

Australian Government

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

Australian Jet Zero Council—Workplan

Version 1—December 2023

Introduction

On 21 June 2023, the Australian Government announced the establishment of the Australian Jet Zero Council (the Council).

The Council brings together a cross-section of senior stakeholders from across the aviation sector and its supply chains to work with industry to inform the design of policy settings to encourage emissions reduction in the aviation industry, provide senior industry leadership, and promote, mobilise and galvanise industry efforts to decarbonise aviation.

The purpose of the work plan is to:

- 1. support the objectives and deliverables in the Council's Terms of Reference,
- 2. outline the focus areas for the Council over the first two years of its operation,
- 3. focus efforts of the Council to where it will be most effective,
- 4. facilitate discussions amongst members, and identify which members might lead particular pieces of work, and
- 5. provide a basis for progress reporting on the Council's work.

Under the Terms of Reference, the Chair is responsible for approving the work plan. The work plan is a living document that will be updated to reflect the Council's deliberations, advice and progress. The work plan also supports the allocation of responsibility for progressing individual work items to particular Council members.

Council objectives

The Council's objectives are to:

- 1. Provide senior industry leadership on efforts to achieve net zero aviation in Australia,
- 2. Provide coordinated advice to the Australian Government, through the Minister for Infrastructure, Transport, Regional Development and Local Government, on policy and regulatory issues related to facilitating the aviation industry's transition to net zero. This could cover issues including, but not limited to:
 - a. the development of a sustainable aviation fuel (SAF) industry (e.g. production, refining, transport and logistics capabilities) and other net zero capabilities that will create Australian jobs, having regard to Australia's competitive advantages and commercial feasibility considerations,

- b. other measures that will reduce aviation emissions at least cost to industry, government and consumers, having regard to competitive neutrality considerations, and
- c. measures to enhance Australia's aviation fuel security supply chains,
- 3. Promote, mobilise and galvanise industry efforts to decarbonise aviation.

Deliverables

The Council's key deliverables are to:

- 1. Establish and implement a forward work plan to target the Council's activities and provision of advice to Government,
- 2. Act as a key facilitator and coordinator between government, industry and the broader community to support education efforts, timely sharing of information and data and to promote appropriate collaboration on decarbonisation initiatives,
- 3. Promote and communicate better practice, and
- 4. Promote and, where appropriate, support the coordination of industry efforts on the development and uptake of SAF and other clean aviation technologies, having regard to potential commercial sensitivities associated with these efforts.

Work items

Decarbonising aviation will require a range of measures, including efficiency gains from aircraft and airport operations, technological advancements in aircraft and airport design, access to high quality offsets and the development and uptake of SAF.

The policy approaches that Australia might adopt to achieve a safe and effective transition to a decarbonised aviation industry, and the timing for their delivery, will need to consider the respective roles of industry and governments and national, regional and international developments.

Like other advanced economies, Australia has established a framework of measures to drive decarbonisation across the economy and meet our net zero targets. These measures include Australia's legislated net zero by 2050 target, annual emissions reduction requirements for Australia's largest emitters (including our largest airlines) through the Safeguard Mechanism reforms, public monitoring and reporting of emissions over time through the National Greenhouse Emissions Reporting (NGER) Scheme, the development of the 2050 Net Zero plan and six sectoral decarbonisation plans including the Transport and Infrastructure Net Zero Roadmap, financial support for clean energy projects through the Clean Energy Finance Corporation (CEFC) and the Australian Renewable Energy Agency (ARENA), as well as a range of other initiatives such as the Research and Development (R&D) Tax Incentive.

The Australian Government further remains committed to continuing to leverage its strong record of international aviation leadership to support international efforts to decarbonise aviation, including through maintaining its participation in the International Civil Aviation Organization (ICAO) and through its support for international net zero carbon emissions initiatives such as the ICAO Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) and the implementation of a long-term aspirational goal (LTAG) for international aviation of net zero carbon emissions by 2050.

It will be important that Council's deliberations are cognisant of this framework, in order to ensure that Council work, advice and proposals are fit for purpose within an Australian context.

The work items identified in Table 1 are the high level priorities for the Council in its first two years of operation. They include a number of work items to establish the 'building blocks' of the regulatory and social environment needed to decarbonise aviation, develop an Australian SAF market and build confidence for investment – while in parallel progressing the identification and development of other short-, medium- and longer-term priorities.

To progress agreed priorities, the Council will appoint a lead (or co-leads) who will be responsible for progressing the development of each work item to a point where it can be further considered by the Council, to allow for a fulsome Council discussion on 'next steps', including in respect of any broader consultation requirements. In appointing a lead (or co-leads) Council may identify other Council members who are willing to support the lead, as well as other stakeholders who should be engaged in the early stages of a work item's development.

Leads are responsible for working with other Council members to progress their items to a point where the item can be further considered by Council, including in respect of convening any required meetings of supporting members and stakeholders, the development of documentation for Council consideration and the provision of updates to Council. Leads are encouraged to consider developing a scoping document for their work items in consultation with the secretariat, which can be tested with the broader Council (either in-session or through an out-of-session process) early in the work item's development. Once the work item is sufficiently progressed, the lead should work with the Secretariat to arrange for the item to be included on the agenda of an upcoming Council meeting.

#	Item name	Council lead/s	Short description
1	SAF sustainability certification	bp	Develop advice on preferred arrangements for SAF certification to provide assurance of the environmental credentials and provenance of SAF (see Attachment A)
2	Building SAF literacy and social licence	CSIRO	Develop and implement a strategy to build SAF literacy and social licence (see Attachment B)
3	SAF accounting	Virgin Boeing	Develop advice on how the benefits of SAF use can be accounted for (see Attachment C)
4	National Framework for Voluntary Consumer Purchasing of SAF	Qantas	Develop advice on options for a National Framework for Voluntary Consumer purchasing of SAF which would allow customers to 'opt-in' to procuring a portion of SAF for their flight (see Attachment D)
5	Identifying changes required to airport operations and infrastructure that will support decarbonising aviation	Brisbane Airport	Identify better practices at leading airports, and showcase and promulgate those practices. Develop advice for the Council's consideration on how best- practice airport measures to decarbonise aviation can be more broadly supported and taken up.
			What are the implications of these developments for our international, major domestic and regional airports? What are implications for airport infrastructure development plans?

Table 1: Work items overview

#	Item name	Council lead/s	Short description
6	Advice on the development of a SAF industry and eco- system in Australia	SAFAANZ bp CEFC (support)	Develop advice on the development of a SAF industry and eco- system in Australia, which includes, but is not limited to, end- to-end supply chain development, identification and supply of feedstock, SAF production and domestic demand that can increase market confidence and drive investment.
			The advice could:
			 identify the key challenges from industry's perspective for establishing a SAF industry in Australia consider how these challenges might be addressed by industry and Government, for example how this could be overcome through policy and regulatory settings identify regulatory barriers to the development of a local industry; promote and showcase industry achievements; and consider how feedstock supply can be facilitated, including by utilising and leveraging domestic resources.
7	Advice on airline measures to reduce aviation emissions in Australia	RAAA	Develop advice for further consideration by the Council on airline emissions reduction measures. Drawing on industry's existing efforts and analysis, this advice could identify developments in aircraft and airline operations that are and will contribute to aviation decarbonisation, and consider the implications of these developments for international, domestic and regional airlines and airports
		Regional Express	
8	Advice on Australian aviation fuel supply chain resilience and security	AIP	Develop advice on Australian aviation fuel supply chain resilience and security for further discussion by the Council. What are the opportunities for Australia's aviation fuel security supply chains in moving to operations increasingly using SAF? How might these supply chains be made more secure? How could a domestic SAF production industry assist with fuel security supply chains?
		Boeing	

New work items

It is expected that new work items will be added to the Council workplan over time as Council activities progress, with the agreement of the Chair.

Council members wishing to nominate a new work item should provide a written proposal to the Australian Jet Zero Council Secretariat, to facilitate the Chair's consideration of the proposal. The Chair may schedule a discussion of the proposal at an upcoming Council meeting. Following Council's discussion of the proposal and the identification of a lead for the work, the Chair may agree to include the item on the Council workplan.

To progress each agreed work item, Council may agree to appoint a lead (or co-leads) for each item, and identify Council members who would be willing to support the lead. Leads will be responsible for working with other Council members to progress the development of each work item to a point where it can be further considered by the Council, in consultation with the Council secretariat, to allow for fulsome discussions on 'next steps', including in respect of any broader consultation requirements.

Attachment A – Establishing robust SAF sustainability certification arrangements

A fuel's feedstock and its conversion process—together called the fuel pathway—determine the fuel's life-cycle emissions. Not all SAFs are equal. For instance, default life cycle emissions factors vary significantly for eligible fuels under the International Civil Aviation Organisation's (ICAO's) Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA).¹ To underpin demand for SAF, a process to certify the life cycle emissions of SAF used in Australia is needed. Robust sustainability certification will provide assurance around decarbonisation outcomes and guard against unintended consequences. Furthermore, sustainability certification could contribute positively to efforts to build social licence by providing confidence in consumers and the public that SAF products do reduce carbon emissions.

A SAF sustainability certification process could consider:

- Development of a clear definition of SAF, aligned with international standards and certification systems, that sets the sustainability criteria required to be met for a fuel to be considered SAF.
- A Guarantee of Origin certificate, such as that being proposed for hydrogen, or SAFc (Sustainable Aviation Fuel Certificates) as set out in the World Economic Forum's Emissions Accounting and Reporting Guidelines.

Certification arrangements should be as consistent as possible with international standards, such as CORSIA, and ideally developed to maximise consistency with NGER and Safeguard Mechanism arrangements. Building consistency where possible with international regimes would help support a proportionate regulatory cost on industry. International certification schemes could be used to support SAF access while a domestic guarantee of origin scheme is being developed.

The framework could be implemented either as a voluntary code (where purchasers set minimum standards for their purchases) or through regulation, with industry responsible for certification costs.

Further information – Guarantee of Origin scheme for hydrogen

The Guarantee of Origin (GO) is an assurance scheme being designed by the <u>Department of Climate</u> <u>Change, Energy, the Environment and Water</u> and the <u>Clean Energy Regulator</u> to track and verify emissions associated with hydrogen, renewable electricity and potentially other products made in Australia. Over time, it could expand to include a range of products such as metals and biofuels. A GO scheme will show where a product has come from, how it was made, and its lifecycle carbon intensity.

Participation in the proposed GO scheme would be voluntary. The scheme would help unlock economic opportunities for Australian industry to meet growing domestic and international demand for verified renewable electricity and low emission products.

¹ International Civil Aviation Organisation 2022, CORSIA Default Life Cycle Emissions Values for CORSIA Eligible Fuels.

Attachment B – Building literacy and social licence

There is a need to educate the public, feedstock producers, businesses and finance markets about the potential of SAF and other lower carbon aviation propulsion technologies, such as electrification for short-haul flights. This would help dispel misinformation, avoid perceptions of greenwashing, and showcase the safety and sustainability of new technologies and the opportunities available.

In relation to SAF, promoting its decarbonisation benefits and commercial potential may help raise awareness and 'connect the dots' across feedstock producers, refiners, buyers and private capital – galvanising industry action. In addition, education on how SAF can be produced may reduce potential public resistance, for example possible 'food vs fuel' concerns.

The CSIRO's Sustainable Aviation Fuel Roadmap has identified that the success of the SAF industry depends on building higher literacy levels across the value chain. Understanding the key aspects of SAF, including their role in decarbonisation, production methods, tracking and reporting, and sustainability criteria, will be important in supporting uptake and acceptance.

Clear and transparent strategies, along with public messaging, are needed to build trust and awareness of the industry, and to prepare consumers for the transition to SAF. SAF literacy is essential for the growth and adoption of the industry, and all stakeholders must work together to increase understanding and promote the benefits of SAF.

A key component of building social licence will be to develop a robust definition and criteria for SAF that avoids adverse emissions and environmental impacts from non-sustainable alternative fuels. Agreed certification or accreditation arrangements will support establishing the definition and criteria. Clear definitions will also support differentiating SAF (as chemically equivalent to kerosene and suitable as a drop-in fuel) from other renewable fuels requiring new or different technologies and infrastructure, such as hydrogen.

Council members could develop educational material and activities for various audiences to build awareness and understanding of SAF and other lower carbon aviation technologies to facilitate broad social acceptance.

Attachment C – SAF accounting mechanisms

SAF is a nascent global market and will be a strategic fuel of the future. Ensuring regulatory settings are calibrated to appropriately recognise SAF use is fundamental to building a stable market environment to support the development of a SAF industry. In addition to robust certification arrangements, appropriate accounting mechanisms for tracking the environmental benefits of SAF are commonly cited as foundational for encouraging SAF usage.² However, the Safeguard Mechanism and National Greenhouse and Energy Reporting (NGER) Scheme is a direct emissions framework which reflects the fuels actually consumed by facilities. This limits the ability of SAF consumers to reflect the emissions benefits of SAF in their emissions reporting without receiving a physical supply of SAF, reducing incentives and impacting demand.

The World Economic Forum identifies three approaches to SAF accounting:³

- **physical segregation**, where different product streams are separated throughout the supply chain, and can deliver consignments that physically contain 100% of the specific product (e.g. 100% SAF);
- mass balance, where products with different characteristics are physically mixed but kept administratively separate. At each step in the supply chain, companies do not sell or produce more products with specified characteristics than they sourced. The EU's RED II Directive and ICAO's CORSIA scheme use mass balance systems; and
- **book and claim**, which enables the decoupling of the physical fuel from environmental attributes associated with the fuel. Companies can purchase certificates generated from SAF production and acquit those certificates as a claim for SAF usage, regardless of the physical location of the fuel.

The World Economic Forum has observed that a book and claim system may be the better approach as it would provide the most flexibility for purchase and ownership of SAF, allowing airlines to contribute to decarbonisation efforts even if they are unable to physically source SAF for particular flights. It could also support more efficient supply chains, with fuel able to be delivered to the nearest airport and minimising fuel transportation emissions.

The United States' SAF Grand Challenge Roadmap establishes investigation of book and claim crediting mechanisms as a work item in recognition of its advantages. Conversely, the United Kingdom determined that a mass balance system would be the only chain of custody system permitted under its mandate. The UK considered this system would provide the fuel with robust proof of sustainability and compliance with the mandate that can be directly traced back from the final fuel to the start of the chain of custody.⁴

The Council could provide advice on the benefits and risks of different accounting approaches and potential regulatory changes required to accommodate accounting for SAF usage, whether through the NGER scheme or through the establishment of supporting arrangements.

The Safeguard Mechanism and National Greenhouse and Energy Reporting Scheme

The Safeguard Mechanism is the Australian Government's policy for reducing emissions at Australia's largest industrial facilities. The Department of Climate Change, Energy, the Environment and Water is the lead policy agency in government for the NGER Scheme and the Safeguard Mechanism.

² World Economic Forum 2022, *Sustainable Aviation Fuel Certificate (SAFc) Emissions Accounting and Reporting Guidelines*; CSIRO 2022, *Sustainable Aviation Fuel Roadmap*.

³ World Economic Forum 2023, Sustainable Aviation Fuels: Offtake Manual.

⁴ UK Department of Transport 2022, *Sustainable aviation fuels mandate: Summary of consultation responses and government response.*

The Safeguard Mechanism applies to industrial facilities emitting more than 100,000 tonnes of carbon dioxide equivalent (CO₂-e) per year. Facilities are required to keep their net emissions at or below emissions baselines set by the Clean Energy Regulator. Qantas and Virgin Australia are facilities under the mechanism.

Baselines will decline by 4.9% each year to 2030. Baselines for existing facilities will be set using a hybrid model initially weighted towards the use of site-specific emissions intensity values, transitioning to industry average emissions intensity values by 2030.

The National Greenhouse and Energy Reporting (Measurement) Determination 2008 (Measurement Determination) provides methods, criteria and measurement standards for calculating greenhouse gas emissions and energy data under the National Greenhouse and Energy Reporting Act 2007 (NGER Act). It covers scope 1 and scope 2 emissions and energy production and consumption, but does not deal with lifecycle assessments.

From 1 July 2023, *renewable aviation kerosene* (RAK), a biomass-derived SAF, was added as a reportable fuel type under the NGER Scheme. The amendments enable NGER reporters to report consumption of pure quantities of RAK or known blends of RAK with conventional jet fuel. Under the NGER Scheme, RAK has the same technical parameters as conventional jet fuel, except is assigned a zero-carbon dioxide scope 1 emission factor. This reflects the fact that its combustion releases carbon which was drawn down from the atmosphere during the lifetime of the fuel's biogenic source materials.

The NGER Scheme is a direct emissions framework which reflects the fuels actually consumed by facilities. This limits the ability of airlines to claim the full benefits of SAF usage in their NGER reporting where blended fuel is not directly available for particular flights. However, further investigation is needed to determine whether these issues are best addressed through the NGER Scheme given its link to the Safeguard Mechanism or whether they are best addressed through developments in other schemes. Alternative bespoke arrangements may be required.

Attachment D – Voluntary Consumer Purchasing

Voluntary consumer purchasing programs could be established to enable customers to opt-in to procure a portion of SAF for their flight. There are a range of options for establishing voluntary consumer purchasing, including:

- A national framework could be established, which would allow SAF purchasers to be 'credited' with the resulting emissions reduction and be tracked via a guarantee of origin scheme with certificates. A portion of SAF for the flight would see a corresponding decrease in purchasers' scope 3 emissions associated with air travel.⁵
- Airline initiatives, for example KLM's Corporate SAF Program in the Netherlands, where eligible consumers pay to opt-in to the airline's SAF purchasing program. In addition, Qantas is piloting a new program to enable participating corporate, government and freight customers to contribute to the purchase of SAF, and exploring whether it could be extended to individuals.

Airline initiatives may provide more flexibility for businesses and choice for consumers, with fewer costs than those associated with a national scheme. Conversely, individual initiatives may not galvanise industry-wide action to the same extent as a national scheme. The Council could provide detailed advice on the various options for implementing voluntary consumer purchasing, and their associated benefits and risks.

Government procurement

Some stakeholders have observed that government procurement policy targets could also be used as a lever to stimulate more local SAF production, including through Government travel purchasing power. The establishment of a framework for facilitating voluntary customer purchasing could facilitate this.

⁵ Bioenergy Australia 2022, *Bridging the Price Gap for Sustainable Aviation Fuel*.

Appendices

Appendix 1: The Australian Government's decarbonisation policy

The Australian Government has adopted emissions reduction targets of 43 per cent below 2005 levels by 2030 and net zero emissions by 2050. These targets are detailed as part of Australia's Nationally Determined Contribution in accordance with the Paris Agreement, and are enshrined in legislation under the *Climate Change Act 2022*.

To drive this commitment, the Australian Government is working to reduce emissions across the economy by:

- upgrading the electricity grid to support more renewable power
- supporting businesses and industries to innovate and adopt smarter practices and technologies
- encouraging businesses and consumers to reduce emissions
- regulating and reporting on greenhouse gas emissions
- helping the land and agriculture sector reduce greenhouse gas emissions
- partnering with our Indo-Pacific neighbours to reduce emissions
- helping negotiate and meet Australia's obligations under the Paris Agreement, including the development of a 2050 Net Zero plan
- reducing baselines under the Safeguard Mechanism predictably and gradually over time
- working to encourage more fuel efficient vehicles, including electric vehicles

Current initiatives relevant to SAF

- In the 2023–24 Budget, the Australian Government announced \$7.8 million over 4 years from 2022–23 to develop a Transport and Infrastructure Roadmap and Action Plan to support the decarbonisation of transport and transport infrastructure sectors. The Roadmap will provide a comprehensive plan to reduce emissions across the both the transport and transport infrastructure sectors, supporting international commitments for reduced emissions, provide investors with certainty for future planning, and provide a national pathway that supports accelerated decarbonisation for these key sectors.
- Under the Powering the Regions Fund, the \$400 million Industrial Transformation Stream to be administered by ARENA is intended to support regional industrial decarbonisation. The ITS will be open to industrial facilities in a wide range of sectors, from mining and manufacturing to transport, including rail and aviation. The Australian Renewable Energy Agency is administering a \$30 million Sustainable Aviation Fuel Funding Initiative, targeted towards the development of a SAF industry in Australia with production from renewable sources. Expressions of Interest opened on 3 July and will close on 1 November 2023.
- The Government has committed \$15 billion to establish the **National Reconstruction Fund**. The NRF will provide finance for projects that diversify and transform Australia's industry and economy. The NRF will provide finance to projects in priority areas, including transport, to leverage Australia's natural and competitive strengths.
- The **Clean Energy Finance Corporation** has invested in several market-leading bioenergy projects and is working with industry to help increase market understanding about the potential uses and benefits of bioenergy.