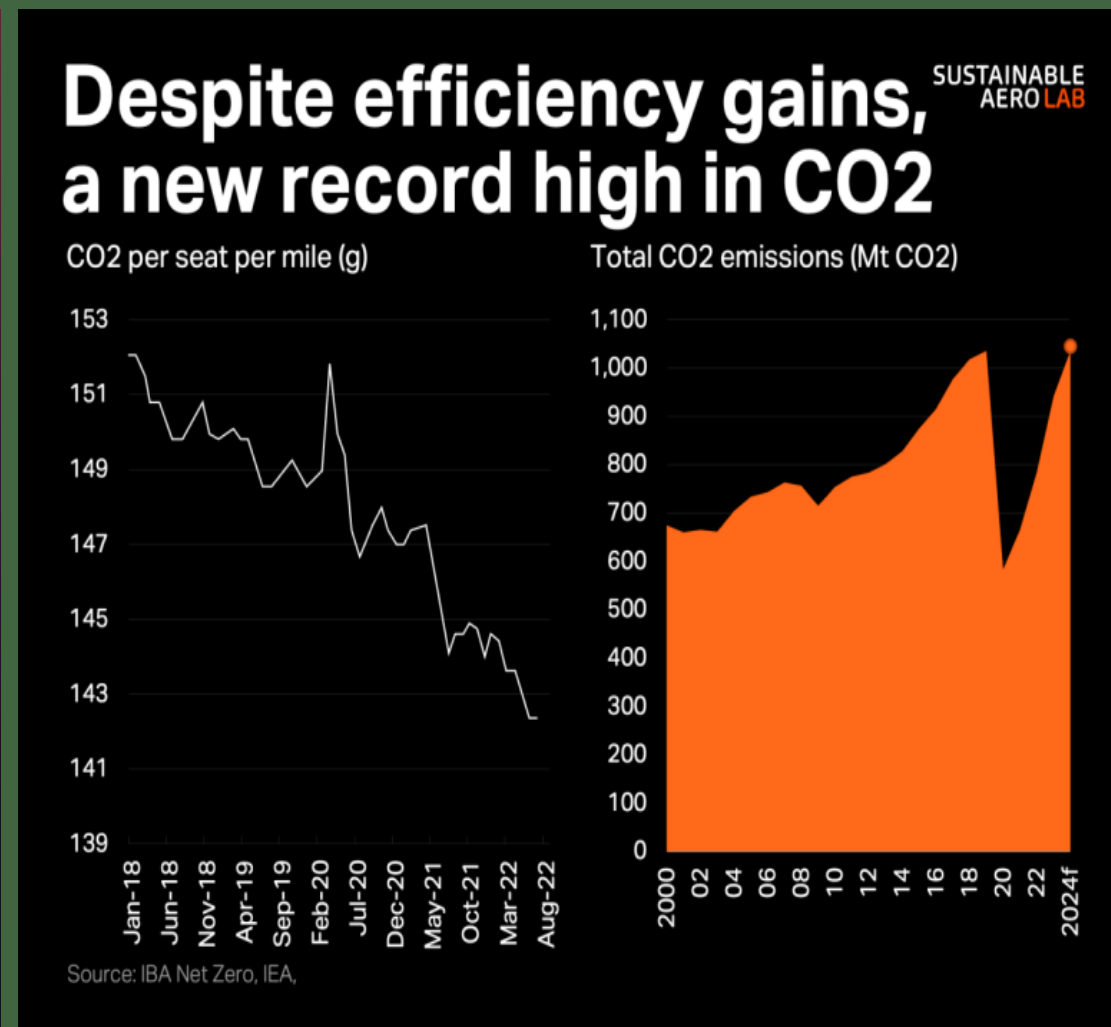
February 28th, 2024



2023 was the world's warmest year on record by far ...aviation emissions surpassed pre-pandemic levels

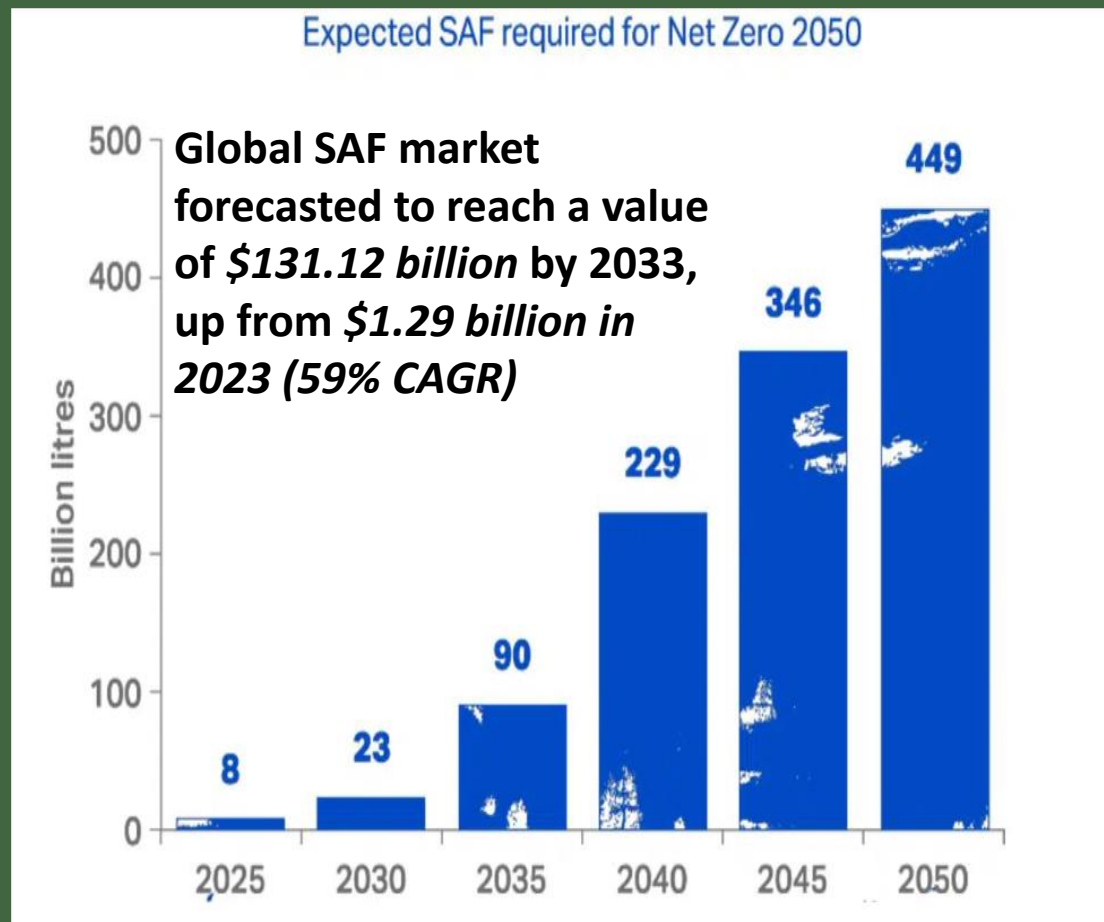


Source: Climate Central, 2023-: Earth's Hottest Year on Record

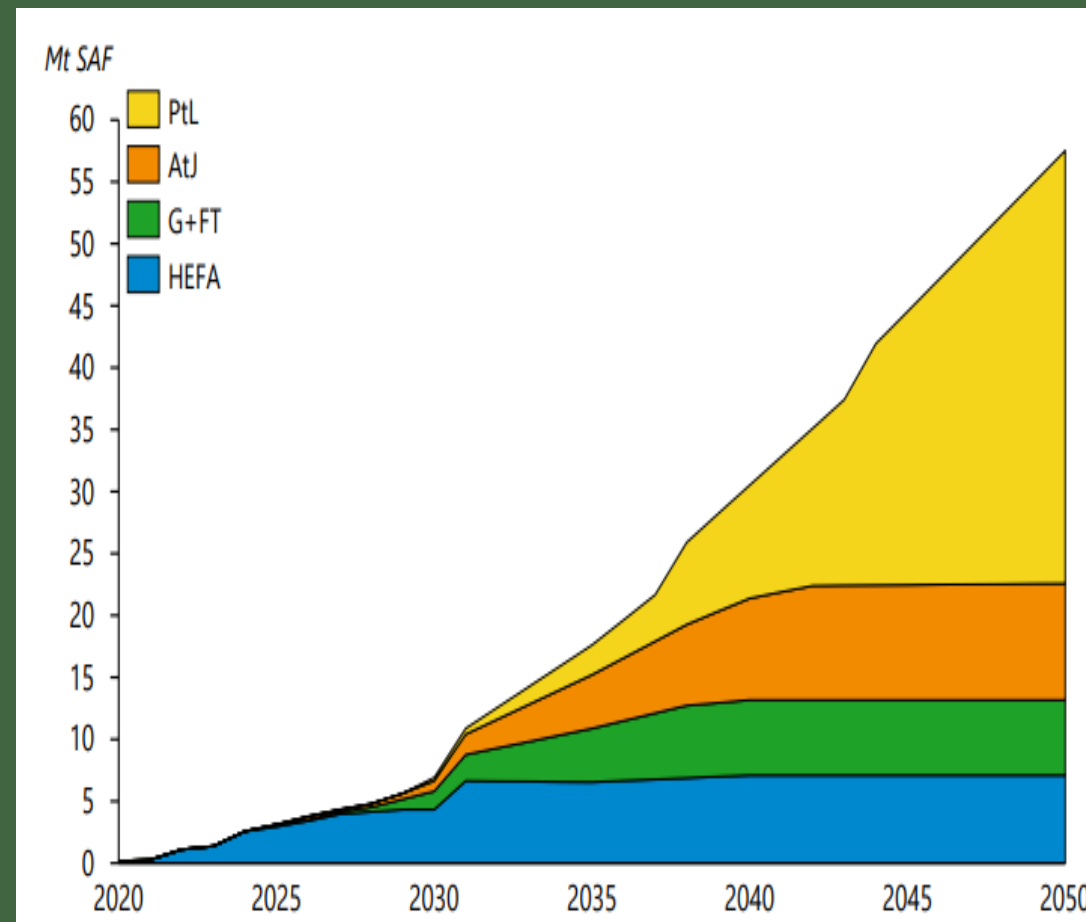


Source: Sustainable Aero Lab SAF Offtake Volume, A Key Metric Unveiling Airlines' Net-Zero Ambitions?

SAF & efuels are the solution for aviation



Source: IATA



Source: SkyNRG SAF Market Outlook

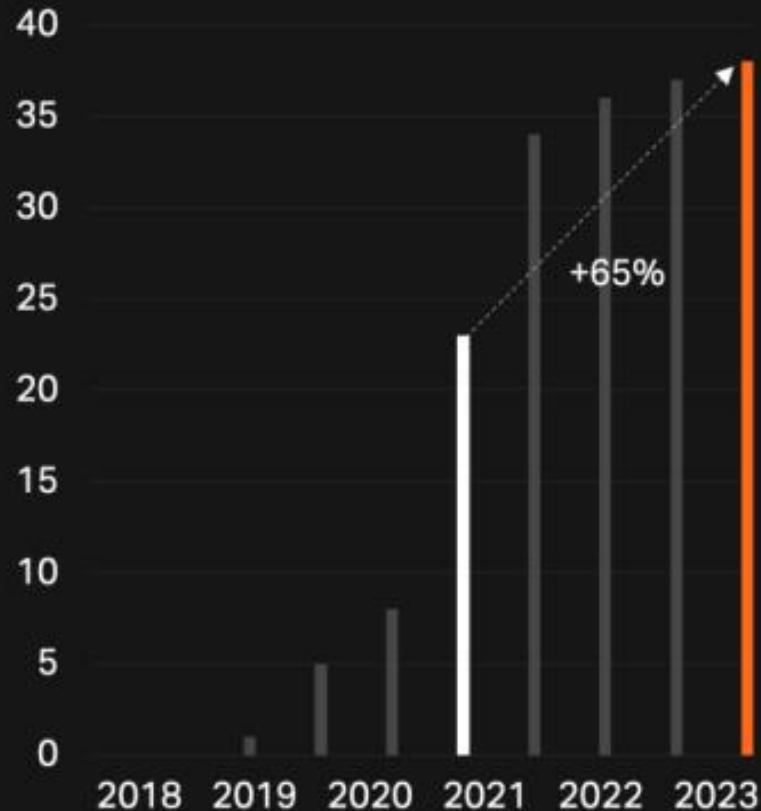
...but potential needs to be unlocked

More climate talk than action in aviation

SUSTAINABLE
AERO LAB

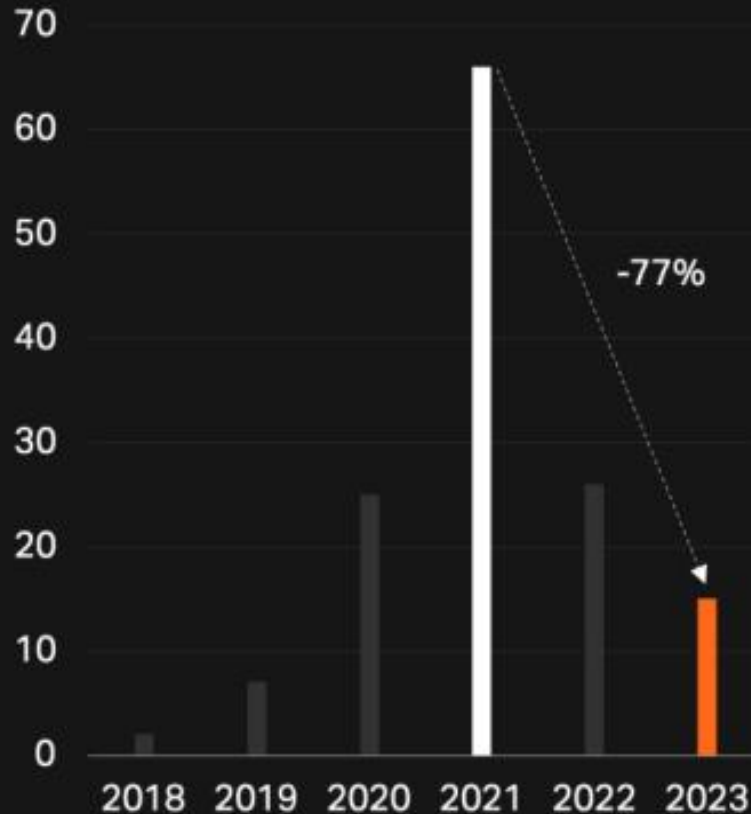
TALK

of publicly announced net-zero commitments by major airlines



ACTION

of actual sustainability projects launched by major airlines



Source: Nat Bullard, BloombergNEF, ICAO

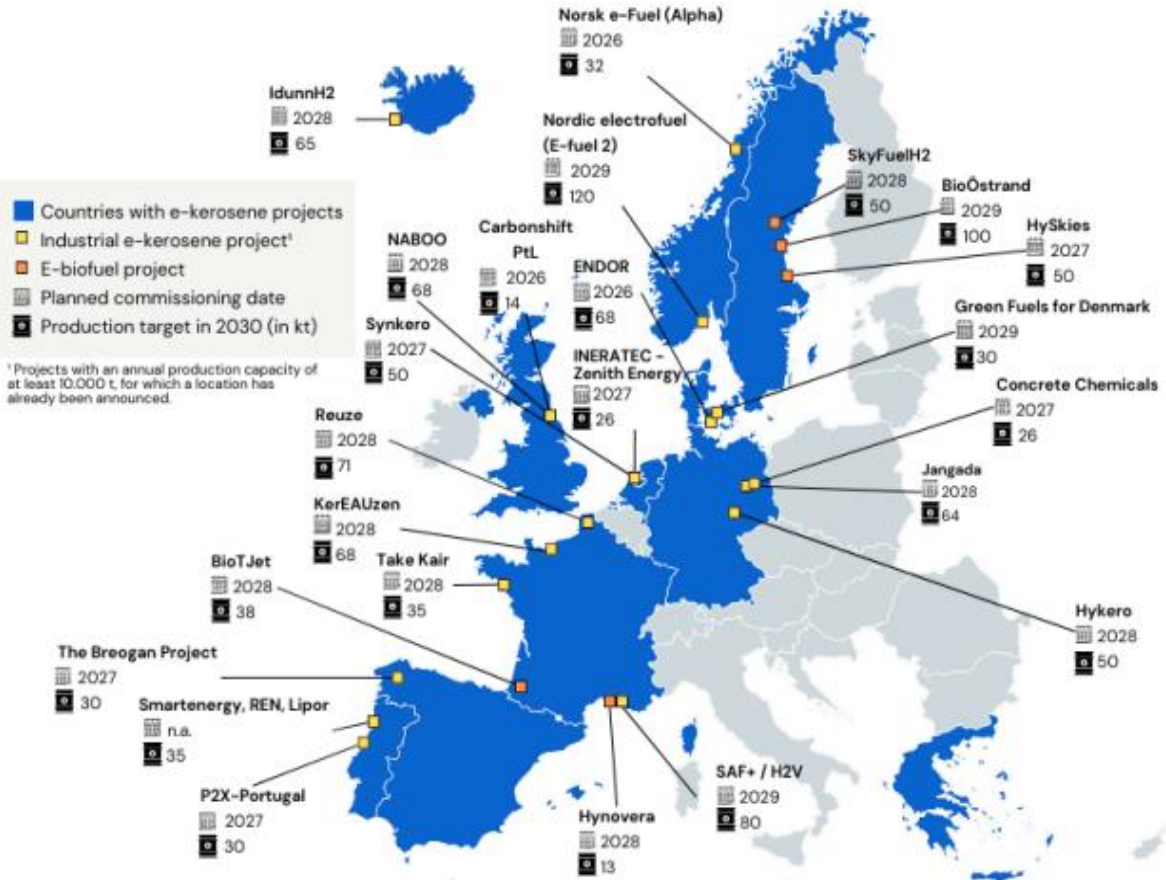
Source: Sustainable Aero Lab SAF Offtake Volume, A Key Metric Unveiling Airlines' Net-Zero Ambitions?



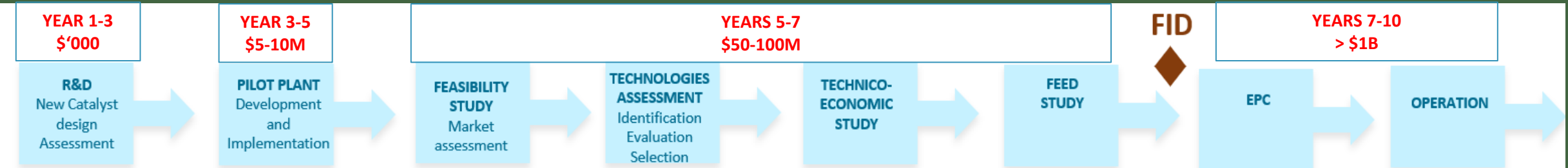
'Build back better, blah, blah, blah'

45 announced e-fuel projects in EU... zero @ FID

SAF INVESTOR



Source: Transport & Environment, The challenges of scaling up e-kerosene production in Europe



Lufthansa Says Green Fuel Would Eat Up Half German Electricity



Deutsche Lufthansa aircraft. Photographer: Michaela Rehle/
Bloomberg

By William Wilkes + **Get Alerts**

September 25, 2023 11:38 AM

Germany's biggest airline would consume half of the country's entire electricity production to switch its fleet to green fuels like e-kerosene, according to Deutsche Lufthansa AG, underscoring the challenge in reducing emissions from air transport.



Government policies critical to support e-SAF

- Governments need to accelerate renewable energy projects for all sectors of society
- Renewable energy and H₂ should be prioritized for aviation (and maritime) over sectors that have other decarbonization options (ex. road transport)
- e-SAF should be part of decarbonization plans and strategies (ex. NZIA)
- Critical to set aggressive e-SAF targets (ex. in EU before 2030)
- Funding and incentives are greatly needed

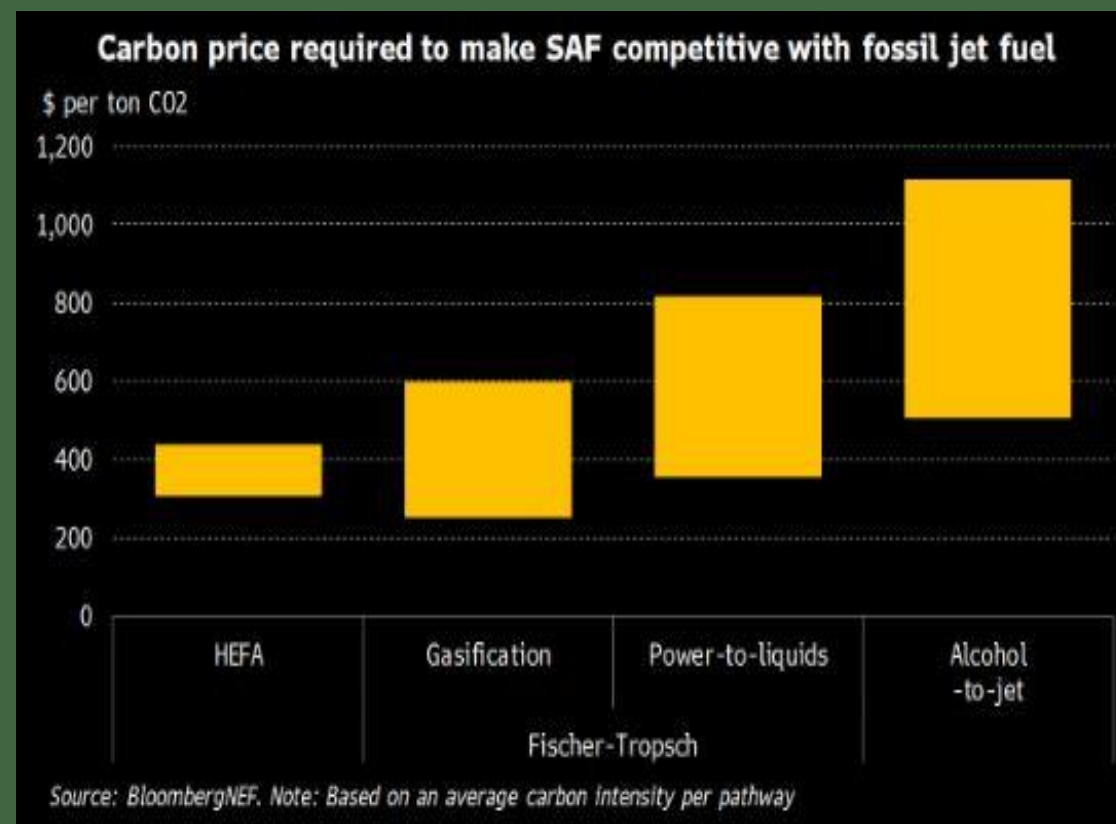
Cost differential of eSAF needs to be reduced to be competitive with fossil fuel and biofuel



Different financial instruments can be used to de-risk first plants:

- Contract for differences (CfD)
- Financial incentives such as SAF allowances
- Loan guarantees (backstops)
- Improved mechanisms to account for the real cost of jet fuel emissions fuel (taxes, higher carbon prices, etc.)

Sustainable Jet Fuels Need High Carbon Price to Compete





Oil companies control access to the jet fuel supply chain



They can restrict market access for blending, transportation, and storage

SAF producers need governments to ensure equal access to kerosene infrastructure (level playing field)