



THE UNIVERSITY OF
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II: Ban the 300-Kilometre Flight

If we're serious about climate,
some trips shouldn't exist



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Acknowledgement of Country

We recognise and pay respect to the Elders and communities – past and present – of the lands that the University of Sydney's campuses stand on. For thousands of years, they have shared and exchanged knowledges across innumerable generations for the benefit of all.



Australians love a cheap domestic flight. We love the speed, the points, the smug sense that this continent is smaller than the map suggests. A weekend in Melbourne. A meeting in Canberra. A spontaneous hop north. Aviation has quietly reshaped how we experience distance, and we've come to treat that convenience as an entitlement.

But here's the uncomfortable proposition. If Australia is serious about cutting transport emissions, we should begin planning to phase out very short domestic flights where reasonable alternatives exist. Not tax them gently. Not offset them symbolically. Phase them out.

Transport is responsible for about 21 percent of Australia's greenhouse gas emissions, and the sector produced roughly 90 million tonnes of CO₂-equivalent in 2022, according to the Climate Change Authority. On-road vehicles dominate that total, accounting for about 85 percent of transport emissions. Aviation is smaller, around nine percent of domestic transport's full fuel-cycle emissions in 2022-23 according to the Bureau of Infrastructure and Transport Research Economics (BITRE, 2025). But "smaller" does

not mean trivial. In climate arithmetic, there is no harmless slice.

And aviation has a specific problem... physics.

Aircraft burn the most fuel during take-off and climb. That means shorter routes are proportionally less efficient per kilometre than longer ones. The emissions spike happens at the beginning of the journey — and then the aircraft barely gets to cruise before it descends again. When you fly 300 or 400 kilometres, you are essentially paying the carbon cost of lift without the benefit of long cruise efficiency.



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The aviation industry will tell you, correctly, that aircraft are getting more efficient. It will point to sustainable aviation fuels (SAF), operational improvements, and



international agreements through ICAO.

The federal government highlights these measures in its aviation emissions strategy (Department of

Infrastructure, Transport, Regional Development, Communications, Sports,

and the Arts, 2023).

All of that matters. But none of it solves the underlying equation quickly enough.

Sustainable aviation fuels remain limited in supply and expensive. Even optimistic global forecasts show SAF scaling gradually over decades, not overnight. And while efficiency improvements reduce emissions per passenger kilometre, total aviation demand continues to grow.

Which brings us to the real issue ... demand.

Australia is uniquely dependent on aviation because of geography. No one is suggesting abolishing flights between Perth and Sydney or to remote communities. Connectivity matters. But not every domestic flight is essential. Routes under roughly 300–500 kilometres, particularly between major cities with existing or potential rail alternatives, deserve scrutiny. The Sydney–Canberra corridor is about 286 kilometres as the crow flies. Melbourne–Adelaide is around 650 kilometres, but high-quality rail could meaningfully substitute much of that demand. Sydney–Melbourne, one of the busiest air routes in the world pre-pandemic, is about 713

kilometres and has long been cited as a candidate for serious rail competition.

Australia has debated high-speed rail for decades without building it. Perhaps the missing ingredient is not another feasibility study, but a signal that aviation will not forever be the default.

The controversial policy is straightforward. Establish a distance threshold under which domestic commercial flights would be progressively restricted once viable rail or coach alternatives meet clear service standards. Begin with the shortest and easiest corridors. Phase in over time. Provide exemptions for essential services and remote communities.

Critics will say this is anti-consumer and anti-business. But transport policy already shapes markets. We regulate safety. We control airport slots. We set fuel standards. We fund highways. The idea that aviation demand is a pure expression of personal freedom is a myth. It's the result of decades of policy choices.

There is also an honesty gap in the aviation debate. We often frame short flights as trivial indulgences. But aviation emissions are high per passenger kilometre compared to rail, particularly electrified rail powered by an increasingly decarbonised grid. If Australia's electricity mix continues to shift toward renewables, the emissions gap between flying and electric rail will widen.

And then there is the lock-in problem. Airports and aircraft fleets are long-lived assets. Approving infrastructure and fleet purchases today embeds emissions trajectories for decades. If we build transport systems assuming perpetual growth in short-haul flights, we entrench carbon dependence even as we claim to be transitioning.

Demand management is not a dirty word. We already accept it in other domains. Smoking was once considered a matter of personal liberty until public health intervened. Water restrictions during drought are accepted as necessary. Road tolls price congestion. When something imposes a social cost, governments eventually step in.

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Short-haul aviation imposes a climate cost. The only reason we hesitate to say so plainly is political fear.

A phased restriction would also create investment clarity. Rail projects that currently struggle under uncertain demand projections would suddenly look more bankable. Bus and coach operators could scale. Regional rail upgrades would gain urgency. The signal would ripple through infrastructure planning.

None of this means Australians must stop travelling. It means we travel differently. Slower on some corridors. More thoughtfully. With infrastructure aligned to climate realities rather than nostalgia for cheap flights.

Yes, it would be controversial. Frequent flyers would protest. Airlines would lobby. Editorial pages would accuse policymakers of social

engineering. But climate policy that never inconveniences anyone is not policy. It is marketing.

If we are prepared to spend billions electrifying cars, subsidising charging infrastructure, and overhauling grids, we should be prepared to confront aviation demand, at least where alternatives are feasible.

The real radicalism is continuing as we are, praising efficiency gains while letting total flight numbers rebound and grow. Pretending that future fuels will erase present emissions. Acting as though every short flight is sacred.

On a continent as vast as Australia, aviation will always play a role. But maturity means recognising that some roles can shrink.

The cleanest kilometre is the one not flown. And on some routes, it may be time to ground the habit.

References

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About the authors of this series

John rejoined the Institute of Transport and Logistics Studies as the Neil Smith Research Chair in Sustainable Transport Futures in October 2022, after an 8-year absence. Over the course of his academic career, John has published over 300 scientific articles in peer-reviewed journals, books, and conference proceedings. He has also been an Associate Editor of *Transportation*, and Co-Editor and Chief of the *Journal of Choice Modelling and Transportation Research Part A*. He has also held various roles on multiple conference committees both in Australia and overseas.

Since graduating with a PhD, John has been obtained numerous grants worth over \$3.4 million. These include a number of ARC discovery grants in the areas of Public Health, Transportation crowding, general economic theory related to utility separability as well as one on improving the external validity of Discrete Choice Experiments. In addition to academic grants, John has been involved in \$9 million in industry-based contract research since the year 2005. Find out more about John: <https://profiles.sydney.edu.au/john.rose>



Andrea joined the Institute of Transport and Logistics Studies as the Neil Smith Lecturer in Sustainable Mobility and Accessibility in March 2023. Before becoming a lecturer, Andrea spent three years as visiting research scholar thanks to two scholarships, the Early.Postdoc mobility and the Postdoc mobility, awarded by the Swiss National Science Foundation. Andrea holds a Master of Science in Statistics with Honors from the University of Bologna and a PhD in Economics from the University of Lugano. Over the years, Andrea has taken part in different consulting projects with several public and private institutions such as NSW Government, University of Florence, and University of Catania. Find out more about Andrea:

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