


Webinar to start at 12pm AEST





ARENA acknowledges the traditional custodians of Country across Australia and their continuing connection to land, sea and community. We pay our respects to elders past, present and emerging.



Sustainable Aviation Fuel (SAF) Funding Initiative

Information Session
17 July 2023



Introductions

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Agenda

1. Welcome and Introduction to ARENA
2. Decarbonising Aviation
3. SAF Funding Initiative Overview
4. Assessment Process
5. Key Dates & Links
6. Q&A



1. Introduction to ARENA

ARENA's Purpose

ARENA is the Australian Renewable Energy Agency.

The Agency was established by the Australian Government in July 2012.

Our purpose is to support the global transition to net zero emissions by accelerating the pace of pre-commercial innovation, to the benefit of Australian consumers, businesses and workers.

To improve the competitiveness
of renewable energy technologies
and increase the supply of
renewable energy through
innovation that benefits Australian
consumers and businesses.



INVESTED

\$2.15B



PROJECTS

654



VALUE

\$9.41



INVESTMENT LEVERAGE

\$1:\$3.37



INVESTMENT BY TECHNOLOGY

BIOENERGY

\$131M



GEOTHERMAL

\$42M



GRID INTEGRATION

\$362M



HYBRID

\$112M



HYDROGEN

\$170M



OCEAN

\$44M



SOLAR PV

\$818M



SOLAR THERMAL

\$242M



STORAGE - BATTERIES/PHEs

\$231M



INVESTMENT BY STATE

NT

PROJECTS
8
INVESTED
\$40M
VALUE
\$82M

WA

PROJECTS
43
INVESTED
\$253M
VALUE
\$1.97B

SA

PROJECTS
58
INVESTED
\$214M
VALUE
\$834M

TAS

PROJECTS
21
INVESTED
\$40M
VALUE
\$99M

VIC

PROJECTS
116
INVESTED
\$230M
VALUE
\$550M

QLD

PROJECTS
67
INVESTED
\$282M
VALUE
\$2.08B

NSW

PROJECTS
267
INVESTED
\$1.01B*
VALUE
\$3.55B

ACT

PROJECTS
74
INVESTED
\$81M
VALUE
\$233M

INVESTMENT LEVERAGE ALONG THE INNOVATION CHAIN

STUDY

\$1:\$1.65



R&D

\$1:\$1.76



DEMONSTRATION

\$1:\$1.85



DEPLOYMENT

\$1:\$5.87



* Includes \$567 million contributed to projects inherited by ARENA in 2012.

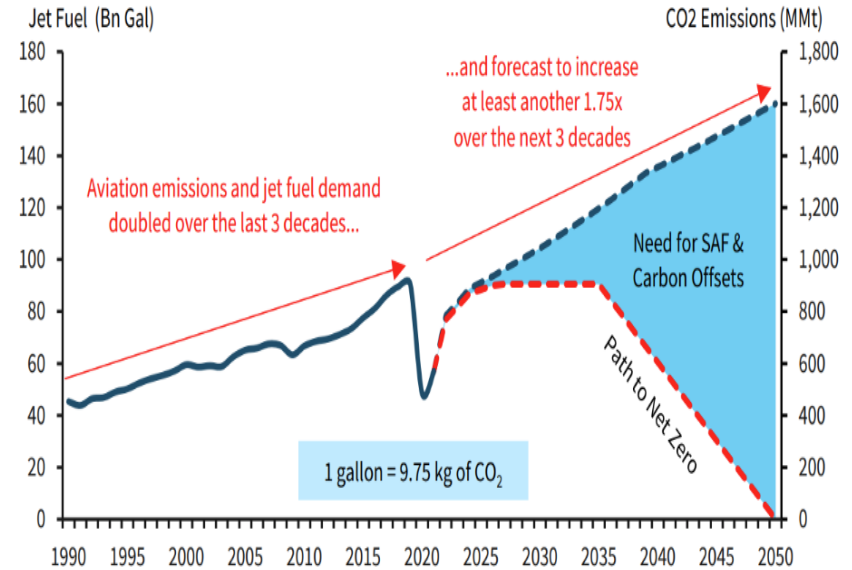
Australian transport emissions



2. Decarbonising Aviation

Emissions from Aviation

- Aviation accounted for over 2% of global energy-related emissions in 2022 (IEA)
- In Australia, domestic aviation emissions were 8Mt (2019), projected to rise to 10Mt by 2035 (DCCEEW)
- Australia ranks second (behind US) for annual emissions from domestic flights.



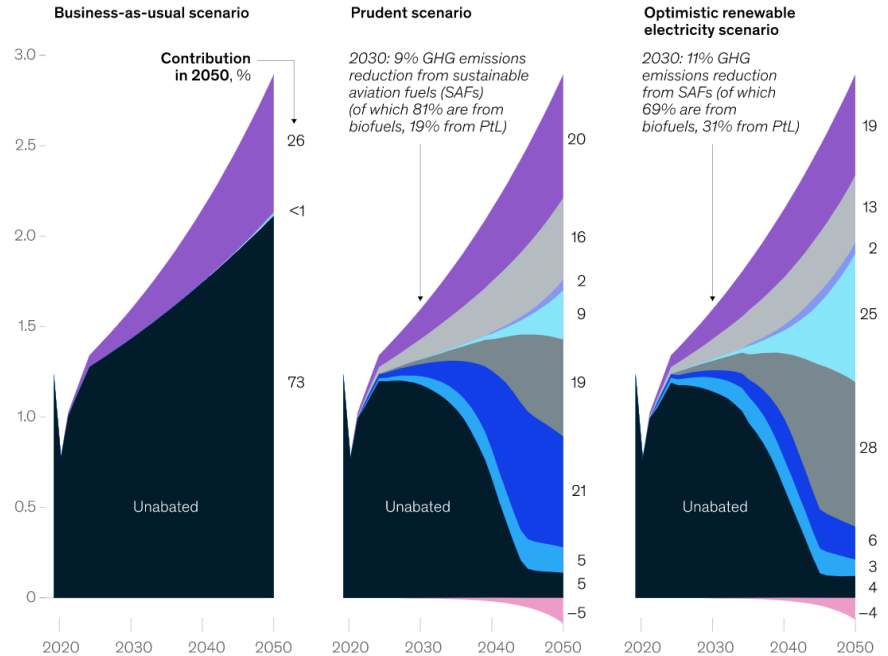
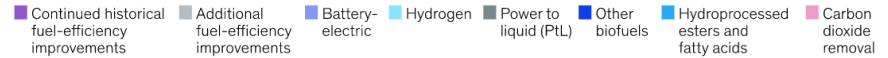
Source: International Air Transport Association (IATA), Air Transportation Action Group (ATAG) & Barclays Research

Pathways

1. **Battery electric aircraft:** A role to play in short to medium haul flights
2. **Hydrogen aircraft:** Currently in early-stage development. To play an increasing role from 2040.
3. **SAF**
 - **Biofuels:** Represents a short to medium term opportunity to decarbonise aviation, utilising Australia's competitive advantages in feedstock availability
 - **Power-to-liquids and E-fuels:** To play an increasing role from 2040.
4. **Efficiency improvements**
5. **Off-sets**

Global aviation can achieve net zero by 2050.

Impact of potential emissions levels on greenhouse gas (GHG) emissions, gigatons of CO₂ equivalent

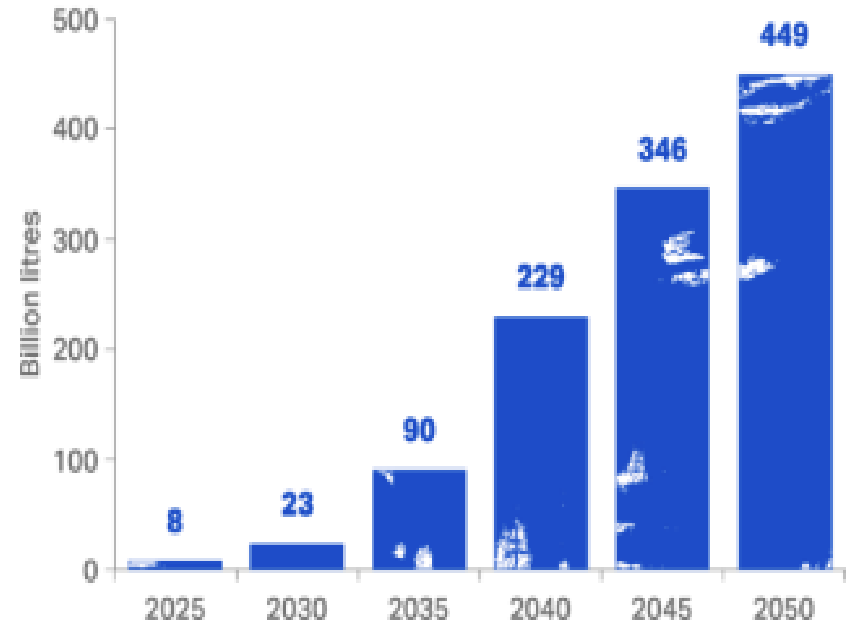


Note: Figures may not sum to 100 because of rounding

SAF Demand

- Global demand for SAF has been estimated by the IATA to reach 449 Billion litres or 65% of emissions reductions needed by 2050.
- Current production (2022) is ~ 300 million litres, tripling from 2021 levels.
- High amount of market activity representing a strong demand in the sector
- Currently, there is no production capability in Australia

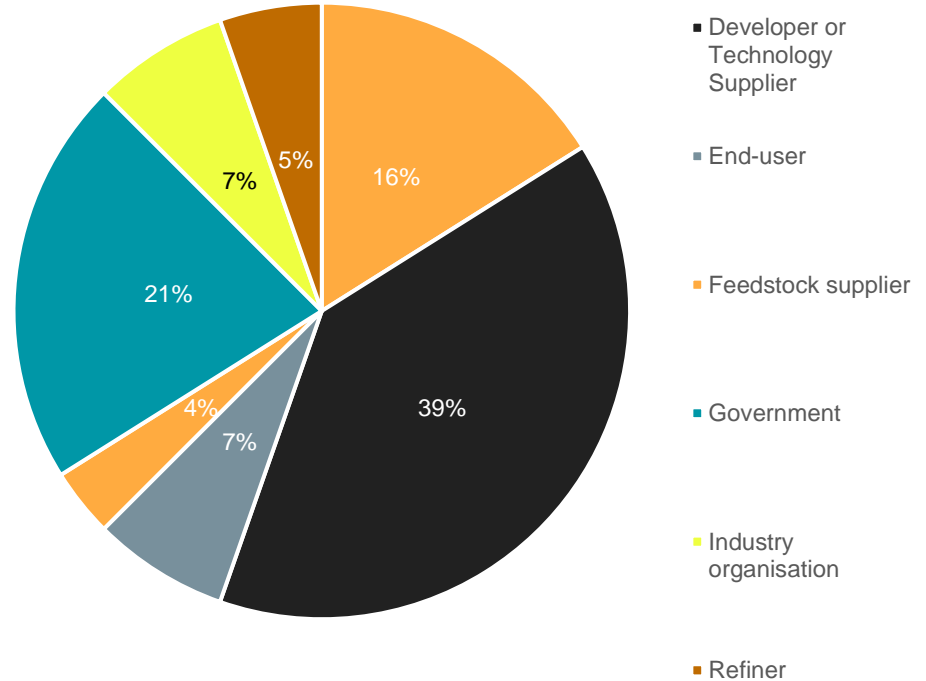
Expected SAF required for Net Zero 2050



Net zero 2050: sustainable aviation fuels (IATA)

Consultation Overview

- ARENA has consulted with a diverse group of stakeholders to ensure the round design was consistent with the perceptions and readiness levels of industry
- ARENA consulted with 56 separate parties
- This resulted in 28 direct consultations and 44 indirect consultations
- ARENA's consultation has both informed the round and educated the team so a big thank you to all involved!



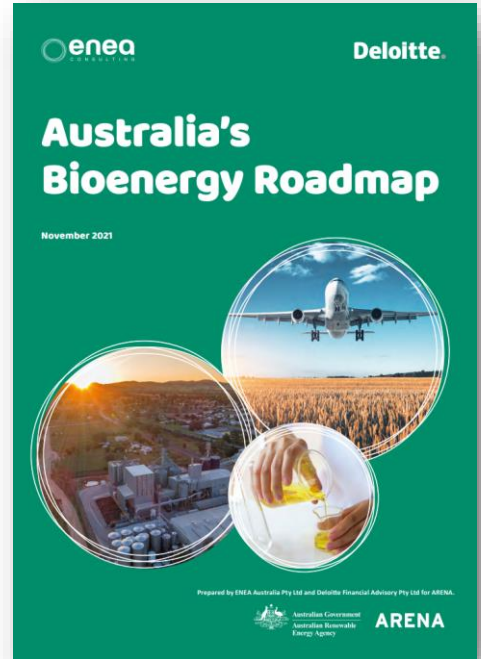


3. SAF Funding Initiative Overview

SAF Funding Initiative Background

[Australia's Bioenergy Roadmap](#) identified aviation as a hard to abate sector where market opportunities could be unlocked from Australia's bioenergy sector. Modelling estimated that targeted support in developing a domestic SAF industry could provide up to 18% of Australia's aviation fuel requirements by 2030.

In November 2021, the Federal Government allocated \$30 million of funding to ARENA to support the development of an advanced biofuels sector.



SAF Funding Initiative

The Sustainable Aviation Fuel Funding Initiative was opened for applications on 3 July 2023 with \$30m in grant funding available. The intent of the SAF Funding Initiative is to:

- Support technology commercialisation
- Understand what technologies and development is required across the sector to establish a domestic SAF industry
- Understand the investment requirements
- Identify requirements across the supply chain (feedstock supply to end-use)



SAF Funding Initiative Objective

*Refer to section 1. SAF FUNDING INITIATIVE
OBJECTIVE of the Funding Announcement*

The Objective of the SAF Funding Initiative is to fund Activities that contribute to one or more of the following Outcomes:

- a) Advance the technology readiness level (**TRL**) and commercial readiness index (**CRI**) of SAF technologies for at-scale deployment.
- b) Facilitate a pathway to the technical and commercial viability of producing SAF from Renewable Feedstocks in Australia.
- c) Build industry capacity in the production of SAF from Renewable Feedstocks in Australia.

Scope of Activity

Refer to section 3. **SCOPE OF ACTIVITY** of the Funding Announcement

The SAF Funding Initiative is open to eligible entities for Proposals that align with the SAF Funding Initiative Objective described in Section 1 of the Funding Announcement.

Activities may include:

- a) Commercial or pre-commercial scale engineering feasibility, front-end-engineering-design (FEED) studies or other project development activities.
- b) Pilot-scale or pre-commercial demonstrations of novel technologies that have a demonstratable pathway to produce SAF.
- c) Demonstration of novel and scalable approaches to establishing the supply chain required in a future SAF industry.

Eligibility – *is my proposal eligible?*

Refer to section 4. **ELIGIBILITY REQUIREMENTS** of the Funding Announcement for more information

To be eligible for funding under the SAF Funding Initiative, proposals must meet **all** Eligibility Criteria.

The Eligibility Criteria include:

- That the activity does not include research components between TRL 1-3
- Proposals must use a Renewable Feedstock or product produced from a Renewable Feedstock
- Proposals must include an Approved Production Pathway
- Any other Eligibility Criteria outlined in the Advancing Renewables Program (**ARP**) Guidelines.



4. Assessment process

SAF Funding Initiative – Overview

- Two stage process: Expression of Interest (EOI) and Full Application
 - Only those considered of high merit at EOI will be invited to submit a Full Application
- Open and collaborative Funding Initiative
 - High-level guidance on the proposed project scope during the EOI Stage
- ARENA will undertake portfolio view to funding Projects
 - May not fund similar projects on a portfolio basis
- \$30 million in available funding
 - Grant requests between \$1 million and \$30 million
- Applicants can submit any time before the EOI due date 5pm AEDT 1 November 2023

Merit Criteria

Refer to section 5. **CLARIFICATION OF MERIT CRITERIA** of the Funding Announcement for more information

Merit Criterion A: Contributes to the Funding Initiative Objective

Merit Criterion B: Applicant capability and capacity

Merit Criterion C: Project design and methodology

Merit Criterion D: Financial viability and co-funding commitment

Merit Criterion E: Knowledge Sharing

Merit Criterion A - Contributes to the Funding Initiative Objective

Refer to section 5. **CLARIFICATION OF MERIT CRITERIA** of the Funding Announcement for more information

ARENA will assess this criterion in accordance with the ARP Guidelines. In addition, proposals that address the following matters **specific** to the **Funding Initiative** will be considered **higher merit** as part of this criterion.

Alignment to Objective

Alignment of the Project to the SAF Funding Initiative Objective

Demonstration of feedstock sustainability

- Sustainable and long-term pathway to produce SAF from the proposed Renewable Feedstock, including specific consideration to the current use of the proposed Renewable Feedstock and any impact or changes to land use.
- Alignment with CORSIA Sustainability Criteria for CORSIA Eligible Fuels.

Demonstration of pathway to commercialisation

Demonstration of a credible commercialisation pathway to produce SAF from Renewable Feedstocks in Australia. This includes consideration of how the costs of production will reduce over time and alignment to forecast demand.

Merit Criterion B - Applicant Capability and Capacity

Refer to section 5. **CLARIFICATION OF MERIT CRITERIA** of the Funding Announcement for more information

ARENA will assess this criterion in accordance with the ARP Guidelines. In addition, proposals that address the following matters **specific** to the **Funding Initiative** will be considered **higher merit** as part of this criterion.

Demonstration of stakeholder support and collaboration

- Demonstration of support from key industry stakeholders (including feedstock providers, technology suppliers, refineries and/or end-users), including the terms of support (whether financial, operational, or other).
- Collaboration across the supply chain and existing industry to assist with the deployment of the Project.

Demonstrated experience

- Demonstration of experience and expertise of the Applicant and project partners, including where they have successfully developed SAF technologies and/or delivered SAF or other renewable fuel projects of a similar nature, scale, or value in Australia or internationally and/or have experience with conventional liquid fuels or feedstock supply and aggregation

Merit Criterion B - Applicant Capability and Capacity (continued)

Refer to section 5. **CLARIFICATION OF MERIT CRITERIA** of the Funding Announcement for more information

ARENA will assess this criterion in accordance with the ARP Guidelines. In addition, proposals that address the following matters **specific** to the **Funding Initiative** will be considered **higher merit** as part of this criterion.

Capability & capacity

The appropriateness of the proposed allocation of roles and responsibilities between the Applicant and Project Partners (including but not limited to technology suppliers, engineering contractors, advisors, and commercial partners).

Alignment with emissions reduction plans

Clear outline of how the Project aligns with the emission reduction plan(s) of the Applicant and Project Partners

Merit Criterion C - Project Design and Methodology

Refer to section 5. **CLARIFICATION OF MERIT CRITERIA** of the Funding Announcement for more information

ARENA will assess this criterion in accordance with the ARP Guidelines. In addition, proposals that address the following matters **specific** to the **Funding Initiative (where applicable)** will be considered **higher merit** as part of this criterion.

Technology pathway

Provision of detail on the selected technology pathway for SAF production, including estimated yields and the pathway to certification.

Production pathway for SAF

Demonstration of a credible pathway to the production of a final SAF product.

Feedstock supply

Demonstration of a credible pathway for the supply, aggregation, and transportation of Renewable Feedstock.

Life cycle emissions

An overview of the life cycle emissions or analysis of the proposed production pathway.

Risk analysis

Consideration of risks including social licence, feedstock availability, permitting, planning and environmental approvals, technology, and funding.

Merit Criterion D - Financial Viability and Co-funding Commitment

Refer to section 5. **CLARIFICATION OF MERIT CRITERIA** of the Funding Announcement for more information

ARENA will assess this criterion in accordance with the ARP Guidelines. In addition, proposals that address the following matters **specific** to the **Funding Initiative** will be considered **higher merit** as part of this criterion.

Budget certainty

The level of confidence regarding project cost estimates, and how clearly this is defined. Proposals should include external evidence of such where applicable.

Financing strategy

Evidence of clear financing strategy for all funding required for the Project (including a plan for managing cost overruns), as well as a credible financing strategy for commercial-scale deployment.

Financial model

A financial model that presents the economic case for the selected production pathway, including the cost of a final delivered SAF product in \$/tonne for the Project and at scale (where applicable).

ARENA grant request

- Clear justification for the ARENA grant request and evidence of the commercial gap in the Project or technology pathway.
- ARENA expects grants requests to be a minimum of \$1 million and a maximum of \$30 million.

Merit Criterion E – Knowledge Sharing

Refer to section 5. **CLARIFICATION OF MERIT CRITERIA** of the Funding Announcement for more information

ARENA will assess this criterion in accordance with the ARP Guidelines.

Value

Value of the knowledge generated by the project in contributing to the Program Outcomes

Audience

How well that knowledge is targeted to **specific audiences**

Methodology

How you will capture, store and disseminate the data, information and **lessons learned** from the project

Note: At the EOI stage, knowledge sharing information should be included in your Project Plan. Ensure you consider the Funding Initiative knowledge sharing plan template provided on the SAF webpage

5. Key links & dates

Key Dates & Documents

EOI Opened

Monday 3 July 2023

EOI Closes

Wednesday 1 November
2023 at 5:00pm (AEDT)

All material relevant to the Fund Round can be found on the **ARENA website** under **Funding > Sustainable Aviation Fuel Funding Initiative**.

Refer to the FAQ document for guidance in the first instance. If your question is not answered in this document email saf@arena.gov.au.

Key links

- [Sustainable Aviation Fuel Webpage](#)
- [Sustainable Aviation Fuel Funding Initiative](#)
- [ARP Guidelines](#)
- [Frequently Asked Questions](#)
- [ARENANet Online Application Form](#)
- Contact via saf@arena.gov.au



Process / next steps

Refer to section 5. **CLARIFICATION OF MERIT CRITERIA** of the Funding Announcement for more information

Next steps

- Once your project has materialised, please email us on saf@arena.gov.au with a 10-slide high-level overview of the project, activities, timeline, budget grant ask and any other key details you feel we should know.
- ARENA to get in touch and schedule a call with high level feedback
- Following a discussion with the ARENA team, you may then be directed to submit an EOI via the ARENANet website

At the EOI stage, Applicants must provide the following:

- **Project Plan:** Approximately 20-30 pages
- **Financial Model** - Dynamic financial model in excel format or similar is (where relevant)
- Other attachments such as letters of support or those that provide evidence of your claims (where relevant)

ARENANet Upgrade

- ARENA is upgrading its Grants Management System – ARENANet. The new platform is anticipated to go live in Q4 2023 with the exact date yet to be finalised.
- Best endeavours will be made to minimise disruptions however, as with any large IT system transition, some downtime will be required.
- If you are looking to submit an application, you should get in contact with the SAF team via saf@arena.gov.au **prior** to the EOI due date.
- Information about ARENANet changes and expected downtime will be published on ARENA's website and in ARENANet.

6. Q&A



End
