

Aviation's climate impact

How to effectively reduce CO2 emissions

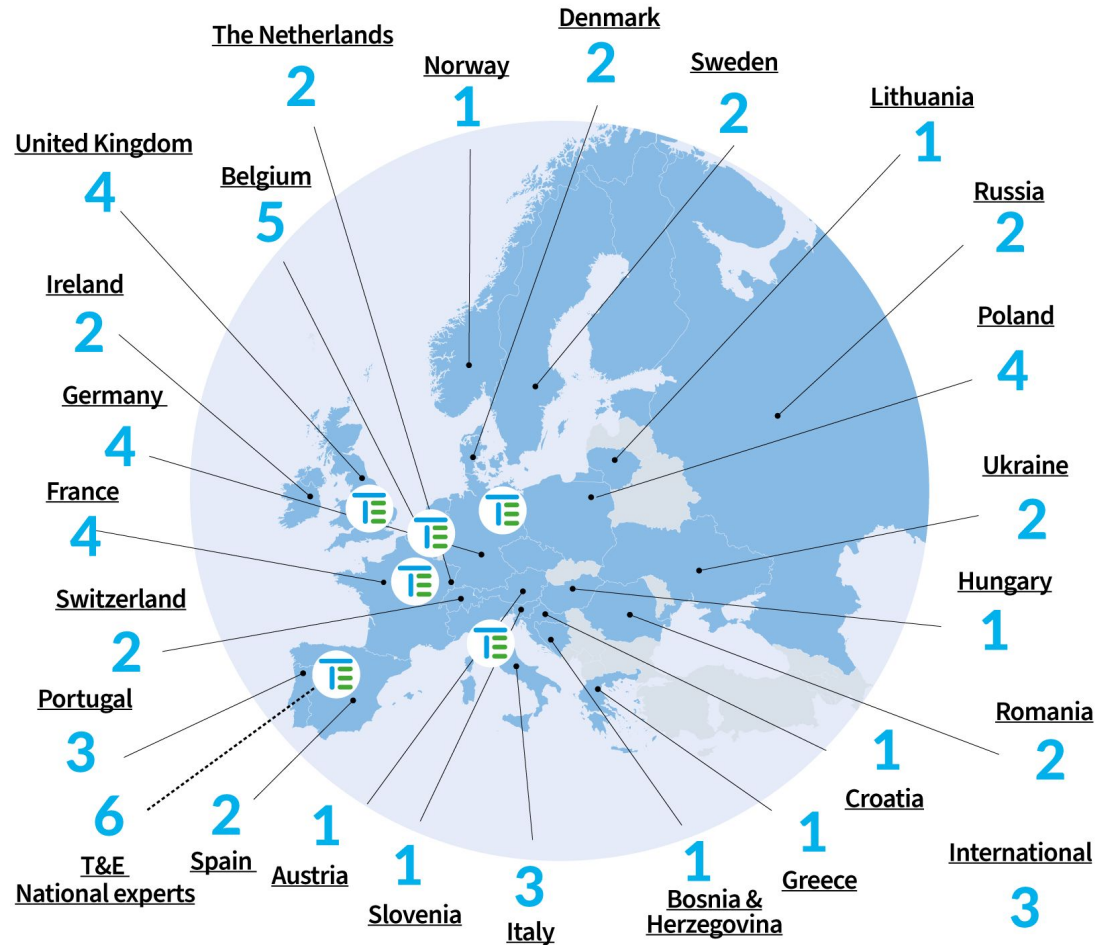


T&E:

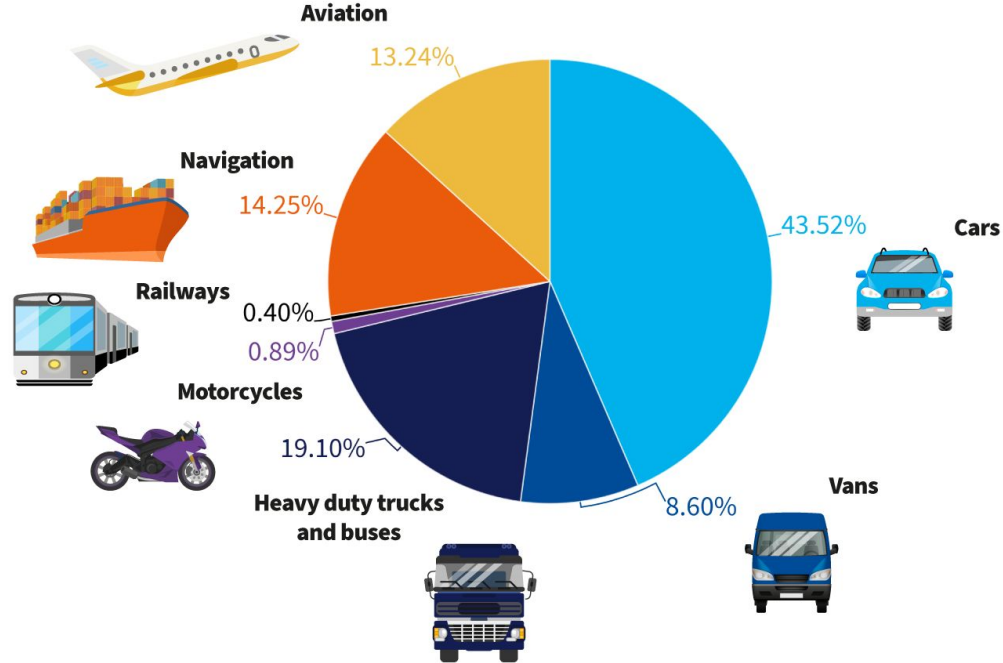
26 Countries

63 Members

6 National experts

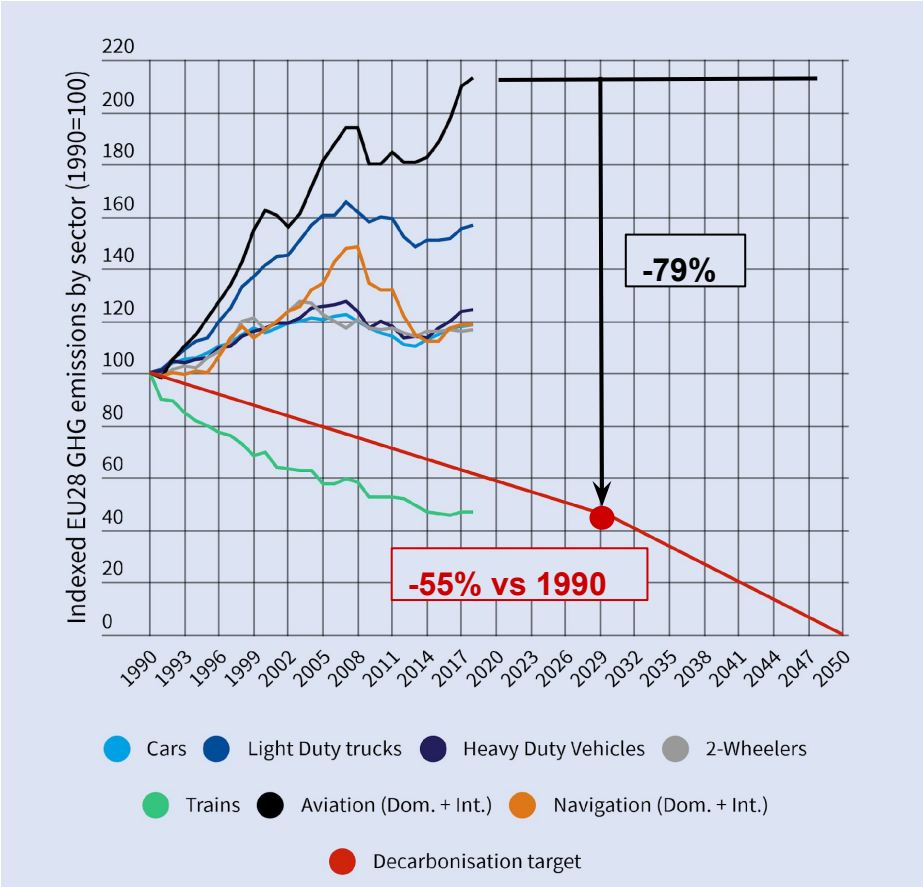


Transport emissions in the EU 27, 2018



Let's not lose another decade

- Falling prices of renewables in the past 10 years
- **IRENA:** Over 75% of the onshore wind and 80% of the solar PV capacity commissioned in 2020 will produce power at lower prices than the cheapest new coal, oil or natural gas options
- **Increased climate ambitions** (-50 -55% by 2030 & neutrality by 2050)
- **Growing public awareness** of transport's negative climate impact



Effective carbon pricing



ICAO's offsetting scheme: Corsia

“Carbon Offsetting and Reduction Scheme for International Aviation”

- **2016:** adoption of an offsetting scheme to cover the **growth** in aviation emissions as of 2021
 - 2021-2023: pilot phase (voluntary)
 - 2024-2026: first phase (voluntary)
 - 2027-2035: second phase (obligatory)
- **2020:** change of the baseline year to only 2019 and not the average of 2019-2020



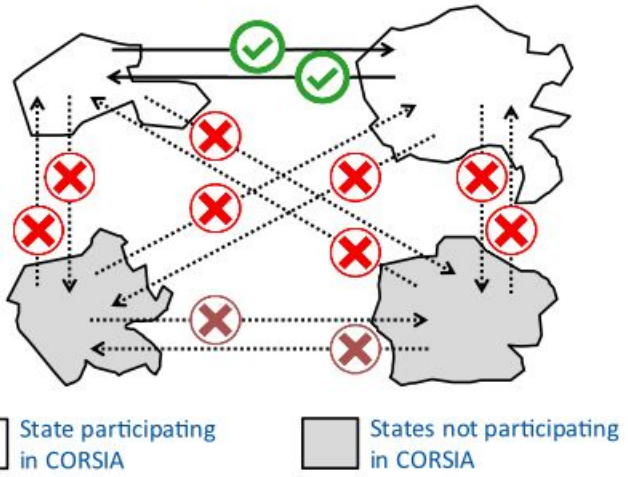
ICAO's offsetting scheme: worst option for the climate



- Price of offsets **under 1€**
- Applying Corsia to outbound flights: **€47.6 - €70.6 million** per year, which represents **only 0.2% of operating costs**
- Demand for Corsia offsets is **reduced by about 50%** 2021-2030 because of 2020 ICAO baseline change
- in the first 4 years of Corsia (2021-2024) there will be **no offsetting** obligations for airlines

Corsia: worst option for the climate

• Example: CORSIA in year X



Included:
Emissions from international flights where both the origin and destination States participate in CORSIA

Excluded:
Emissions from international flights where the origin and/or destination States do not participate in CORSIA

- ✓ Route included in CORSIA – para. 10 a)
- ✗ Route not included in CORSIA – para. 10 b)
- ✗ Route not included in CORSIA – para. 10 c)

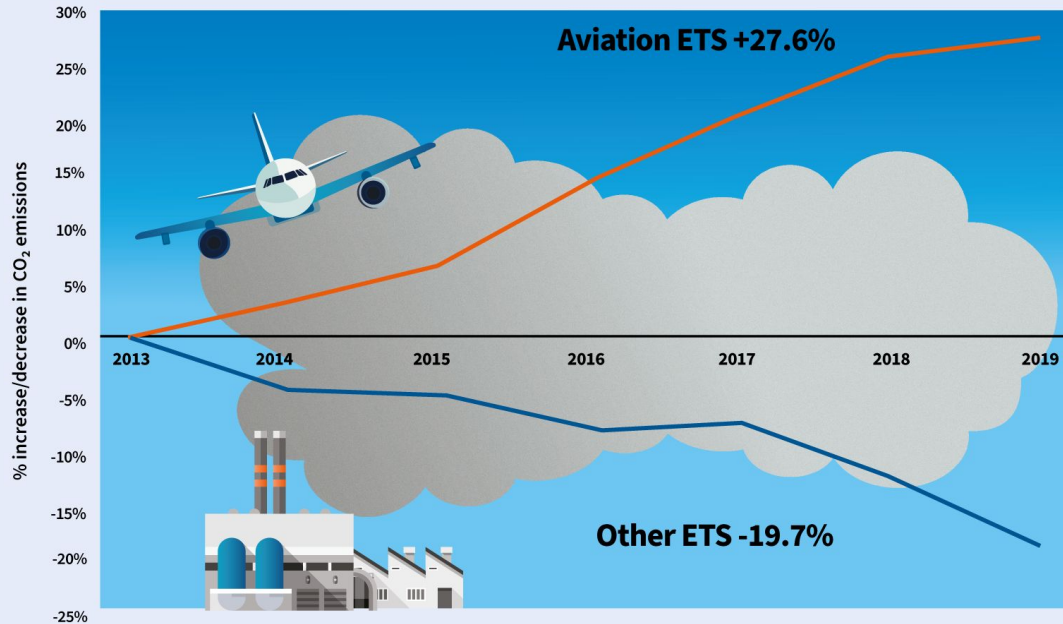
- Corsia would **only cover approximately 35%** of global aviation CO2 emissions vs. EU ETS full scope would cover **33% in 2025**
- **None** of the programmes meet all sustainability criteria (**half of the credits** risk being double counted)
- **Cheaper for airlines** to continue polluting and buying offsets than actually reducing emissions by using clean fuels

© ICAO 2017

Source: ETS Aero

Making the EU's carbon market fit for purpose

Aviation emissions have grown 28% in Europe since 2013



Note: Emissions of bankrupt airlines that were not reported for 2019 were approximated based on 2018 emissions and number of months in operation. This assumption adds approximately 1% to the verified reported emissions.

Source: European Commission, 2020

Making the EU's carbon market fit for purpose

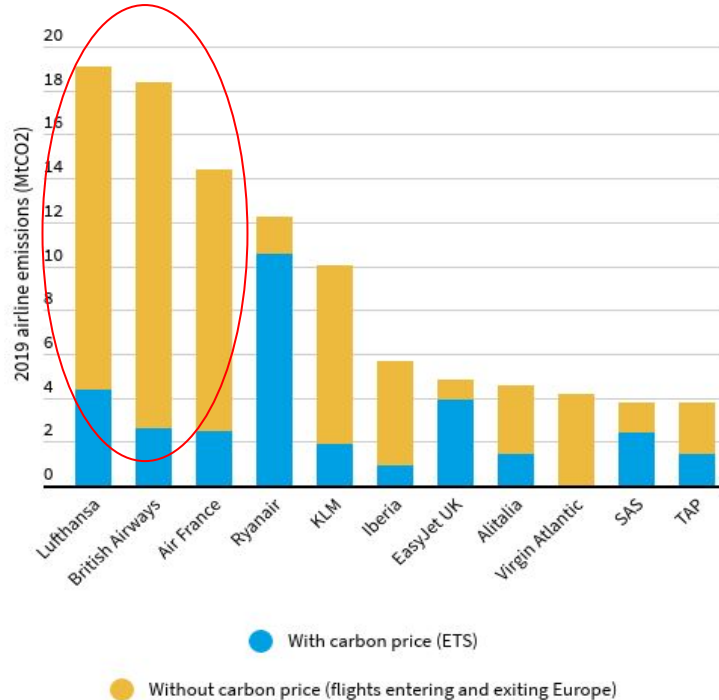
EU Aviation growth in the ETS



- **Scope** only covers intra-EEA flights
- Airlines can **buy over their cap** and get allowances from the stationary market
- **50% of allowances** are given out for free
- Prices ranged around 20-25 euros/ tonne of CO₂

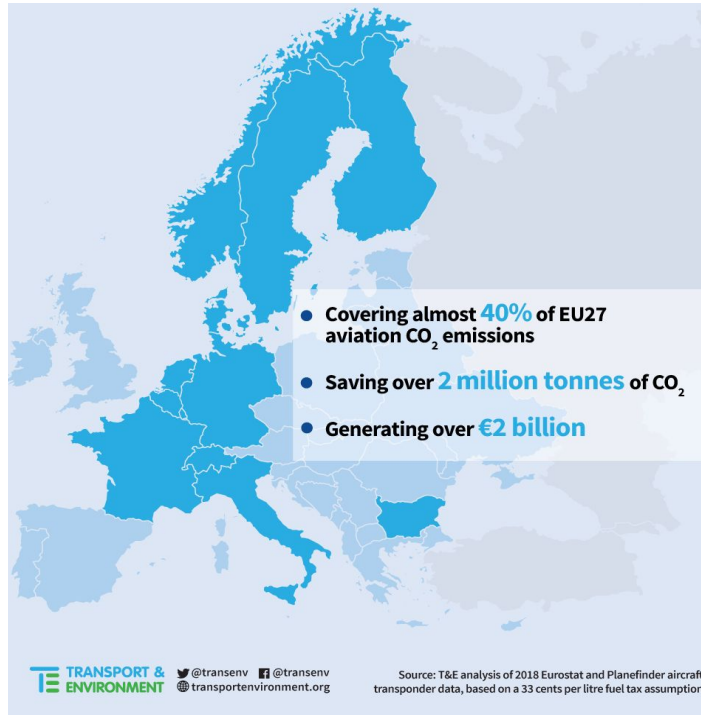
Making the EU's carbon market fit for purpose

Revealed: airlines don't pay for most of their pollution



- **Enlarge the scope** to cover all emissions (at least departing)
- **Make 2019 peak year** for aviation emissions
- **Remove free allowances** & use to fund e-fuels deployment

Ensuring effective EU wide jet fuel taxation



- Jet fuel tax exemptions estimated to be worth **€27 billion a year**
- **Bilateral taxation agreement** to pressure the Commission if failure to revise ETD
- Most EU-third country aviation agreements allow jet fuel tax

The European countries willing to tax jet fuel could generate over €2bn a year





Aviation COVID recovery





The staggering discrepancy of approach between the EU and the US...

- **US Airlines** are *less* impacted, but received **double financial support**
- **US Airports** are *less* impacted but received **8 times financial support**
- Biden Administration announced \$25 billion airport investments to “**position the United States as a global leader in clean aviation**”
- European Recovery & Resilience Funding is denied for aviation

... will reverse the market & competitive position of European Aviation!

Growing aid for an over subsidised sector

European airlines' total emissions in 2019

Rank	Country	Airline	Total emissions (MtCO2)	Covid bailout received (€ million)
1	Germany	Lufhansa	19.11	6840*
2	UK	British Airways	18.38	2553
3	France	Air France	14.39	7000 (plus 3000 under discussion)
4	Ireland	Ryanair	12.28	670
5	Netherlands	KLM	10.03	3400 (plus 1000 under discussion)
6	Spain	Iberia	5.66	750
7	UK	EasyJet UK	4.83	2240
8	UK	Virgin Atlantic	4.15	0
9	Sweden	SAS	3.78	1130
10	Portugal	TAP	3.75	1200
**	Italy	Alitalia	Unknown. Italian government failed to disclose	200 (plus 3000 under discussion)

- Over **€38 billion** subsidies handed out to the EU airline industry
- No effective climate conditions
- **Airports** also seeking subsidies, more difficult to find data
- An analysis of all EU airports served by Ryanair has found **that almost one-quarter of these airports** are likely to be receiving state aid.

Industry commitments



- Commitment to net climate neutrality by 2050
- How does this translate in their lobbying and advocacy?

*“Airbus says it won’t matter if the company doesn’t meet its target of launching a zero-emission commercial aircraft by 2035. **“Even if we are late by a couple of years, that’s not the point,”** CEO Guillaume Faury”*

Overall climate impact of aviation





Non-CO₂: the hidden side of aviation's total climate impact

Contrails, NO_x, soot, water vapour, black carbon



CO₂

1/3rd of aviation's
total climate impact

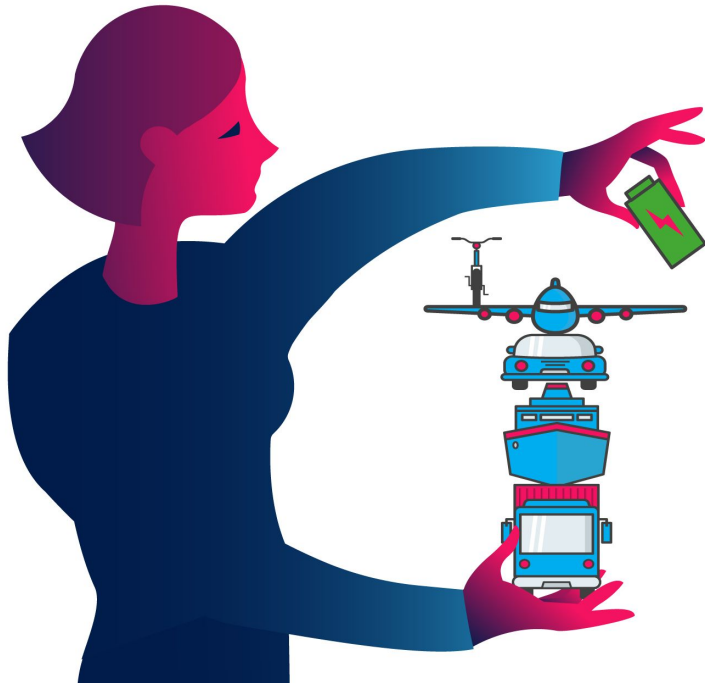
non-CO₂

2/3rds of aviation's
total climate impact

- Jet engine emissions of nitrogen oxides, water vapor, soot and black carbon (non-CO₂ effects) were responsible for **two-thirds of aviation's climate impact in 2018**
- In Japan, scientists showed that rerouting **less than 2% of flights** in Japan had reduced the warming effect of contrails by nearly 60%

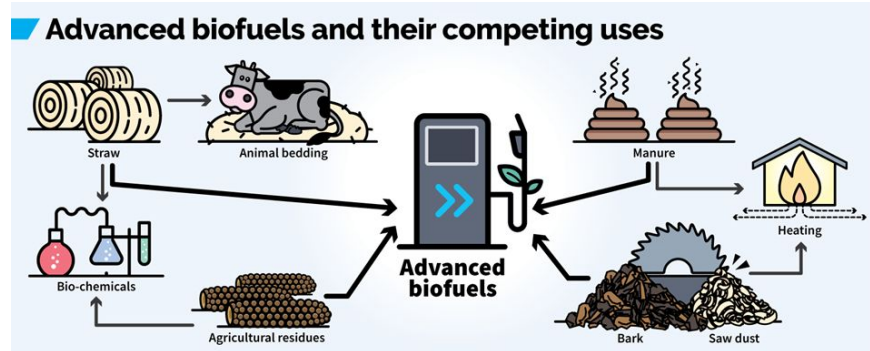
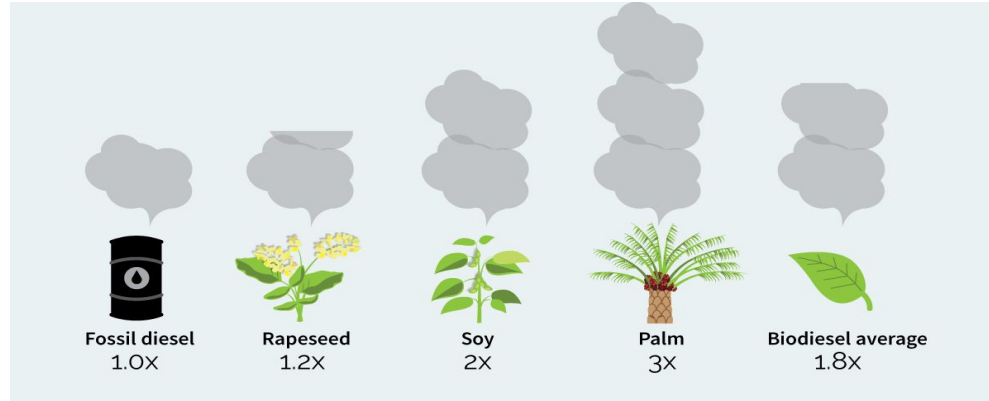


Smart & Sustainable fuels

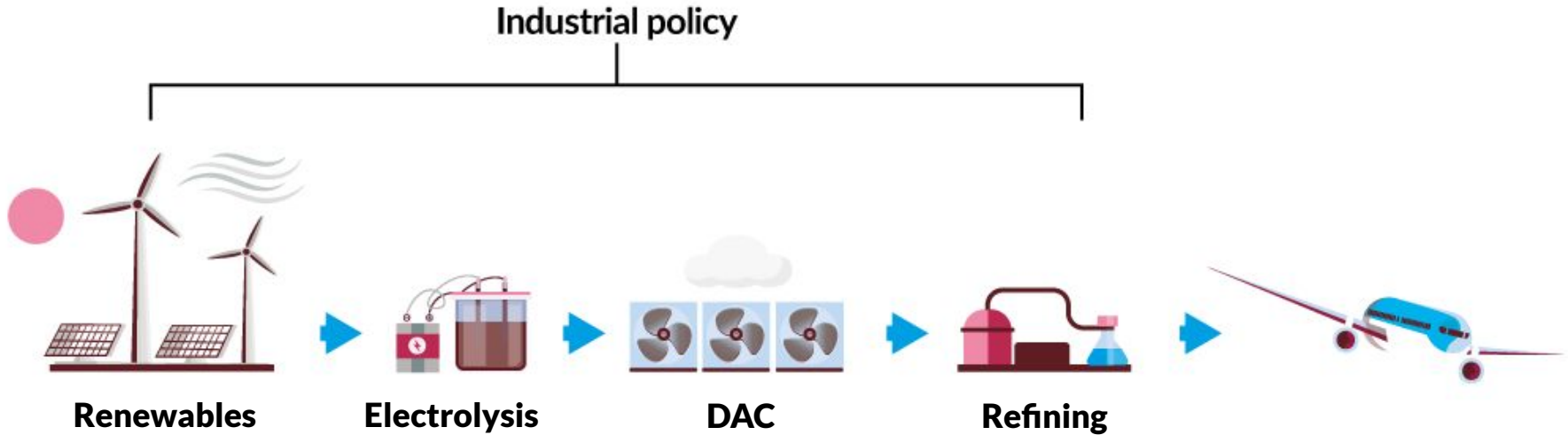




The danger of biofuels



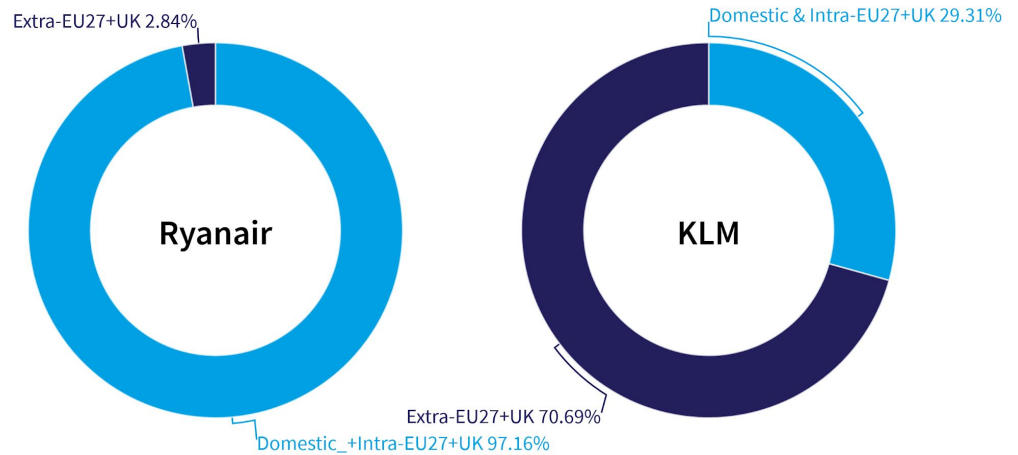
The importance of “synthetic” fuels



A fuel mandate on all fuel sold in the EU

KLM and Ryanair, 2019 emissions by flight sector

- Half of CO2 emissions come from just 6% of flights: the long-haul ones (Eurocontrol)



Source: T&E analysis of commercial aviation AIS data, provided by PlaneFinder, and ICAO emissions calculator

Where to find the data?



**European
Environment
Agency**



- FOI requests
- National governments & Environmental agencies
- Data providers (planefinder)