

Transport and Infrastructure Net Zero Consultation Roadmap

Take the survey

Department of Climate Change, Energy, Environment and Water

Response received at:

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1 Confirm that you have read and understand this privacy notice.

Yes

2 Please indicate how and if you want your submission published.

Public

3 Published name

Airlines for Australia & New Zealand (A4ANZ)

4 Confirm that you have read and understand this declaration.

Yes

5 First name

Emma

6 Last name

Wilson

7 Email

[REDACTED]

8 Phone



9 Who are you answering on behalf of?
Organisation

10 Organisation name
Airlines for Australia & New Zealand (A4ANZ)

11 What best describes you or your organisation?
Industry

12 What sector do you represent?
Other: "Aviation"

13 What state or territory do you live in?
Victoria

14 Postcode
3000

15 What area best describes where you live?
City

16 1. Do you support the proposed guiding principles?
Not answered

17 1.1 Please add details to your response.
Not answered

18 2. Do you support the use of the avoid-shift-improve framework as a tool to identify opportunities for abatement?
Not answered

- 19** 2.1 Please add details to your response.
Not answered
- 20** 3. Do you agree the development of a national policy framework for active and public transport will support emissions reduction?
Not answered
- 21** 3.1 Please add details to your response.
Not answered
- 22** 4. What should be included in a national policy framework for active and public transport and how should it be developed?
Not answered
- 23** 5. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the movement of people contributes to transport emissions reduction?
Not answered
- 24** 6.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure that the movement of goods contributes to transport emissions reduction?
Not answered
- 25** 6.2. How would these actions address the identified challenges and opportunities for emissions reduction in the movement of goods?
Not answered
- 26** 7. Do you agree with the proposed net zero pathway for light road vehicles?
Not answered

- 27 7.1 Please add details to your response.
Not answered
- 28 8. The Australian Government is currently developing an Australian New Vehicle Efficiency Standard and has already begun to implement actions in the National Electric Vehicle Strategy.8.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce light vehicle emissions?
Not answered
- 29 8.2 How would these actions address the identified challenges and opportunities to reduce light vehicle emissions?
Not answered
- 30 9. Do you agree with the proposed net zero pathway for heavy road vehicles?
Not answered
- 31 9.1 Please add details to your response
Not answered
- 32 10. The proposed pathway for heavy road vehicles relies on a mix of battery electric, hydrogen fuel-cell and low carbon liquid fuels.Rank from 1 to 3, the order in which these should be prioritised for emissions reduction.
Not answered
- 33 10.1 Please add details to your response. Why did you rank them in that order?
Not answered
- 34 11. What role should low carbon liquid fuels play in the heavy vehicle

decarbonisation?

Not answered

35 12. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce heavy vehicle emissions?

Not answered

36 13. Do you agree with the proposed net zero pathway for rail?

Not answered

37 13.1 Please add details to your response.

Not answered

38 14. The proposed pathway for rail relies on a mix of battery electric, hydrogen fuel-cell and low carbon liquid fuels. Rank from 1 to 3, the order in which these should be prioritised for emissions reduction.

Not answered

39 14.1 Please add details to your response. Why did you rank them in that order?

Not answered

40 15. What role should low carbon liquid fuels play in rail decarbonisation?

Not answered

41 16. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce rail emissions?

Not answered

42 16.1 How would these actions address the identified challenges and

opportunities to reduce rail emissions?

Not answered

43 17. Do you agree with the proposed net zero pathway for maritime?

Not answered

44 17.1 Please add details to your response.

Not answered

45 18. The Australian Government is engaging in consultation as part of the development of the Maritime Emissions Reduction National Action Plan and those consultations will also inform the final Roadmap and Action Plan. 18.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce maritime emissions?

Not answered

46 18.2 How would these actions address the identified challenges and opportunities to reduce maritime emissions?

Not answered

47 19. Do you agree with the proposed net zero pathway for aviation?

Not answered

48 19.1 Please add details to your response.

Not answered

49 20. The Australian Government has already engaged in consultation on aviation decarbonisation through the development of the Aviation White Paper and those consultations will also inform final Roadmap and Action Plan.

Not answered

- 50 20.1 What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce aviation emissions?
Not answered
- 51 21. Do you agree with the proposed net zero pathway for transport infrastructure?
Not answered
- 52 21.1 Please add details to your response.
Not answered
- 53 22. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to reduce transport infrastructure emissions and ensure that transport infrastructure is ready for and enables low-emission transport modes?
Not answered
- 54 22.1 How would these actions address the identified challenges and opportunities to reduce transport infrastructure emissions?
Not answered
- 55 23. What additional actions by governments, communities, industry and other stakeholders need to be taken now and in the future to ensure the energy mix is ready to support transport emissions reduction?
Not answered
- 56 24. How should the use of low carbon liquid fuels (LCLFs) be prioritised across different transport modes over time to achieve maximum abatement?
Not answered

- 57 25. What are the best ways for the Australian Government to work collaboratively with industry, business, governments and communities to implement the proposed pathways?
Not answered
- 58 25.1 What are good domestic or international examples of partnership and collaboration on transport and transport infrastructure emissions reduction that could inform the final Roadmap and Action Plan?
Not answered
- 59 25.2 What opportunities can Government leverage to show leadership in Australia and internationally?
Not answered
- 60 26. What measures and metrics should be used to evaluate the final Transport and Infrastructure Net Zero Roadmap and Action Plan?
Not answered
- 61 26.1 What other data and evidence could governments use and how could this offer further insights on the pace, scale and location of transport emissions reduction pathways?
Not answered
- 62 27. Do you have any feedback on the proposed review process?
Not answered
- 63 28. Do you have any further feedback on the Consultation Roadmap and proposed pathways?
Not answered
- 64 28.1 Is there anything missing? Are the sections appropriately integrated? Is the Roadmap appropriately ambitious?
Not answered

- 65 29. Is there any further information or documentation that you wish to be considered with your submission?
Not answered
- 66 Would you like to upload a document?
Yes
- 67 Have you removed any identifying information from your submission?
Yes
- 68 Upload a submission
Transport and Infrastructure Net Zero Consultation Roadmap - A4ANZ Submission.pdf
- 69 Upload a submission
Not answered
- 70 Upload supporting file
Not answered
- 71 Upload supporting file
Not answered

Net Zero Unit

Data, Research, Strategy and Net Zero

Department of Infrastructure, Transport, Regional Development, Communications and the Arts

GPO Box 594

Canberra ACT 2601

1 August 2024

RE: Transport & Infrastructure Net Zero Consultation Roadmap

Dear Net Zero Unit,

Airlines for Australia and New Zealand (A4ANZ) welcomes the opportunity to respond to the Government's *Transport and Infrastructure Net Zero Consultation Roadmap*. A4ANZ shares the Government's focus on ensuring that the transport sector is fit for our net zero future.

As the industry group established to represent airlines based in Australia and New Zealand, A4ANZ's commentary on the questions posed in the consultation roadmap will be focused on decarbonising the Australian aviation sector.

In this submission, we have not answered each of the specific questions posed by the consultation roadmap – instead, we provide high-level commentary which aims to address two broad, yet inextricably linked, policy challenges; whether the proposed net zero pathway for aviation outlined in the consultation roadmap is appropriate, and the actions which need to be taken now and in the future to ensure that the energy mix, including Low Carbon Liquid Fuels, is ready to support transport emissions reduction.

A4ANZ member airlines will also be making their own submissions to the consultation.

A4ANZ supported the formation of the Australian Jet Zero Council as part of a broader Government focus on decarbonising the aviation industry, and welcomed the focus on sustainable aviation throughout the development of the upcoming Aviation White Paper, as well as commitments made in the 2024-25 Federal Budget to progress the development of a domestic Low Carbon Liquid Fuels industry.

Our members are firmly committed to working with government and industry to decarbonise aviation and reach net zero emissions by 2050 – demonstrated by backing the global airline industry's 2021 net zero resolution,ⁱ advocating for the adoption of the International Civil Aviation Organisation's (ICAO) collective Long Term Aspirational Goalⁱⁱ in support of the Paris Agreement's long-term temperature goal, and, closer to home, supporting commitments by the Federal Government for Australia to reach net zero by 2050.ⁱⁱⁱ

In 2022, A4ANZ led a significant piece of work in this space, publishing an *Australian Roadmap for Sustainable Flying – Net Zero by 2050*, informed by stakeholders from across the aviation and energy sectors. This Roadmap outlines potential pathways towards decarbonising flying in Australia, to reach net zero emissions by 2050 – with the use of sustainable aviation fuel being a key facilitator.

A4ANZ provided the Net Zero Unit with a copy of A4ANZ's Roadmap during early consultation on the Transport & Infrastructure Net Zero Roadmap. We also note that the Net Zero Unit are familiar with A4ANZ's submission to the Aviation Green Paper, which builds on our Roadmap, outlining policy options for consideration by the Government.

More recently, A4ANZ has participated in consultations that will inform the Roadmap and Action Plan, including the Energy & Electricity Sector Plan, and the Low Carbon Liquid Fuels Consultation Paper – given the critical role of LCLFs in the Australian aviation sector reaching net zero emissions by 2050. A4ANZ’s response to the LCLF consultation is included at *Appendix A*.

A4ANZ welcomes the Net Zero Unit’s stated commitment to using outcomes from these other consultations as inputs to the final Transport and Infrastructure Net Zero Roadmap and Action Plan.

The Proposed Net Zero Pathway for Aviation

Question 19 asks stakeholders whether they agree with the proposed net zero pathway for aviation, as outlined in Figure 18 in the consultation roadmap. A4ANZ broadly agrees that the net zero pathway for aviation outlined in the consultation roadmap is accurate – according with A4ANZ’s *Australian Roadmap for Sustainable Flying* – and reflective of likely available decarbonisation options and technology.

However, the mapping of that pathway relies on a number of assumptions about the policy environment. Accordingly, A4ANZ would encourage the Net Zero Unit to also consider the following points in developing the final version of the Transport & Infrastructure Net Zero Roadmap and Action Plan:

The Role of SAF Policy

Without an appropriate and comprehensive policy framework which includes supply- and demand-side policies, and the frameworks for certification and SAF accounting, Australia will not reach the future outlined in the proposed net zero pathway, which suggests that from 2040-2050, the majority of fuel used in Australia will be SAF.

Additionally, the consultation roadmap indicates that from 2024-2030, the Government expects that the development of certification and accounting frameworks to verify LCLFs will be completed. A4ANZ would like to emphasise the critical importance of timely design and implementation of policies to support the development and deployment of Australian-made LCLFs prior to 2030 – ideally within the next 12 to 18 months.

In our response to the Low Carbon Liquid Fuels Consultation Paper, A4ANZ noted that alongside the development of supply- and demand-side policies, the Government must continue to progress its work on both certification and SAF accounting frameworks, at pace, to support the development of an Australian LCLF industry, and that an absence of or lag in the development of these policies will have a direct impact on both the supply and demand for Australian-made LCLFs.

There is agreement across industry that there is a limited window for Australia to capitalise on the opportunity to be a LCLF-producing superpower. For this to happen, the Government must be able to provide industry, and LCLF producers, with a clear signals and policy to establish long-term planning security and investment certainty.

For further commentary on necessary policies to stimulate and support the development and deployment of Australian-made SAF and other LCLFs, please see A4ANZ’s submission to the Low Carbon Liquid Fuels Consultation Paper, included at *Appendix A*.



The Role of Biogenic and Synthetic SAF

The net zero pathway for aviation outlined in the consultation roadmap notes that between 2024 and 2030, SAF production will prioritise agricultural residues, waste materials, and energy crops; and flags investment in synthetic SAF from 2030 to 2040.

It is important to note that CSIRO modelling shows that biogenic SAF will still have a critical role to play in the decarbonisation of the Australian aviation sector from 2030 onwards. Indeed, as highlighted by the CSIRO's Sustainable Aviation Fuel Roadmap, SAF produced from residues, carbohydrates, and waste will account for more than half of Australia's potential SAF production until 2050, with synthetic SAF production only ramping up post-2040.^{iv}

As such, we would support the role of both biogenic and synthetic SAF being more clearly expressed in the net zero pathway for aviation that is reflected in the final Roadmap and Action Plan.

Application of Modal Substitution in Australia

The consultation roadmap notes that “*modal shift towards alternative transportation methods like low emission road transport, high-speed rail, and increased use of videoconferencing could reduce domestic demand for flight*”. It is of note that, following extensive consultation, in developing our *Australian Roadmap for Sustainable Flying*, we did not include any abatement from a reduction in demand – unlike projections from individual European countries, or the regional Roadmap for European Aviation, *Destination 2050*, developed by Airlines for Europe. This is because Australia's geography, and the resulting nature of longer-distance flying means that modal substitution (e.g. train travel, driving) is not currently a realistic option given the distances and time involved, nor will it likely be by 2050.

While there have been international calls for people to fly less as the key means of reducing aviation's contribution to global emissions^v, such a proposal vastly oversimplifies what is a complex global challenge. More importantly, it ignores the positive, unique and vital role that the aviation industry plays in connecting the world, adding immense value to the global – and Australian – economy.

Prior to the COVID-19 pandemic, the air transport sector contributed AUD\$104bn to the Australian economy, and directly and indirectly supported 716,000 jobs.^{vi} The airline industry is also a significant source of economic activity on its own; pre-pandemic, it contributed \$9.4 billion to the economy and supported 50,000 jobs.^{vii}

Indeed, the effect of the COVID-19 pandemic, in bringing movements to, from and within Australia to a standstill, highlighted the critical and substantial importance of air transport to the Australian economy. Australia's unique geography means that there are remote communities that are only accessible by air or that are long distances from major population centres, making travel by road time consuming and expensive.^{viii} Aviation therefore plays an important role servicing the needs of these communities by providing access to key services, including transport and freight, medical services, social services and law enforcement, and travel for business and tourism.

Given this, flying less is not a viable alternative to progressing other, effective emissions reductions measures – particularly for countries such as Australia, a large island nation with challenging geography, which is reliant on aviation for so much of its connectivity.

Prioritising Low Carbon Liquid Fuels in the Energy Transition

A4ANZ welcomes the Government's focus on LCLFs, as this is particularly important for the decarbonisation of Australian aviation industry. As a hard-to-electrify sector, aviation will rely heavily on the use of Sustainable Aviation Fuel (SAF) to reach net zero emissions by 2050, and for its long-term future.

The consultation roadmap asks how the use of LCLFs should be prioritised across different transport modes over time to achieve maximum abatement. While A4ANZ understand the Government's focus on "maximum abatement" from LCLFs, focusing solely on using LCLFs to decarbonise heavy vehicles, heavy haulage, construction, or shipping will be to the detriment of the Australian aviation sector – necessitating a faster and higher-cost transition in the future.

In order for the 2040-2050 vision articulated in the proposed net zero pathway for aviation – of SAF making up the majority of aviation fuel used in Australia – to be realised, there must not only be the development of a LCLF industry in Australia, but also prioritisation of the production of SAF.

Both A4ANZ's and the CSIRO's Roadmaps demonstrate clearly how the proportionate contribution of aviation to total transport emissions will increase significantly over time if targeted policy measures to ensure affordable access to LCLFs for SAF are not prioritised in the short to medium term.

As noted in the LCLF Consultation Paper, renewable diesel (RD) is currently twice the price of conventional diesel – compared with SAF which is between two to five times the price of conventional jet fuel. As such, A4ANZ strongly advises the Government to consider different rates of support for SAF and RD – noting that this could still be progressed through a well-designed Production Tax incentive (as noted in A4ANZ's submission to the LCLF Consultation Paper, at Appendix A).

For example, under the Inflation Reduction Act in the United States, the SAF Credit in its current form provides between \$1.25 to \$1.75/gallon depending on the carbon intensity of the fuel, with credits for renewable diesel under the Biodiesel Mixture Excise Tax Credit being worth \$1/gallon. This differentiation of support will continue under the Cleaner Fuels Production Credit, due to commence in 2025, with non-aviation fuel eligible for credits of \$1/gallon, while aviation fuel will be eligible for credits of up to \$1.75/gallon.

Further commentary on the supply- and demand-side policy measures necessary for the development of a robust and sustainable domestic SAF industry is available in A4ANZ's submission to the LCLF Consultation Paper included as Appendix A.

A4ANZ looks forward to continuing to provide input, as appropriate, to the Transport and Infrastructure Net Zero Roadmap and Action Plan and would welcome the opportunity to discuss any part of this submission.

Sincerely,



Dr Alison Roberts

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Chief Executive Officer
Airlines for Australia & New Zealand

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ⁱ International Air Transport Association. 2021. Net-Zero Carbon Emissions by 2050. [Media Release: 04/10/21] At: <https://www.iata.org/en/pressroom/2021-releases/2021-10-04-03/>

ⁱⁱ ICAO. 2022. States adopt net-zero 2050 global aspirational goal for international flight operations. Media Release: 7 October 2022. At: <https://www.icao.int/Newsroom/Pages/States-adopts-netzero-2050-aspirational-goal-for-international-flight-operations.aspx>

ⁱⁱⁱ The Hon. Anthony Albanese MP. Media Release: Albanese Government Passes Climate Change Bill in the House of Representatives [04/08/2022]. At: <https://www.pm.gov.au/media/albanese-government-passes-climate-change-bill-house-representatives>

^{iv} CSIRO. 2023. Sustainable Aviation Fuel Roadmap. AT: <https://www.csiro.au/en/research/technology-space/energy/sustainable-aviation-fuel>

^v Flight shame or flygskam: https://en.wikipedia.org/wiki/Flight_shame

^{vi} Air Transport Action Group (2020), Aviation Benefits Beyond Borders. At: <https://aviationbenefits.org/downloads/aviation-benefits-beyond-borders-2020/>

^{vii} Deloitte Access Economics (2018), Connecting Australia: The economic and social contribution of Australia's airports, piii. At: <https://www2.deloitte.com/content/dam/Deloitte/au/Documents/Economics/deloitte-au-economics-contribution-australian-airport-industry-080318.pdf>

^{viii} Commonwealth Senate, Interim report to the inquiry into the *Future of Australia's aviation sector, in the context of COVID-19 and conditions post pandemic*, March 2021, p5. At: https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Rural_and_Regional_Affairs_and_Transport/CovidAviation/Interim_Report

UNLOCKING AUSTRALIA'S LOW CARBON LIQUID FUEL OPPORTUNITY

SUBMISSION TO CONSULTATION PAPER

OVERVIEW

Airlines for Australia & New Zealand (A4ANZ) welcomes the opportunity to respond to the Low Carbon Liquid Fuels Consultation Paper, released by the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA), and the Department of Climate Change, Energy, Environment and Water (DCCEEW).

A4ANZ has welcomed the Government's focus on decarbonising the aviation industry through consultation on the Aviation White Paper, and has supported the formation of the Australian Jet Zero Council as an important step to ensuring that industry and government are able to work collaboratively to design and implement a coordinated national strategy and policy framework to support the decarbonisation of aviation in Australia.

A4ANZ and our member airlines are pleased to note that the Government has recognised the opportunity presented by, and critical role of, an Australian Low Carbon Liquid Fuel (LCLF) industry and is now consulting on the necessary suite of policies – including both supply and demand levers – to promote and support the development of Australian-made Sustainable Aviation Fuel (SAF) and Renewable Diesel.

As the industry group established to represent airlines based in Australia and New Zealand, A4ANZ's commentary on the questions posed in the consultation paper will be focused on SAF. A4ANZ's submission does not answer each of the specific questions posed by the paper, and instead provides high-level commentary covering each of the key areas of the Government's focus; the LCLF opportunity, demand-side mechanisms, production incentive schemes, and emissions and sustainability criteria.

A4ANZ member airlines will also be making their own submissions to the consultation.

THE LOW CARBON LIQUID FUELS OPPORTUNITY

Australia's Comparative Advantage

The LCLF Consultation Paper asks what Australia's comparative advantage is as a potential producer of LCLFs. It is broadly recognised, both within Australia and internationally, that Australia has an abundance of high-quality and diverse biogenic feedstock primed for the production of LCLFs.

The Sustainable Aviation Fuel Roadmap, released by the CSIRO in conjunction with Boeing in 2023 demonstrated that Australia has the opportunity to play a major role as both a source of feedstocks for LCLF and a LCLF producer, given that Australia already produces a significant amount of feedstock which is exported internationally for the production of LCLFs in the EU, Singapore, and US. The CSIRO Roadmap also notes that Australia is well-positioned to capitalise on its natural abundance of diverse feedstocks including; carbohydrates, waste, residues, oilseeds, and, in the future, green hydrogen.

More recently, analysis from the World Economic Forum has identified Australia as "one of the most ideal production locations" for SAF – classifying it as a Top 20 production location, based on most competitive production cost regardless of the deployed technology.¹

It is also of note that the carbon intensity of some of Australia's agricultural products has been found to be significantly lower compared to the same product produced by other exporting countries – making it a valuable and high-quality feedstock.² As such, using these products as feedstock for LCLFs produced in Australia could produce high-quality SAF with significant emissions reduction over the total lifecycle.

As noted by the CSIRO in their SAF Roadmap, in a scenario where Australia becomes only a feedstock provider or exporter, rather than an integrated local processor and LCLF producer, it risks missing out on the significant benefits and opportunities presented by a local – and regional – bioeconomy.

Australia's Opportunities from a LCLF Industry

Australian-Made Options for Decarbonisation

Both the Australian Roadmap for Sustainable Flying produced in 2022 by A4ANZ, and the Sustainable Aviation Fuel Roadmap produced by the CSIRO in 2023, estimate that demand for jet fuel in Australia is likely to be between 14-15 billion litres by 2050.

Importantly, the CSIRO SAF Roadmap demonstrates that Australia could potentially, with the right policy conditions, produce enough SAF to meet almost 90% of its own anticipated jet fuel demand in 2050.

With this quantum of demand, and supply potential (as outlined above), it makes sense for Australia to pursue a domestic LCLF industry – not only to decarbonise the Australian aviation sector, but to assist in meeting the decarbonisation needs of other sectors of the economy. An Australian LCLF industry would not only produce SAF but also Renewable Diesel, which can already be used at a 100% blend, and is critical in the decarbonisation of other hard-to-electrify sectors such as construction, shipping, trucking, mining, and heavy haulage.

At present, both SAF and renewable diesel would have to be imported for use – following Australia's current practice of importing 90% of our liquid fuel. Given that Australia is currently exporting significant quantities of high-quality, high-value feedstocks for the production of LCLF in other countries, it makes no sense to not become a domestic producer of LCLFs.

Liquid Fuel Security

A domestic LCLF industry will have a significant positive impact on Australia's domestic fuel security – safeguarding Australia's long-term sovereign refining capability and reducing Australia's reliance on imported fossil jet fuel and diesel – protecting against geopolitical risks, price shocks, and supply chain issues.

Analysis by ICF suggests that imports of jet fuel could be reduced to as little as 21% by 2050³, or an even smaller proportion, if Australia's potential – as outlined in the CSIRO SAF Roadmap – is fully realised.

Additionally, by utilising Australian-made LCLF, and reducing reliance on imported fossil fuels, the Australia Defence Force – specifically, the Royal Australian Air Force, as the largest consumer of fuel in the ADF – would increase its operational independence and resilience, translating to an increase in military capability.⁴ Indeed, both the US and UK militaries have trialled and adopted SAF for their aircraft fleets – leading to a global precedent for the widespread adoption of SAF within military aviation.⁵

Economic and Employment Opportunities

It is now well-accepted that an Australian LCLF industry has the potential to provide major benefits to the Australian economy and community more broadly. Preliminary analysis by A4ANZ – based on projections from the ARENA Bioenergy Roadmap – suggests that an Australian SAF industry alone, could, across the total supply chain, create more than 7,400 jobs and contribute an additional \$2.8 billion annually in GDP by 2030, and over 15,600 local jobs and an additional \$7.6 billion annually in GDP by 2050.⁶

Further analysis by ICF, on behalf of Qantas, confirms the quantum of these estimates for local jobs, noting that a domestic SAF industry would also safeguard and maintain 53,000 jobs downstream in the aviation sector.⁷

Regional/Asia Pacific Leadership

In addition to the Australian market for LCLFs, there is an opportunity for governments to take a regional approach. A4ANZ has previously noted the interest from both the New Zealand Government and aviation industry in working together to develop a regional solution for the supply of SAF – noting that it is unlikely that New Zealand will be able to meet its demand for SAF through domestic production alone.

With Australia and New Zealand both having significant connectivity to the Pacific, there is also an opportunity for Australia and New Zealand to become sustainable aviation hubs – facilitating the supply of SAF, and therefore sustainable flying, throughout the Pacific region.

DEMAND-SIDE MEASURES

A4ANZ supports the Government's commitment to undertake a regulatory impact analysis on the costs and benefits of introducing demand-side measures for LCLFs.

A4ANZ member airlines recognise the importance of a regulated demand lever, with requirements relating to carbon intensity, to provide long-term planning and investment certainty for an Australian LCLF industry. We support this being progressed through either a mandate or a low-carbon fuel standard, discussed further below.

A4ANZ would also support the Government considering how Defence Force – or broader Government – procurement may be leveraged to stimulate LCLF demand in Australia.

While the implementation of demand-side measures does not need to be immediate – and in fact would require a significant lead time before implementation at a material level, to not adversely impact the industry or create unintended consequences – the consideration, development, and announcement of such measures does warrant urgent action.

There is agreement across industry that there is a limited window for Australia to capitalise on the opportunity to be a LCLF-producing superpower. For this to happen, the Government must be able to provide industry, and LCLF producers, with a clear signal to establish long-term planning security and investment certainty.

Therefore, while A4ANZ and the industry more broadly are supportive of the Government's commitment to undertake a regulatory impact analysis on various demand-side measures – we would urge the Government to prioritise this work, and for it to be undertaken in an efficient and timely manner.

Low Carbon Fuel Standard Considerations

While there is broad industry agreement that a Low Carbon Fuel Standard (LCFS) connected with a trading scheme would provide long-term policy certainty for a domestic LCLF industry, there is also acknowledgment that this option is far broader and more complex than the blunt instrument of a mandate.

As a result of this complexity and the potential broad application of a LCFS, there are concerns that this may take significantly more time to design, consult on, and implement – especially given the number of stakeholders involved in any consultation on such a policy, and the Government’s previous experience with the *New Vehicle Efficiency Standard*.

Mandate Considerations

As the consultation paper notes, a progressive volumetric mandate aligns with policies in other jurisdictions. Mandates for Sustainable Aviation Fuel have either been introduced, or are in the process of being introduced in multiple jurisdictions, including: the EU, Japan, Singapore, India, Indonesia, Malaysia, Turkey, and Brazil.

A volumetric mandate may simplify monitoring, reporting, and verification for compliance. However, there is also a view from industry that the Government should consider carbon intensity in designing any mandate for the Australian market.

A4ANZ understands that Government will be undertaking an impact analysis of demand-side measures with inputs from this consultation. We would strongly urge the Department to include provision for economic modelling on the impact of any demand side-measures in this analysis.

In undertaking regulatory impact analysis on the introduction of a potential mandate, the Government has highlighted a number of considerations for inclusion. A4ANZ suggests that the analysis also consider the following:

- Various potential blending rates, the impact of these on the industry, and likely outcomes, including but not limited to:
 - the potential financial impacts on airlines, and flow through of this to consumers;
 - any potential impacts on competition;
 - whether projected supply from announced facilities will be sufficient to meet demand.
- The minimum sustainability criteria for LCLFs to ensure a meaningful emissions reduction.
- The potential trajectory of a volumetric mandate, and an appropriate interval to review blending levels, to ensure that supply is able to meet projected demand, to avoid supply bottlenecks.
- To whom the blending mandate is applied – for example, under the Refuel EU Aviation initiative, a blending mandate will be imposed on aviation fuel suppliers, with an obligation to ensure that all aviation fuel supplied to aircraft operators at European Union (EU) airports contains a minimum share of SAF.
- How a potential mandate would interact with the Safeguard Mechanism, and the National Greenhouse and Energy Reporting Scheme more broadly.
- Whether access to LCLFs will be equal for all airlines, and if it won’t be (based on network operations), the potential mechanisms to address this to ensure that all airlines have a level

playing field, and that market distortion does not occur. This could be done through SAF accounting, including through a Book and Claim mechanism.*

In addition to the above considerations for the regulatory impact analysis, A4ANZ would also draw attention to the following important points, below.

As A4ANZ and industry more broadly have advised several times, mandates alone are not enough to drive SAF uptake, and must be coupled with incentives to help bridge the significant cost gap between SAF and conventional jet fuel. This is echoed by the World Economic Forum's guidance on the introduction of a SAF blending mandate in Europe, which notes that the introduction of a mandate is insufficient to unlock investments in the SAF supply chain, and that reaching the desired levels of SAF production will require public financial support.⁸

The experience of the SAF mandate in France has previously been cited by A4ANZ and others within industry as an example of a badly designed policy framework.⁹ Since the beginning of 2022, French regulations have required an average of 1% SAF on flights departing from France (from 2025 this will be adapted to the broader EU mandate under the ReFuel initiative). Due to poorly-designed policy, the cost of SAF is extraordinarily high – up to six times the cost of conventional jet fuel – and not all aircraft operators have been able to access SAF, causing a non-level playing field.¹⁰ Additionally, the mandate has been insufficient in stimulating the production of the volume of SAF it requires.¹¹

It will be important to avoid similar negative impacts for the Australian population, who are heavily-reliant on air transport, particularly in the regions, whilst simultaneously facing sustained cost of living pressures. A4ANZ is therefore pleased to see Government acknowledge in this consultation paper, that in order to develop a robust and sustainable LCLF industry in Australia, there must be a suite of policy measures introduced – including both demand measures and supply measures. It is only through a carefully-considered combination of these measures that market distortions and significant consumer cost impacts will be prevented.

As noted by the World Economic Forum, it is vital that these policies work to simultaneously boost production and consumption of SAF in a strategic and sequenced manner – supply first, then demand – and that they are aligned with the technically feasible pace of production ramp up to avoid supply bottlenecks and price volatility.¹²

SUPPLY-SIDE MEASURES

A4ANZ welcomes the Government's consideration of mechanisms to deliver production incentive support to producers of Australian-made LCLFs.

It is of note that, in recent polling at roundtables convened by Government and Bioenergy Australia, a significant majority of industry participants nominated a Production Tax Incentive as their preferred option of support, in the instance of only being able to choose one policy option.

A4ANZ members broadly agree that a Production Tax Incentive – analogous to the Hydrogen Production Tax Incentive (HPTI) announced in the 2024-25 Federal Budget – is the mechanism most likely to deliver effective production support for an Australian LCLF industry.

* A robust SAF accounting framework – including Book and Claim – should be progressed parallel to the development of both demand- and supply-side policies, regardless of whether the Government pursues the option of a volumetric SAF mandate.

Production Tax Incentives, as described in the consultation paper and the 2024-25 Federal Budget – and in the case of the Tax Credits available to SAF producers in the United States under the Inflation Reduction Act (IRA) – are preferred because as they are technology-neutral and don't favour only established producers or production pathways like HEFA.

Indeed, performance-based tax credits – like the Sustainable Aviation Fuel (SAF) Tax Credit and the upcoming Clean Fuels Production Credit (CPFC) available under the US IRA – are broadly agreed to be among the most effective supply-side policies that currently exist in the global LCLF industry.

However, a key downside of the current US SAF Tax Credit and the soon-to-be-implemented CPFC is the short duration of these policies – the CPFC, due to commence in 2025 only runs until 2027, and must be extended every two years thereafter.¹³

As such, to provide Australian LCLF producers with long-term planning and investment certainty, A4ANZ would recommend that the Government design any Production Tax Incentive for SAF in a similar way to the HPTI, having the measure in place for at least ten years. Such a timeframe would accord with global best practice recommendations for these types of policies and aligns with the typical timeframe of SAF offtake agreements, providing LCLF producers and projects with long-term business case and investment certainty.¹⁴

Like the SAF Tax Credit and CPFC, A4ANZ member airlines, and industry more broadly, also support any production tax incentive for LCLFs in Australia being tied to carbon intensity as a way to provide greater support for more sustainable production and encourage innovation to drive greater emissions reductions – with a baseline rate of support and further support available per litre for each percentage point of a reduction in carbon intensity.

On the question of specific levels of financial support associated with baseline rates and rates for carbon intensity reductions, individual airlines and fuel producers should be surveyed for their views, as the producers and end users of LCLFs.

While the highest priority of support would be the progression and design of a Production Tax Incentive, there is recognition within industry that targeted support or intervention may be required in the medium-term for more expensive or nascent technology – to ensure that Australia is able to diversify its production of LCLF, and meet the full potential for the production and supply of Australian-made LCLFs.

This targeted support or intervention could take the form of grants, or – in some cases – Contracts for Difference, however, this would have to be assessed on a case-by-case basis.

A4ANZ is pleased to see that the consultation paper notes that any production incentives would operate alongside targeted innovation support such as funding administered by ARENA from the Future Made in Australia Innovation Fund or the National Reconstruction Fund.

A4ANZ understands that Government intends to undertake further consultation on the detail of a supply side policy option, once the outcomes of this current consultation have been determined. We look forward to continuing to engage in this process as appropriate.

CERTIFICATION & ACCOUNTING FRAMEWORKS

Emissions & Sustainability Criteria

Ensuring feedstock and LCLF production processes are sustainable and transparently-reported is essential in providing industry, and the community more broadly, with trust and confidence that any LCLFs produced meet the intended standards and sustainability goals.

A4ANZ welcomes the Government's commitment to expand the Guarantee of Origin Scheme to certify the emissions and sustainability profile of low carbon liquid fuels.

A4ANZ has also welcomed the work of the Australian Jet Zero Council in exploring the development of preferred arrangements for SAF certification to provide assurance of the environmental credentials and provenance of SAF.

A key aspect in structuring country-based regulations is to, where possible, pursue harmonisation and alignment globally. To this end, A4ANZ supports aligning with international sustainability criteria, with provision for the practicalities and unique attributes of Australian feedstocks, for example, the comparatively low carbon intensity of Australian-produced grains, noted earlier in this submission.

There is appetite from industry to see Australian-specific data included in the certification standards associated with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) - eligible fuels.

Learning from international experience with developing sustainability criteria and certification will be key to progressing a framework for certification for SAF in Australia. It is important that Australian standards are aligned, where possible, with international standards to prevent market distortion and facilitate international trade, however, it will also be important to ensure that there is regional alignment and harmonisation with standards and regulations set by New Zealand, given that both industry and government in New Zealand are interested in working with Australia to explore a regional SAF solution.

The Importance of SAF Accounting Frameworks

To ensure that the sustainability attributes of SAF are appropriately accounted for, traced, transmitted, and communicated, a tracking mechanism is required to allow for airlines to claim the environmental benefits of their SAF purchases against their various decarbonisation obligations and commitments.¹⁵

Such a mechanism or framework will need to be implemented and recognised in Australia – including recognition under the Safeguard Mechanism and National Greenhouse and Energy Reporting (NGER) Scheme, more broadly.

There is broad agreement that a SAF accounting framework, based on trusted chain-of-custody approaches, is necessary to support the scale-up of SAF globally. In a country like Australia, with a significant aviation network – connecting rural and remote Australia with regional and major cities, a robust SAF accounting framework will be particularly important to overcoming the likely geographical constraints associated with the supply of Australian made LCLFs.

The development and recognition of a “Book and Claim” model would account for the production, distribution and use of SAF across various stakeholders and supply chains – including international supply chains. This will be of particular importance when considering opportunities to supply SAF in both New Zealand and the Pacific. IATA has outlined the key common principles and necessary attributes of a robust SAF accounting approach in recent policy papers.¹⁶

While the development and implementation of both supply- and demand-side policies are obviously the focus of this consultation paper, A4ANZ urges the Government to also continue to progress its work on both certification and SAF accounting frameworks, at pace, to support the development of an Australian LCLF industry. An absence of or lag in the development of these policies will have a direct impact on both the supply and demand for Australian-made LCLFs.

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- ¹ World Economic Forum. 2024. Scaling Up Sustainable Aviation Fuel Supply: Overcoming Barriers in Europe, the US and the Middle East. At: https://www3.weforum.org/docs/WEF_Scaling_Sustainable_Aviation_Fuel_Supply_2024.pdf
- ² <https://publications.csiro.au/publications/publication/Plcsi:EP2022-0163>
- ³ ICF. 2023. Developing a SAF industry to decarbonise Australian aviation. A report for Qantas and Airbus.
- ⁴ Cole, B. 2022. Decreasing Reliance on Fossil Fuels to Increase Defence Capability. Air/Space, 2. At: <https://airpower.airforce.gov.au/sites/default/files/2022-12/Decreasing%20Reliance%20On%20Fossil%20Fuels%20To%20Increase%20Defence%20Capability.pdf>
- ⁵ Cole, B. 2022. Decreasing Reliance on Fossil Fuels to Increase Defence Capability. Air/Space, 2. At: <https://airpower.airforce.gov.au/sites/default/files/2022-12/Decreasing%20Reliance%20On%20Fossil%20Fuels%20To%20Increase%20Defence%20Capability.pdf>
- ⁶ Analysis by Frontier Economics prepared for A4ANZ.
- ⁷ ICF. 2023. Developing a SAF industry to decarbonise Australian aviation. A report for Qantas and Airbus.
- ⁸ CST & WEF. 2021. Guidelines for a Sustainable Aviation Fuel Blending Mandate in Europe. At: http://www3.weforum.org/docs/WEF_CST_EU_Policy_2021.pdf
- ⁹ A4ANZ. 2023. Submission in Response to Aviation Green Paper. At: <https://a4anz.com/documents/231201-A4ANZ-Green-Paper-Submission.pdf>
- ¹⁰ IATA. 2023. IATA SAF Policy Workshop – Example and Lessons Learnt. Delivered to SAAFANZ on 31/08/2023.
- ¹¹ IATA. 2023. IATA SAF Policy Workshop – Example and Lessons Learnt. Delivered to SAAFANZ on 31/08/2023.
- ¹² WEF. 2020. Joint Policy Proposal to Accelerate the Deployment of Sustainable Aviation Fuels in Europe: A Clean Skies for Tomorrow Publication.
- ¹³ United States Code, “26 USC 45Z: Clean Fuel Production Credit”, 21 December 2023: <https://uscode.house.gov/view.xhtml?req=granuleid:USC-prelim-title26-section45Z&num=0&edition=prelim>
- ¹⁴ WEF. 2020. Joint Policy Proposal to Accelerate the Deployment of Sustainable Aviation Fuels in Europe: A Clean Skies for Tomorrow Publication.
- ¹⁵ IATA. 2023. SAF accounting based on robust chain-of-custody approaches. At: https://www.iata.org/contentassets/d13875e9ed784f75bac90f000760e998/saf-accounting-policy-paper_20230905_final.pdf
- ¹⁶ IATA. 2023. SAF accounting based on robust chain-of-custody approaches. At: https://www.iata.org/contentassets/d13875e9ed784f75bac90f000760e998/saf-accounting-policy-paper_20230905_final.pdf