

19 July 2024

Secretariat  
Low Carbon Liquid Fuels Consultation Section  
Department of Infrastructure, Transport, Regional Development,  
Communications and the Arts  
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Dear Secretariat

**Submission – Low Carbon Liquid Fuels consultation**

Canberra Airport appreciates the opportunity to make a submission to the Department in relation to the consultation paper *A Future Made in Australia: Unlocking Australia's low carbon liquid fuel opportunity*.

The enclosed submission details Canberra Airports belief that through collaboration between industry, government and academia, the aviation sector can develop effective approaches to contribute to Australia's net zero transformation.

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Yours sincerely



Michael Thomson  
Head of Aviation



## SUBMISSION

### Low Carbon Liquid Fuels

*A Future Made in Australia: Unlocking Australia's low carbon liquid fuel opportunity*

July 2024

## Table of contents

Introduction	2
Net zero	2
Sustainable aviation fuel	4
Domestic production	5
Conclusion	6

## Introduction

The transport industry is central to the economic and social prosperity of Australia by facilitating the movement of people and goods over large geographical areas. Aviation is pivotal to achieving this by contributing to the ongoing growth of supply chains, business, trade and tourism sectors. Without a strong domestic and international aviation industry, Australia stops. This was most evident during the COVID-19 pandemic.

The halting of the aviation industry due to lockdowns and border closures illustrated the value and importance of the sector for all Australians. People were unable to visit family and friends, travel interstate for business or rely on the delivery of essential goods due to delays experienced by freight forwarders.

Airports are the critical infrastructure that support and sustain the ongoing growth and efficiency of the aviation industry. It is airports that facilitate the connectivity of people and goods across Australia's diverse transport network.

Without the connectivity afforded by airports, many Australians would be impeded from travelling for business, leisure or cultural purposes. Supply-chain networks would also be delayed considerably. In comparison to other public transport options, aviation is the most effective in aiding inter-capital and inter-regional travel.

This is why Canberra Airport is central to connecting people and goods to the ACT and southern NSW. In 2023, more than 40,165 domestic and international aircraft movements occurred at the airport, delivering travellers, essential freight and medical flights to the National Capital region.

Despite the various social and economic benefits the aviation sector makes to the ACT and southern NSW, it is clear the transport industry is a major source of greenhouse gas emissions. Given domestic aviation contributes approximately 9 per cent of Australia's total transport emissions, it is necessary that industry participants commit to decarbonisation.

As a leader in the transport industry for more than two decades to achieving a cleaner, more sustainable future, Canberra Airport appreciates the opportunity to provide a submission on the consultation paper *A Future Made in Australia: Unlocking Australia's low carbon liquid fuel opportunity*. Through collaboration between industry, government and academia, the aviation sector can develop effective approaches to contribute to Australia's net zero transformation.

## Net zero

Australia's adoption of emissions reduction targets of 43 per cent by 2030 and net zero by 2050 sets the framework for the aviation industry to address greenhouse gas emissions. Despite the challenges associated with abating emissions across the aviation industry,

Canberra Airport is confident that the implementation of appropriate policy directions will assist in reaching decarbonisation goals.

Canberra Airport has been at the forefront of decarbonisation for more than two decades with sustainability being central to airport operations. The airport is on target to achieve carbon neutrality by 2030 which exceeds similar goals set by the Commonwealth and ACT Governments.

This is only possible because of Canberra Airport's responsibility and commitment to managing the airport in a sustainable, sensitive and responsible manner that contributes to decarbonisation. Considerable precinct development has been undertaken at Canberra to create a high-quality facility serving the ACT and southern NSW's growing transport and business requirements. A commitment to net zero has been central to the development of commercial and employment infrastructure at Brindabella Business Park, Majura Park retail precinct and the Fairbairn precinct over the last two decades.

Brindabella Business Park was constructed using leading edge techniques and sustainable building practices. It is Australia's greenest business centre, incorporating a number of landmark sustainable buildings, achieving a number of environmental honours and being the deserving recipient of a number of environmental achievement awards.

One of these landmark buildings is 8 Brindabella Circuit, which was awarded five stars when built under the Green Star rating system of the Green Building Council of Australia (GBCA) – the first and highest rating ever awarded in Australia at the time. It set the benchmark for continuous improvement for all subsequent buildings in the business parks.

Brindabella Business Park was the first development in Australia to use recycled concrete and steel on a commercial scale, resulting in buildings that use less embodied energy and more recycled materials. Canberra Airport have also installed waterless urinals and commercial property water recycling plants. The Brindabella Business Park was the first in Australia to use tri-generation which produces 75 per cent less carbon dioxide than a standard office building and 55 per cent less than a five-star rated building. Brindabella Business Park also hosts some of Australia's most advanced water saving technologies, reducing dependency on scarce town water supplies.

This vision has been extended to the Majura Park precinct where a new office building at 25 Catalina Drive was formally awarded 6 Green Stars by the GBCA in 2023.

The implementation of solar panels across all precincts of the airport as a form of renewable energy to guarantee the power required to light, heat and cool the terminal, office buildings and operational facilities has been another positive step towards decarbonisation. Over the last decade, the airport has made considerable investment in solar which has resulted in 26 buildings across the airport precinct being powered completely by solar panels. It is the second largest solar farm in the ACT.

Being an infrastructure provider, Canberra Airport fulfils a critical role in the domestic and international aviation network. Decarbonisation of infrastructure on airport is especially crucial for the net zero agenda. Canberra Airport has enacted various measures to reduce enabled, operating and embodied emissions. Although not directly linked to the scope of the consultation paper, this demonstrates the willingness of Canberra Airport to implement initiatives and actions which contribute to the aviation industry's overall commitment to net zero.

It is this commitment to achieving net zero which has resulted in Canberra Airport investing in sustainable practices across the business, including solar generation, rainwater harvesting, carbon sequestration, alternative agriculture and wind farming. These initiatives have been central to meeting Canberra Airport's objective of minimising the impact of operations on the natural and physical environment.

With more than 40,000 passenger aircraft movements per year, Canberra Airport recognises the importance of implementing positive sustainable actions which off-set some of the emissions that are generated by aircraft arriving and departing from the airport. The proactive steps taken by airlines over the last decade to invest in new, more fuel-efficient and technologically advanced aircraft demonstrate the commitment across the aviation industry to decarbonisation. However, it is clear that without refined guidance from industry participants and the Commonwealth Government, aviation's path to reaching net zero by 2050 will be hampered.

## Sustainable aviation fuel

Given aircrafts account for between two and three per cent of all global carbon emissions, the decarbonisation of the aviation industry is necessary for Australia to meet the net zero targets set by the Commonwealth Government. Initiatives such as more fuel-efficient aircraft contribute to net zero, but sustainable aviation fuel (SAF) is the near and long-term decarbonisation solution to drive emissions reduction across the aviation industry.

The International Air Transport Association (IATA) estimates that the uptake of SAF will reduce global aviation emissions by between 62 and 78 per cent by 2050. Canberra Airport agrees with the sentiment of the consultation paper that achieving net zero across the Australian aviation industry is only achievable through the progressive transition to SAF.

Canberra Airport has a state-of-the-art fuel farm that has the capacity to cater for a significant increase in domestic and international aviation activity by storing around 770,000 litres of jet fuel. Through the use of advanced technologies, the fuel farm operates under strict environmental controls. The progressive nature of the fuel farm reflects Canberra Airport's ongoing commitment to quality, safety and sustainability.

Canberra Airport is satisfied that existing fuel infrastructure can accommodate SAF. As the current fuel farm is compatible for the "drop-in" of blended SAF, Canberra Airport is in the position to support airlines to begin using SAF on a larger scale. There would be no

modification required to the practices of storing, transferring or refuelling. As demand for SAF increases, Canberra Airport will be well-prepared to provide the necessary support required to meet the decarbonisation goals of the industry.

The Jet Zero Council's role in progressing aviation's capability to meet net zero targets is valued. The promotion of further research by the Council to identify cost-effective measures to produce SAF to ensure it will not have an adverse impact on airfares is crucial. Collaboration between researchers, supply-chain participants and industry stakeholders is necessary to achieving a positive outcome for the environment and consumers.

This research must be embraced by all aviation stakeholders to guarantee the realisation of decarbonisation objectives. The close proximity to leading universities and researchers means Canberra Airport is equipped and prepared to assist in the trialling of SAF technology that emerges from this research. Providing the infrastructure to support this process will enhance aviation's ability to align with the net zero targets set in Australia and abroad.

Recognising the role airports can play to advance a domestic SAF industry, Canberra Airport has also proactively sought to support Australian industry participants who have the potential to produce SAF. In 2023, Canberra Airport announced an investment of USD\$10 million into Vast, an Australian renewable energy company with a focus on concentrated solar thermal power (CSP) energy systems which can produce SAF.

Vast has developed CSP v3.0 technology to be based at its utility-scale reference plant at Port Augusta that will capture the sun's energy and generate clean, low-cost, dispatchable power. The carbon free power and heat produced by this technology can be dispatched to the grid, or used as a thermal battery, stored for later dispatch.

Co-located with the utility-scale reference plant will be a green methanol demonstration plant which will be supplied with baseload renewable heat to assist in the production of SAF. Vast anticipates that up to 7,500 tonnes of green methanol will be produced annually. Canberra Airport recognises the potential of Vast's technology to play a major role in powering large-scale low-cost production of SAF.

If the aviation industry is to meet net zero targets, collaboration between various industry participants is required. Canberra Airport's investment in Vast is a demonstration of the importance of airports supporting the domestic production of SAF. The timely development of large-scale production is crucial, and Canberra Airport hopes to play a leading role in the establishment of a domestic production industry through support. This aligns with the airport's persistent commitment to sustainability.

## Domestic production

As noted in the consultation paper, Australia does not currently produce and distribute SAF on a large scale. This impacts the ability of the industry to appropriately respond to mandates in an orderly manner. As an infrastructure provider, Canberra Airport is focused

on ensuring the fuel infrastructure on airport is equipped to accommodate SAF should airline demand increase in the near future.

Domestic production of SAF will be necessary to ensure net zero is achieved. It is imperative that appropriate supply-side drivers are effectively analysed by the Commonwealth Government to incentivise domestic agricultural producers to contribute to the production of SAF.

Australia's sustainable environment, rich agricultural practices and extensive feedstock supplies set the foundations for a domestic SAF production industry. The ACT and southern NSW are resource rich which would provide sufficient feedstock to support the domestic production of SAF. This significant variety of feedstock means that Australia is capable of becoming a global producer of SAF, servicing both the domestic and international aviation markets. The opportunity to develop a high-value SAF production industry will deliver economic and employment benefits to the ACT and southern NSW. However, this can only be realised once there is a shift away from the export of significant levels of local feedstock.

The potential for feedstock export agreements to be extended beyond 2030 will further reduce the likelihood of the establishment of a significant domestic production industry. Airports and the Jet Zero Council have been clear in advocating for appropriate intervention from the Commonwealth Government to work with airlines, fuel producers, airports and other stakeholders to overcome the reliance on overseas jet fuel supply-chains. This consultation process is an appropriate step in achieving this, however, the incentives that emerge from this process must be enacted in a timely manner to ensure overseas dominance is not entrenched and the development of a local production industry is not unnecessarily hindered.

Canberra Airport encourages the Commonwealth Government, under guidance from the Jet Zero Council, to collaborate with participants across the supply-chain to develop incentives that will instil confidence in producers from across the ACT and southern NSW to contribute to aviation's decarbonisation goals. Guaranteeing the resources of the region are utilised for local SAF production rather than exported to other countries will convey a clear message that Australia's aviation industry is committed to emissions reduction.

## Conclusion

For more than two decades, Canberra Airport has been committed to sustainability by reducing the impact operations have on the natural and physical environment. Contributing to the transport industry's overall path to reaching net zero is a key objective in the broader decision-making across the airport.

Reducing greenhouse gas emissions across aviation is a priority for all industry participants. The benefits afforded by the uptake of SAF have been proven in other jurisdictions. Australia's future large-scale SAF production is reliant on effective collaboration between government and industry stakeholders to develop demand and supply mechanism.



The fuel infrastructure at Canberra Airport is capable of responding to an increase in the use of blended SAF by airlines. As demand for SAF increases across the domestic market in the forthcoming years, it is necessary for demand-and-supply side initiatives to be considered and implemented.

As this process continues, Canberra Airport remains prepared to support airlines as they transition to a greater uptake of SAF.