Flying in the face of climate change: Aviation on a heating planet, by **Geoff Collis**

The **carbon footprint of the aviation industry** is a topic that is rarely tackled in the conversation around the energy transition, mostly due to the fact that there are hardly any viable alternatives to fossil jet fuel, and people do not want to give up their freedom to travel easily and cheaply around the world.

But our speaker last Thursday, **former Jetstar pilot Geoff Collis**, is not afraid to tackle the uncomfortable reality of an industry that is not only set on expansion, but is **rife with missed targets, double standards, tokenism and greenwashing**.

Geoff began his talk with a question to the audience – who has flown in the last year? Most of the room responded with an affirmative. In spite of our nagging guilt, we rationalise it by pointing to the positive steps we are taking as individuals to decarbonise (solar panels, EVs, batteries), just a small flight, offset by planting trees etc. etc.

Geoff described his personal relationship with flying – a love that slowly transformed into an awareness of the dirty secrets that the aviation industry was concealing, leading to a decision to retire from flying partly prompted by the climate impacts of the industry.

Some disturbing statistics:

- Nearly 50% of emissions from aviation have occurred in the last 25 years.
- Airbus and Boeing forecast EU air traffic to more than double in 2050.
- While Australian GHG emissions have dropped by 2.2% in the past year, domestic jet fuel consumption in Australia has risen by 2.9%, and this does not account for international air travel.
- Global aviation 'hot spots' such as India and China predict much greater increases in traffic and jet fuel consumption.
- Australians rank 5th highest per capita for CO_2 emissions from flying.

Regulatory control of emissions is patchy – international aviation emissions are not covered by the Paris Agreement, and other regulatory bodies (ICAO) rely on voluntary offset and reduction.

The industry puts forward **five main planks for decarbonisation**:

- SAF - Sustainable Aviation Fuel (derived from biofuels, crop residue, woodwaste, used cooking oils, e-kerosene).
- Low Carbon Aviation Fuel
- Carbon offsets
- Technological and airspace efficiencies
- Alternative fuel/propulsion (electric and hydrogen-propelled aircraft)

Geoff systematically works through each of these, highlighting **limitations to their viability** due to factors such as:

- **cost** (SAF worldwide costs 2-10 times the cost of fossil jet fuel)
- **lack of availability** (SAF supply in Australia is currently non-existent, and relies on yet-to-be developed green hydrogen technology)
- **greenwashing** (fuel certified as "low carbon" can simply mean transporting and pumping 100% fossil jet fuel using renewable energy)
- **high energy-intensity used in production** (e-kerosene)
- **lack of feasibility** (carbon offsets deemed a 'last resort', and 'not a credible or feasible strategy' for aviation)
- **diminishing returns** (technological and airspace efficiencies).
- **limited application** (electric aircraft are currently feasible only for short range, smaller aircraft. Hydrogen-powered aircraft probably a dead end)

He details a widespread history of **missed targets, tokenism, double standards and greenwashing** in the industry. For global airline CO2 emissions targets from 2000 to 2021, **20 out of 21 of these were missed, abandoned or forgotten**. For Jetstar, claiming to lead the way on CO2 emissions, any minor gains made in **reducing per capita passenger emissions** were **considerably outweighed by the massive increase in the total number of flights**. Double standards are rife – Jetstar pilots are encouraged to carry out fuel efficiency measures such as reducing the amount of excess fuel carried on aircraft, and selecting reduced landing flap settings to cut down on wind resistance, while the airline **continues to grow its fleet and expand its new routes** (15 new routes to be added in 2025-6). Fuel tankering (taking on fuel from locations where it is cheapest, not closest, thereby adding to the weight of the aircraft), while banned in the EU, is common in Australia.

Who is flying? Geoff points to **global equity issues** here - globally, only 20% of people have flown, while only 20 countries are responsible for the surge in tourism emissions. Wealthy entitlement social norms have contributed to this surge. Ironically, while 6 in 10 Australians are concerned about the impact of climate change, 1 in 4 nevertheless plan to travel overseas in the near future. 68% of Australian tourism sites are at major risk with 2 degrees warming by 2050, leading to a rush in 'last chance' tourism – see the Barrier Reef before it disappears.

He offers suggestions for **industry and government changes**:

- Frequent flyer levies - you fly more, you pay more
- Stop fuel tankering
- Stop airport expansion
- Demand management to buy time (cap the number of flights available)
- Mode shift – promote rail travel and expand the rail network
- Ban unhealthy products advertising

Individual actions:

- **Fly less!** (The CO2 of a Premium Economy flight to Europe almost doubles an individual's carbon footprint from 15t to 28t)
- Look for alternatives to flying, and advocate for these (e.g. rail upgrades)

- Support groups campaigning on aviation and climate change (see resources below)

Resources:
Groups campaigning on aviation and climate change:
• http://safe-landing.org
• https://www.callaviationtoaction.org/
• https://stay-grounded.org/
• https://flightfree.net.au/
• bumprints.org (consumer awareness website – 'How to fly better in the climate crisis')