

THE YEAR IN SUSTAINABLE AVIATION

ELECTRIC AIRCRAFT



SAF PRODUCTION



OP, CO₂

OPERATIONAL CO₂ REDUCTION



EU REGULATION



DANISH INNOVATION

DANISH INNOVATION

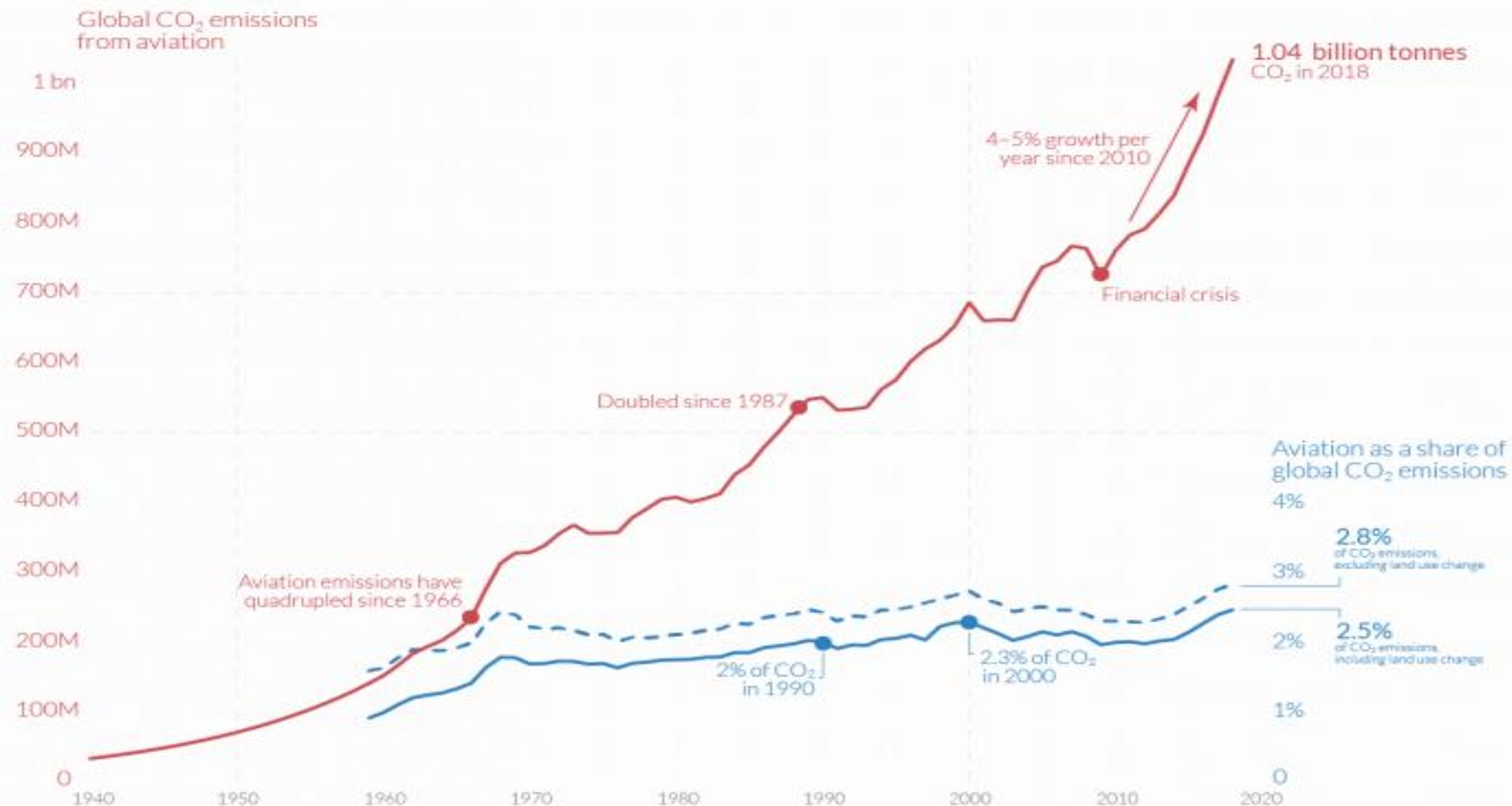


INTERNATIONAL COLLABORATION



Global carbon dioxide emissions from aviation

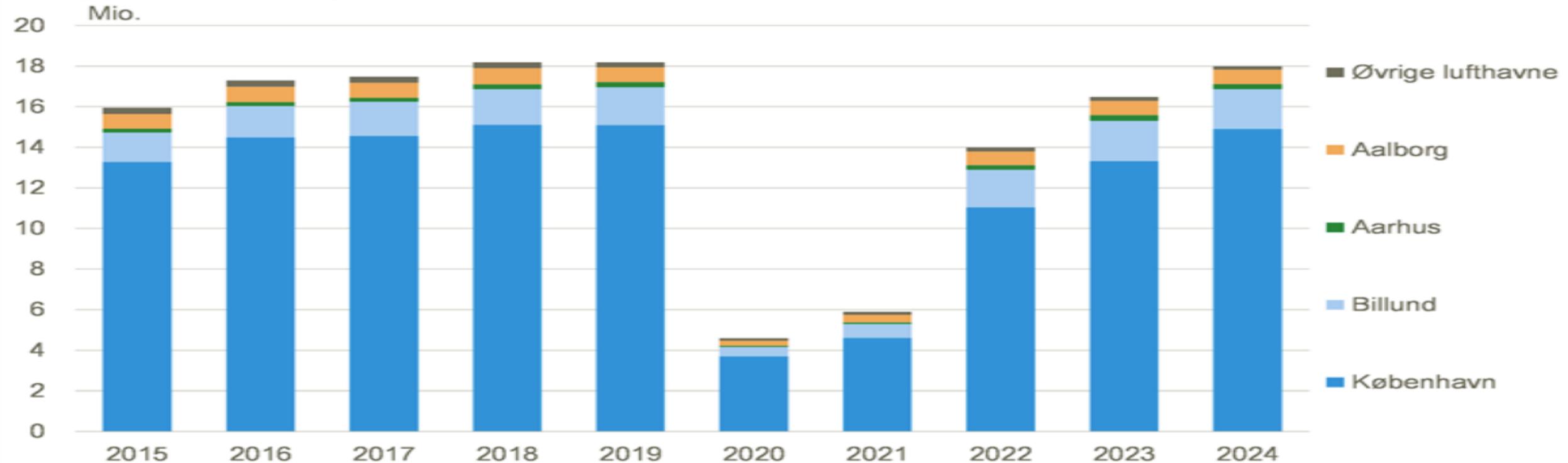
Aviation emissions includes passenger air travel, freight and military operations. It does not include non-CO₂ climate forcings, or a multiplier for warming effects at altitude.



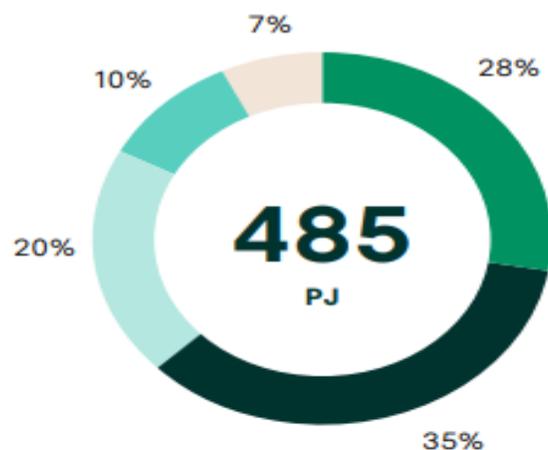
Lufthavnen i Kastrup har aldrig haft så mange rejsende gennem terminalerne som denne sommer, viser regnskab.

Glæde i Københavns Lufthavn: »Vi har aldrig haft så mange rejsende gennem terminalerne«

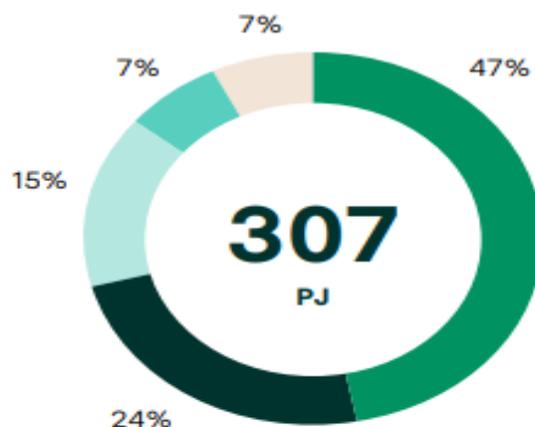
Afrejsende passagerer, faktiske tal



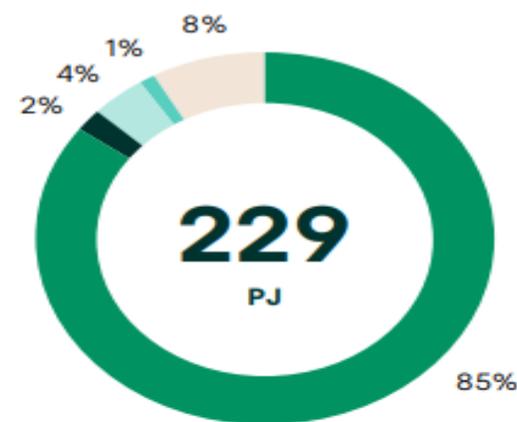
Olieforbrug fordelt på sektorer



1972



1989

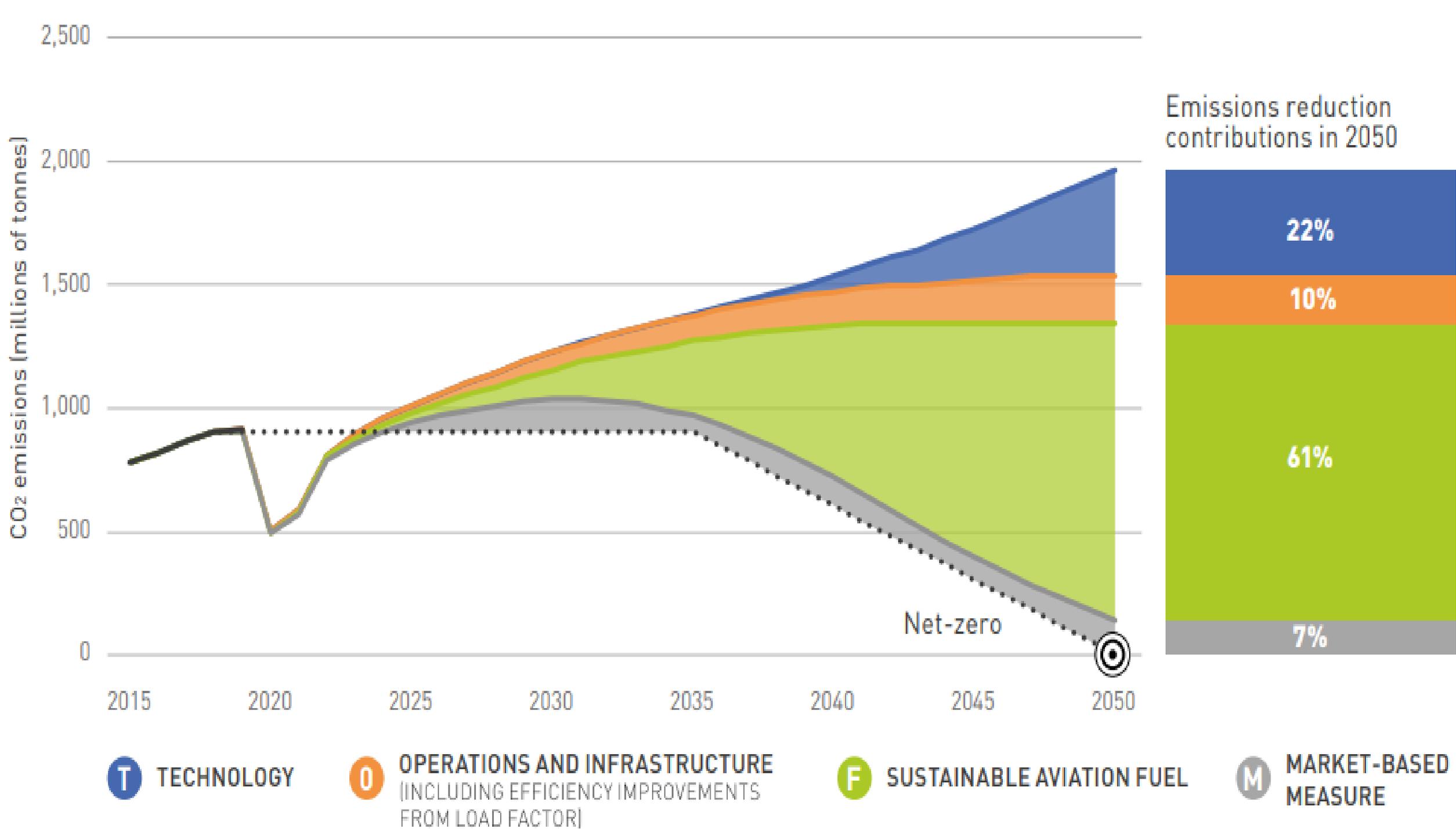


2024

● Transport ● Husholdning ● Industri ● Service ● Landbrug mm.

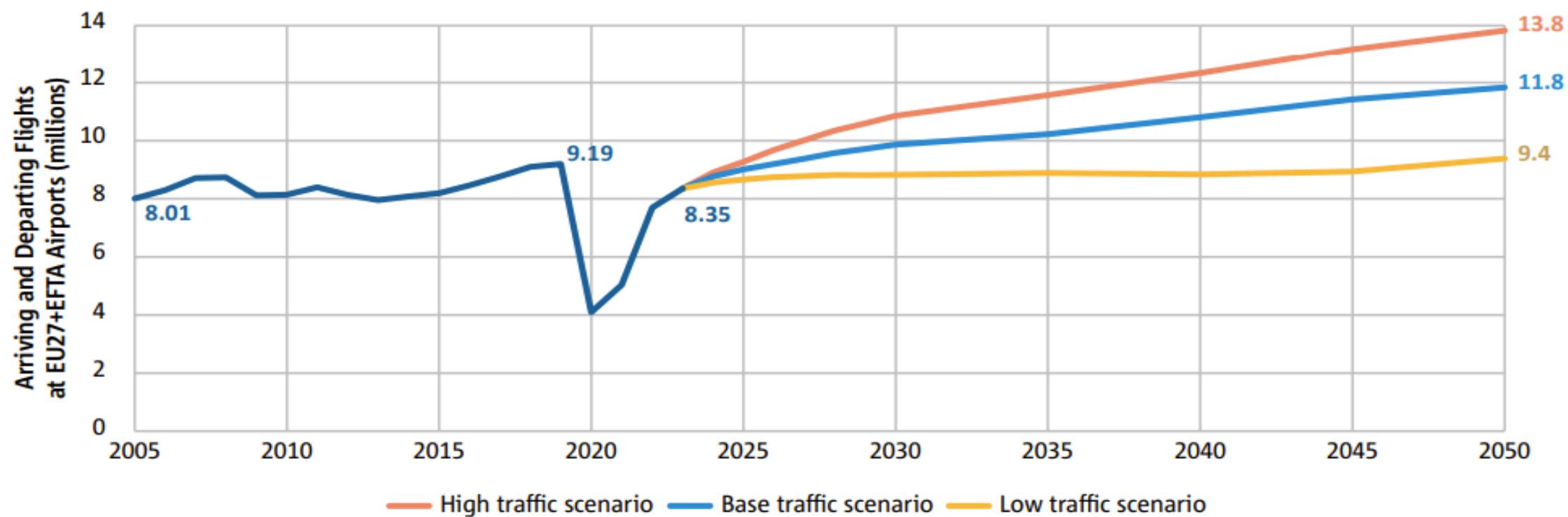
Kilde: Drivkraft Danmark

- Jet fuel udgør cirka 1 million kubikmeter olie om året (Inklusiv forsvarets brug) (2024).
- Omregnes til cirka 4 millioner ton CO₂e



EAER DASHBOARD

TRAFFIC



Indicator	Units	2005	2019	2023	2030 ¹
Number of flights ²	million	8.01	9.19	8.35	9.9
Passenger kilometres ³	billion	777	1 459	1 375	1 683
Number of city pairs served most weeks by scheduled flight		5 368	7 991	7 695	N/A

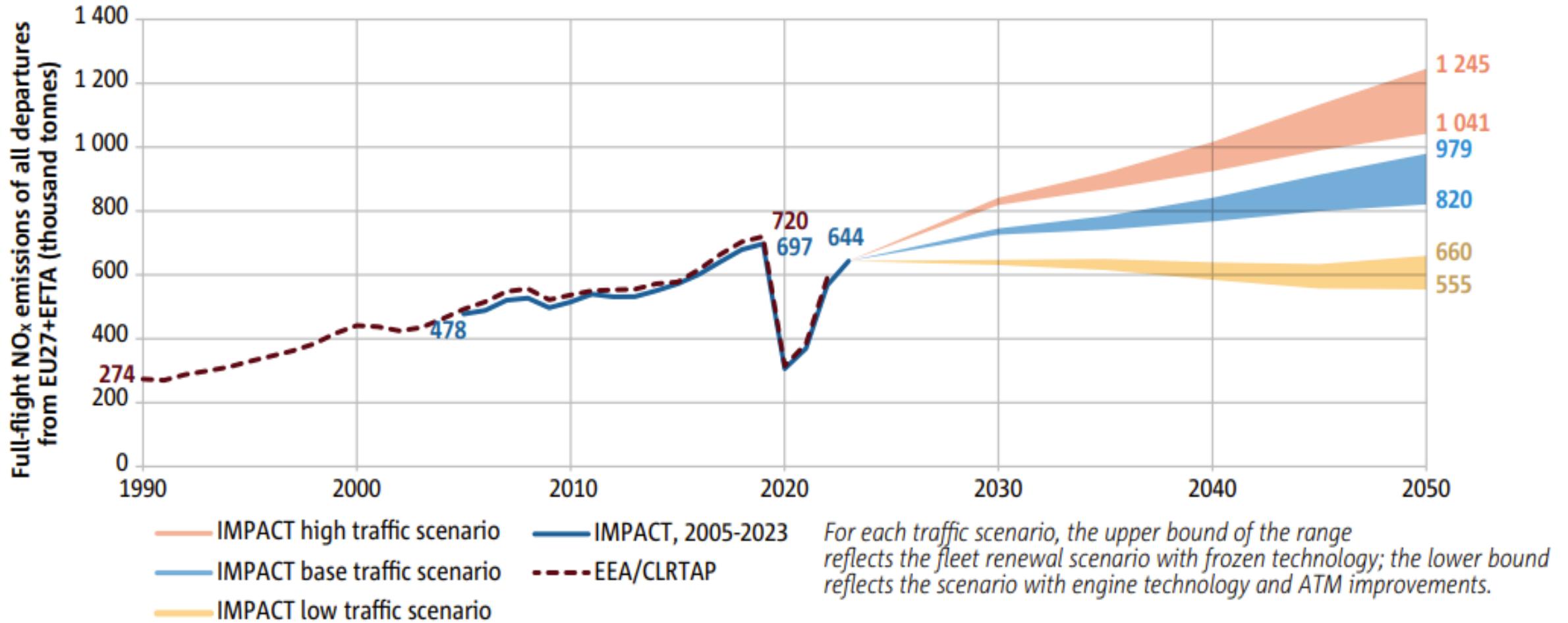
¹ Base traffic scenario

² All departures and arrivals in EU27+EFTA.

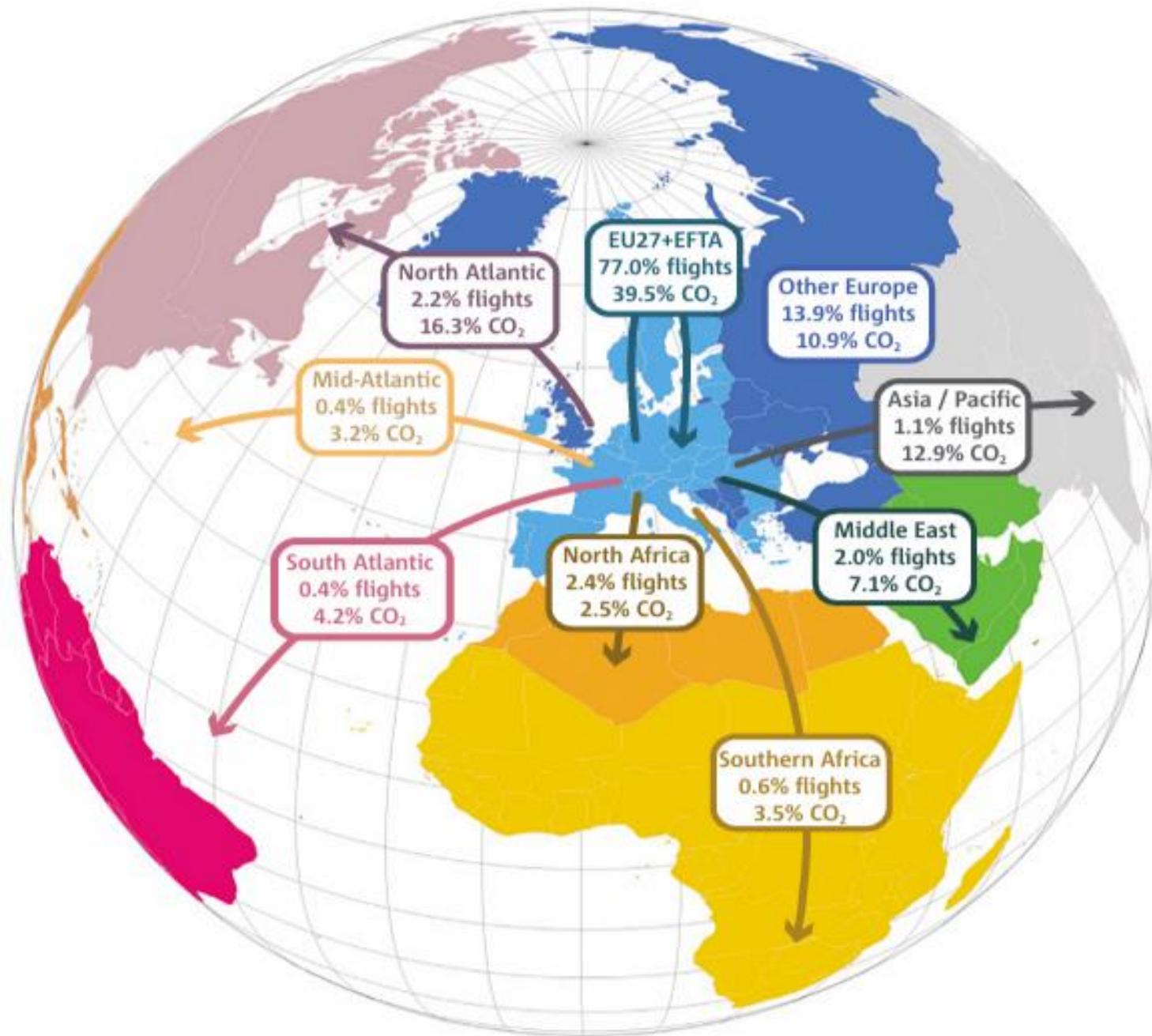
³ All departures from EU27+EFTA.

EMISSIONS

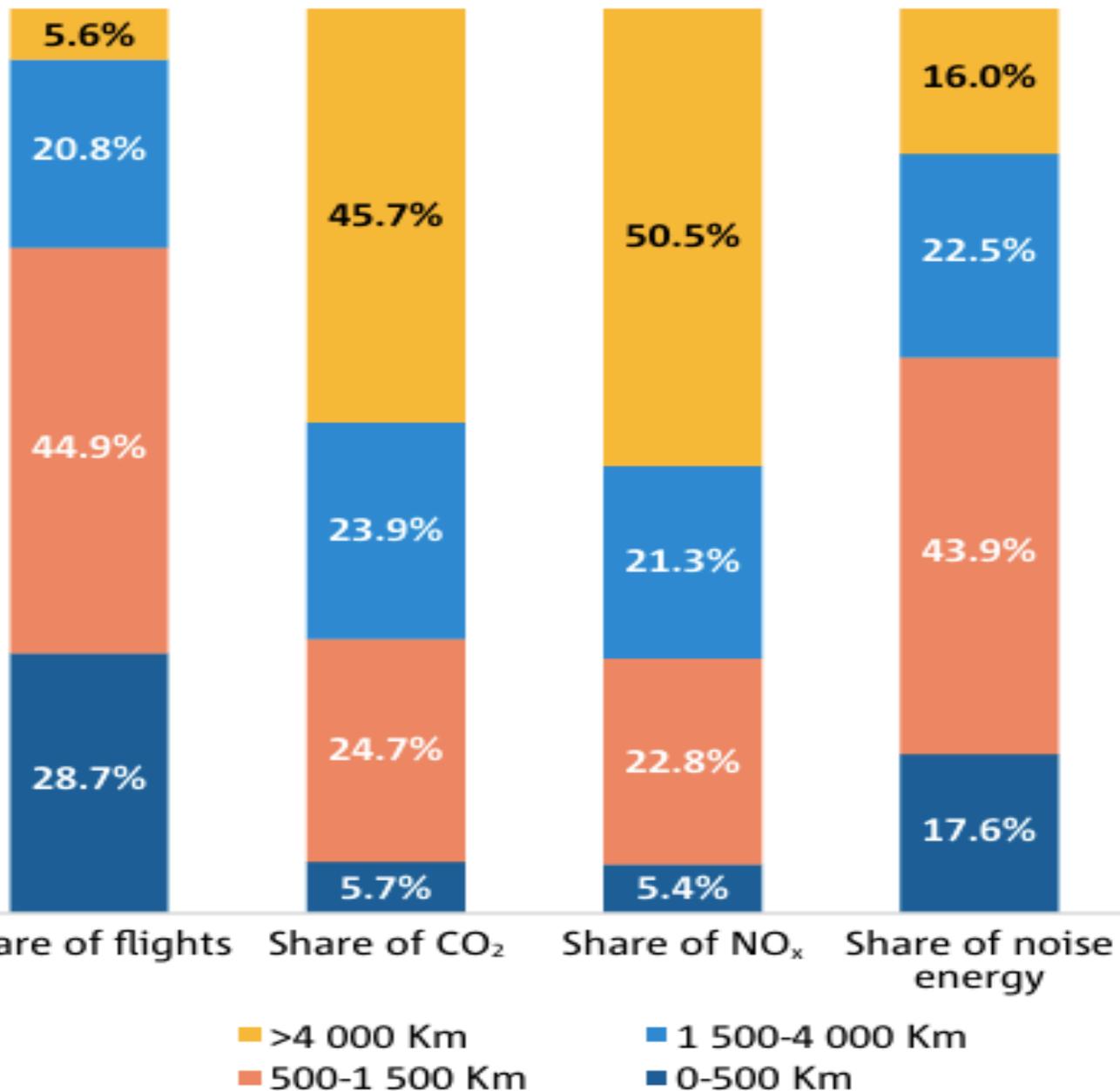
Kilde: EASA bæredygtighedsrapport 2025



Indicator ⁷	Units	2005	2019	2023	2030
Full-flight CO ₂ emissions ⁸	million tonnes	109	147	133	144
Full-flight 'net' CO ₂ emissions ⁹	million tonnes	109	114	108	139
Full flight NO _x emissions ⁸	thousand tonnes	478	697	644	726
Average fuel consumption ⁸	litres fuel per 100 passenger kilometre	4.8	3.5	3.3	2.9



Flight Distance



Long haul på over 4000km udgør 5,6% af de samlede rejser, men Udgør også 45,7% af de samlede Udledninger.



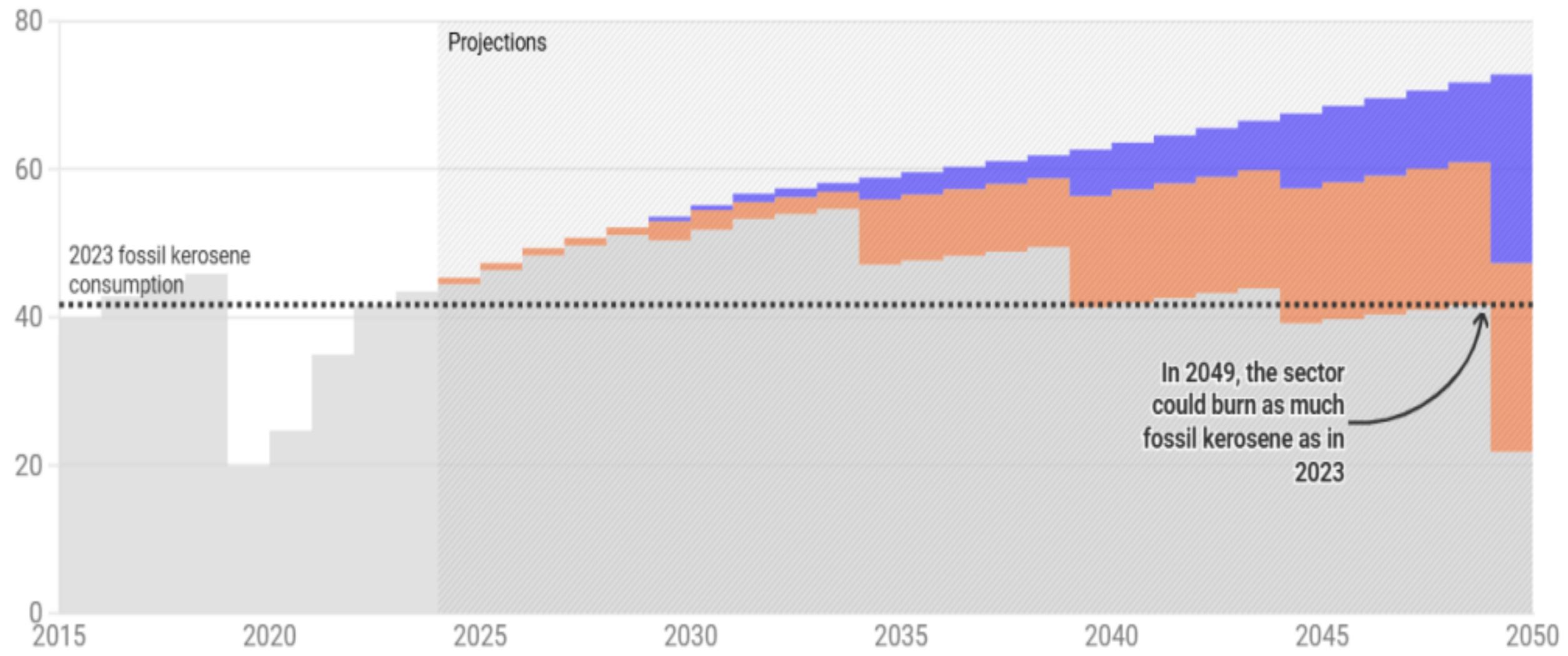
SAF er "on track" med nuværende compliance og kan realistisk nå 2030 mandater fra EU

Primært HEFA, baseret på brugt madolie og dyrefedt.

Næsten ingen diversificering i SAF-teknologier på markedet.

■ Fossil kerosene ■ Biofuels ■ E-kerosene

Fuel burnt (Mtoe)



Source: T&E modelling based on Airbus and Boeing market outlooks



Sustainable transport investment plan (STIP)

Investment needs

For **2035**, the RFEUA SAF target is **20%**, out of which **5%** needs to be eSAF. It is estimated to require investment in the range of **EUR 56.93 billion to EUR 66.75 billion²⁸**.

For **2050**, the RFEUA SAF target is **70%** out of which **35%** needs to be eSAF. It is estimated to require investment in the range of **EUR 267.9-376.2 billion²⁹**.

Flagship actions

The Commission will:

- *Provide MEUR 446 under the 2024 Innovation Fund call for 4 eSAF projects and 5 maritime fuel projects.*
- *Launch a European Hydrogen Bank auction (Innovation Fund), with a EUR 300 million window for projects with aviation and maritime off-takers (Q4 2025).*
- *Mobilise EUR 2 billion from InvestEU for the sustainable alternative fuel sector (2026-2027).*
- *Support the EIB Group to mobilise additional investment, including through the TechEU programme (2026).*
- *Provide an indicative budget of EUR 133.5 million supporting R&I projects of renewable fuel technologies and industrial value through Horizon Europe call and SET Plan flagships (2026-2027).*
- *Consider extending SAF support under the EU ETS as part of its upcoming review, and explore analogous support or alternative measures for EU-produced SMF (2026)*

Early movers coalition

Ambitionen er at rejse 500 millioner euros fra medlemsstater.

Indtil videre har Østrig, Finland, Frankrig, Tyskland, Luxembourg, Holland, Portugal og Spanien tilsluttet sig koalitionen officielt.

Skal finansielt støtte den første dobbelt-siddet-auktionsmekanisme til E-fuels

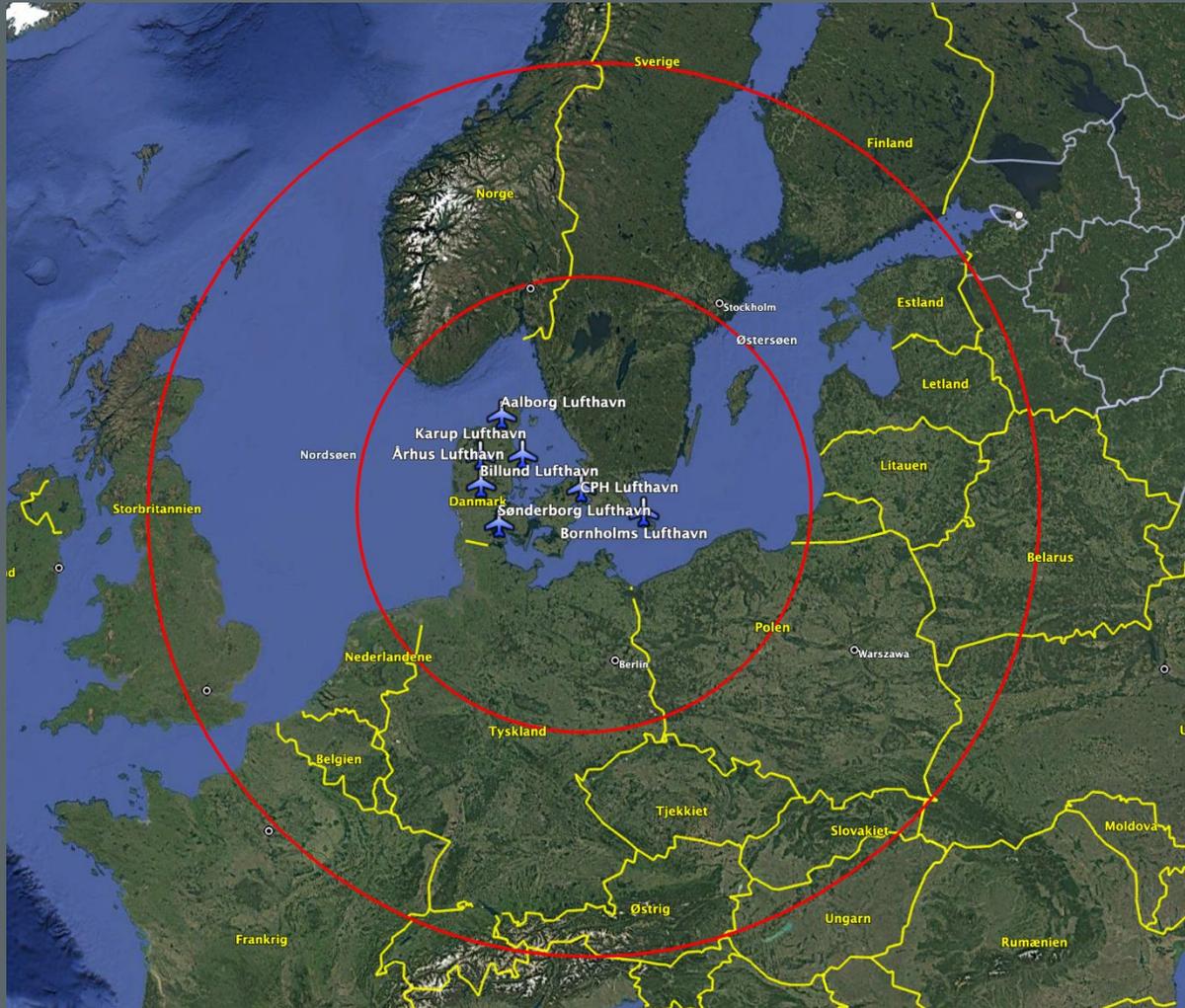


N214BT

DELTA

F3 F2

Visualisering af flyafstande



Afstande med
udgangspunkt i CPH
lufthavn

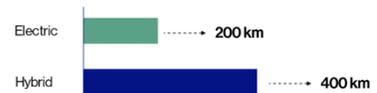
500 km radius

1000 km radius

HEART AEROSPACE



Late 2020's



Mid 2030's



Late 2030's



* Heart Analysis - Electric range development

Realistisk mulighed fra 2030?

Model med rækkevidde på ca. 300 km

Op til 30 passagerer

Kan dække hele Danmarks indenrigsflyvning



BETA

Bergen, Norge, er international testcenter for el-fly

Testflyvninger uden passagerer mellem Stavanger og Bergen – ca 160 km

Bristow som operatør

Model type: ALIA

- 1 pilot, 5 passagerer
- Rækkevidde 620 km
- Ladetid < 1 time

Lander i København d. 10. juli 2025 som en del af BETA's European tour

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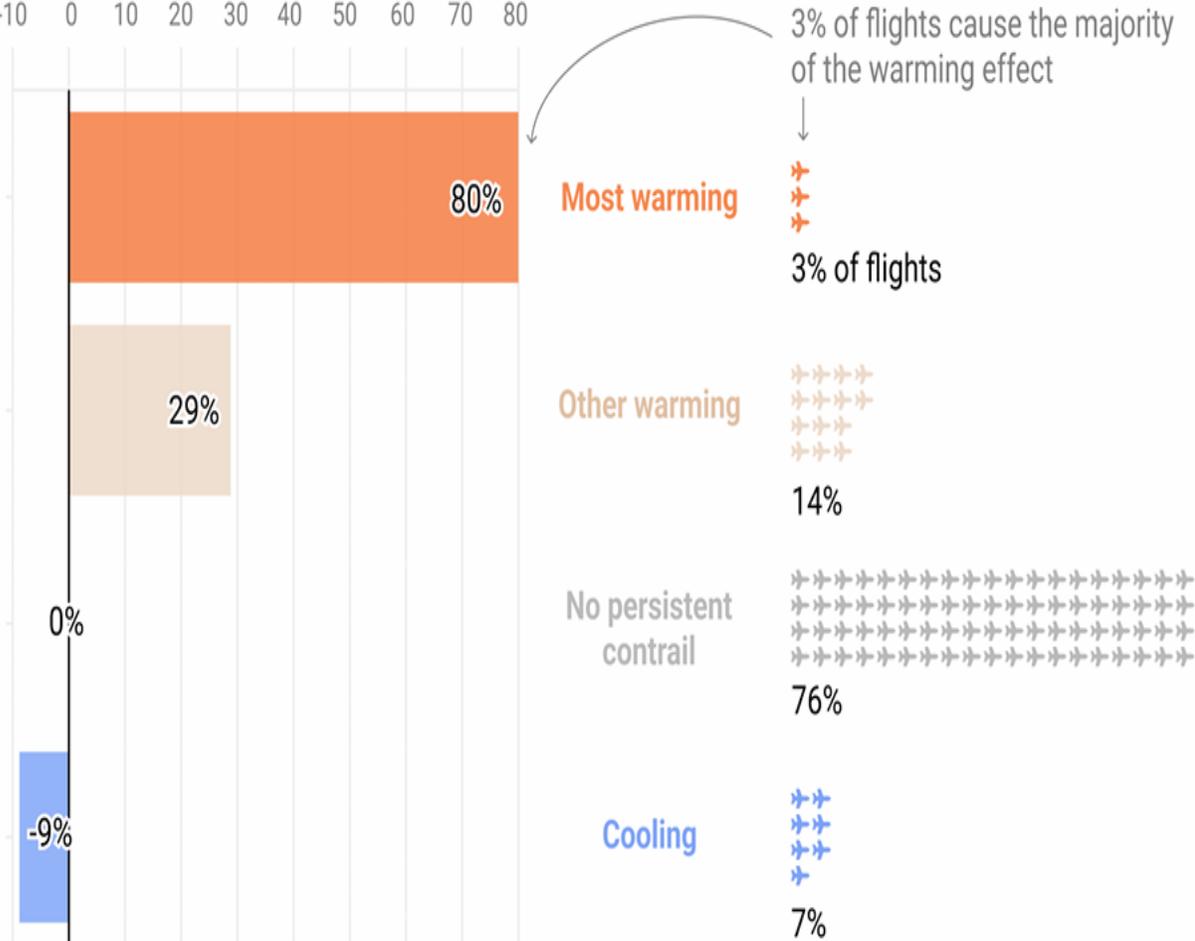
3% of flights cause 80% of global contrail warming

Contrail warming (%)

Flights (%) ✈️ = 1%

Cooling ↔ More warming

-10 0 10 20 30 40 50 60 70 80

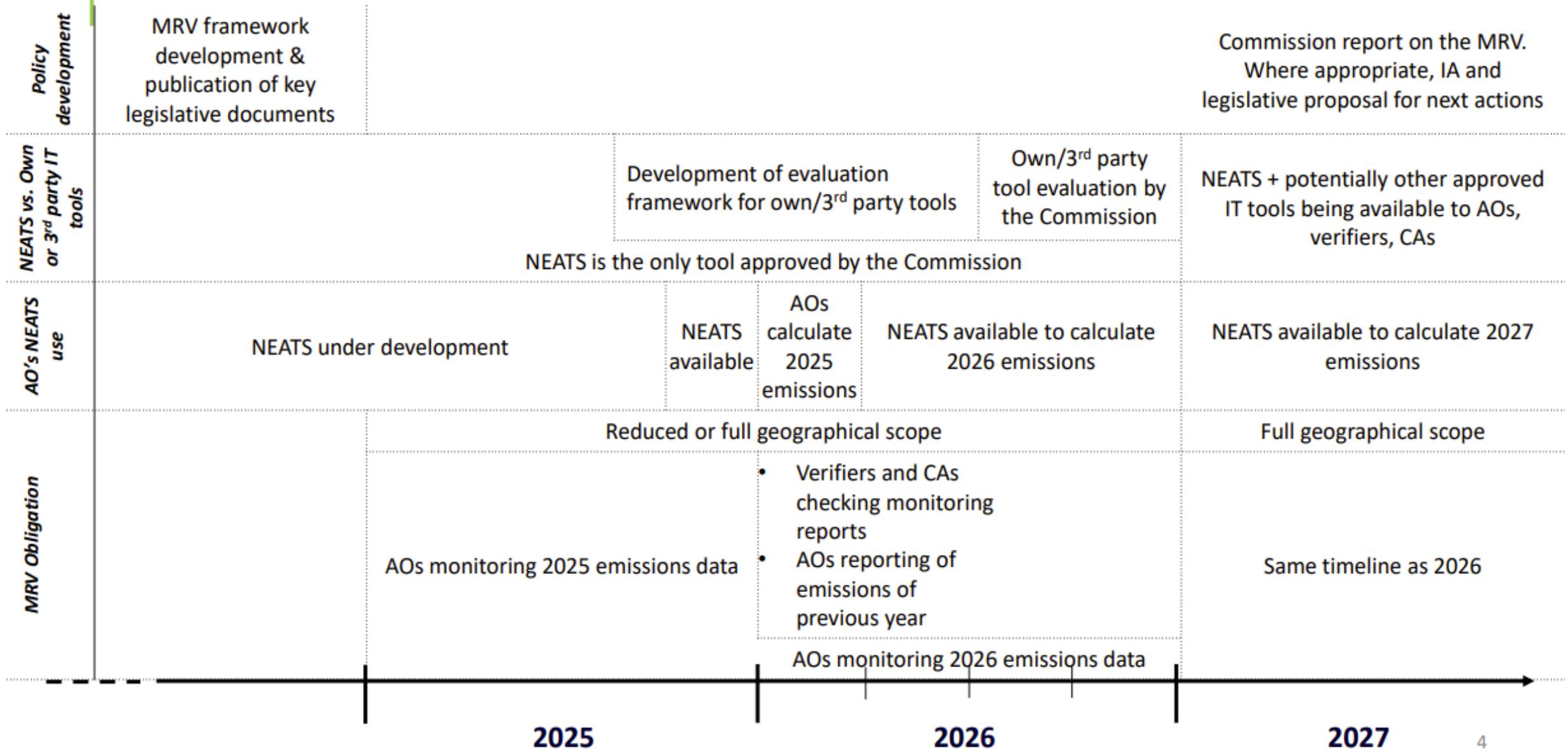


Average cost of contrail avoidance



Source: Teoh et al. (2024). Note: Contrail warming has different distributions depending on the region. In Europe, 5% of flights cause 80% of contrail warming in the region.

Non-CO2 MRV: Timeline



Refleksioner af det politiske miljø

- Bæredygtighed, ”grønhed” og lignende diskurser bliver i større grad tilsidesat
- EU kæmper for at legitimere forordninger, i særdeleshed E-fuels
- Stor polarisering mellem nord og øst- samt syd Europa.
- Der bliver ofte henvist til Danmark som frontløbere, men flere er begyndt at stille spørgsmålstegn ved gennemførelse af initiativer
- I både EU og Danmark eksisterer stadig en gammeldags 1-1 teknologisk forståelse

Tak for jeres opmærksomhed!

Spørgsmål?

Finansieret af EU nævnet