AUSTRALIAN AIRPORTS ASSOCIATION

CLEANER FUELS PROGRAM

POWERING LOW CARBON LIQUID FUEL PRODUCTION IN AUSTRALIA

AUSTRALIAN AIRPORTS ASSOCIATION (AAA)

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ACKNOWLEDGEMENT OF COUNTRY

The AAA respectfully acknowledges the enduring connection of the Traditional Owners to the lands and waters across Australia.

We extend our respect to the wisdom and guidance of elders, both past and present. In sharing our narratives, we recognise that the Aboriginal and Torres Strait Islander peoples are the original custodians and storytellers of their ancestral homelands.

Executive summary

The Australian Airports Association (AAA) welcomes the opportunity to provide input to the Department of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts (DITRDCSA) on the design of the Cleaner Fuels Program (the Program). Airports represent critical national infrastructure and are central to the decarbonisation of the aviation sector. Airports support the scale up of Sustainable Aviation Fuel (SAF) production, the development of supply chains and the integration of new fuel products into existing fuelling infrastructure.

Aviation has had no technologically viable alternative to liquid fuels for medium and long-haul travel for several decades. SAF is the only credible pathway for aviation emissions reduction in the near to medium term and is recognised internationally by ICAO, [1] IATA and leading jurisdictions as the primary tool for aviation decarbonisation.[2] IATA has estimated that Sustainable Aviation Fuel (SAF) could contribute around 65 per cent of the emissions reductions required for aviation to reach net zero CO_2 emissions by 2050.[3] Without domestic SAF production, Australia risks higher abatement costs, lower fuel security and reduced competitiveness in global aviation markets.[4]

A fuel neutral policy approach will unintentionally disadvantage SAF relative to renewable diesel because SAF has higher production costs and far fewer alternative abatement pathways. To ensure the Program delivers genuine emissions reduction in the sectors that most need it, the AAA recommends that the Program explicitly recognise the strategic importance of SAF and prioritise its production within eligibility, funding and certification settings. Without this, public investment may be directed toward abatement opportunities available elsewhere in the economy rather than toward aviation, which is uniquely dependent on liquid fuels.

Australia has significant comparative advantages in SAF production, including abundant renewable energy, agricultural feedstocks, existing export supply chains and strong international aviation links. However, Australia is being outpaced by global competitors that already combine production incentives with demand signals. Recent analysis commissioned by the AAA indicates that competing jurisdictions have established more coherent and investable policy environments and that Australia will need a similarly integrated framework if it is to attract commercial scale SAF projects.[5] The Program represents a critical opportunity to close this gap.

International experience demonstrates that successful low carbon liquid fuel markets combine production support with clear demand signals, visibility on expected volumes and coordinated infrastructure planning. Leading jurisdictions such as California and the European Union have shown that policy clarity on scale and long-term ambition is critical to unlocking investment and reducing cost impacts over time. For Australia, early consideration of the scale, timing and

[1] ICAO, *Skyward Action: Realizing Aviation's Sustainable Future*, 2025 p.163.
[2] SAF Accounting Policy Position: An ICF Report for the Australian Airports Association, June 2025, pp. 1-2.
[3] IATA *Developing Sustainable Aviation Fuel (SAF)*, accessed 18 December 2025.
[4] ICF (2025), pp. 2–3.
[5] ICF (2025), pp. 4–5.

geographic distribution of SAF production will be important to support efficient supply chains, avoid market distortion and ensure benefits are realised across the national aviation network.

The AAA supports a production linked incentive that is transparent, scalable and capable of supporting multiple pathways. We strongly recommend production tax credits or similar mechanisms that can be incorporated into investment decisions quickly. Clear demand side signals, including potential aviation specific sub targets or fuel standards, will be essential to create sufficient long-term offtake to underpin private capital investment**.** These measures should be supported by a national SAF accounting framework that enables verified emissions reductions to be allocated consistently across Scope 1 and Scope 3 boundaries, aligned with CORSIA, the emerging Guarantee of Origin framework and international registry models.[6]

The AAA supports a robust emissions accounting and certification framework aligned with international methodologies such as ICAO CORSIA and ISCC, with fuel specific thresholds that tighten over time.[7] Credible and transparent accounting is essential to environmental integrity, investor confidence and the functioning of book and claim systems. Without the ability to transparently pass sustainability and lifecycle emissions documentation along the supply chain, including to airports, Australia will struggle to demonstrate the integrity of SAF use or to align with international markets where registries and standardised documentation are already established.[8]

This submission answers each consultation question in order.

[6] ICF (2025), pp. 3–4, 10–11.
[7] ICF (2025), pp. 3-5.
[8] ICF (2025), pp. 4–6.

1. Eligible fuels

Question 1.1: Which LCLF should be eligible under the program and why?

The AAA supports broad eligibility for low carbon liquid fuels to encourage innovation, maintain optionality for emerging pathways and avoid constraining the development of viable technologies. However, the Program should recognise that not all liquid fuels serve equivalent decarbonisation needs across sectors. Aviation relies exclusively on liquid fuels and has no ready substitute in the relevant timeframe.[9] Electrification and hydrogen technologies that will, over time, decarbonise parts of the road transport, rail and stationary energy sectors are not viable alternatives for aviation.[10] The Australian domestic aviation sector (particularly airlines with a solely domestic footprint) therefore cannot decarbonise without a local SAF market.

This creates a structural distinction in the role that SAF must play relative to renewable diesel or other fuels. Program design should therefore identify SAF as a priority category within a broad eligibility framework, ensuring that aviation is not disadvantaged by a fuel neutral approach. Internationally, jurisdictions that have successfully expanded SAF production, including the United States and the European Union, have incorporated tailored SAF criteria, incentives or mandates within broader low carbon fuel frameworks. Adopting a similar approach in Australia will help avoid perverse outcomes where fuels serving sectors with alternative abatement pathways attract a disproportionate share of support.

Question 1.2: Should certain types of LCLF be prioritised over others?

Yes. The AAA considers that SAF should be explicitly prioritised because it is the only scalable pathway to reduce aviation emissions in the foreseeable future.

SAF is essential to maintaining the international competitiveness of Australia's aviation network, as global carriers increasingly rely on SAF to meet their CORSIA obligations and corporate emissions commitments. A fuel neutral approach will lead to renewable diesel out competing SAF because renewable diesel has lower capital and operational costs and broader market demand. Modelling undertaken for the AAA indicates that without clear prioritisation, capital will continue to favour renewable diesel over SAF due to cost and speed to market advantages, even though renewable diesel serves sectors with a wider range of decarbonisation options.[11]

Without prioritisation, the Program will not deliver the emissions reductions required in aviation and will instead direct incentives toward sectors that already have alternative technological solutions. Aviation emissions constitute the majority of airports' Scope 3 profiles and SAF is the only mechanism capable of materially reducing these emissions in the near term.[12]

[9] ICF (2025), pp. 1–2.
[10] ICF (2025), pp. 13–15.
[11] ICF (2025), pp. 17–18.
[12] ICF (2025), pp. 1–2, 5–7.

Question 1.2a: Should LCLF suitable for particular sectors or uses be prioritised? For example, should sustainable aviation fuel be prioritised over renewable diesel?

LCLFs used in sectors that lack alternative abatement options should be prioritised. Aviation is the clearest case. SAF is a drop in fuel compatible with existing airport and airline infrastructure and is therefore the only viable near- and medium-term option for airlines to meet both regulatory and voluntary emissions targets.

Prioritising fuels based on strategic need aligns with international practice. ReFuelEU mandates aviation specific SAF obligations and Singapore's SAF levy and incentive framework applies solely to aviation. These policies recognise that a sector without technological substitutes must be treated differently, particularly where airlines face binding international emissions obligations.

As CORSIA transitions from a voluntary to a mandatory scheme from 2027, airlines will require access to verifiable SAF in order to meet their compliance requirements. The Program should reflect this logic and treat SAF as a priority use case, including by supporting the availability of domestically produced SAF that can be recognised under CORSIA.

Question 1.2b: Should LCLF for certain sectors be de prioritised due to other viable decarbonisation pathways?

Where sectors have cost effective alternatives available or emerging, LCLFs should not be prioritised ahead of SAF.

Road transport will increasingly rely on electrification for light and medium vehicles, with hydrogen and battery electric technologies progressing for heavy vehicles. Renewable diesel may play a transitional role but prioritising it ahead of SAF would divert support away from aviation and would not produce efficient long-term decarbonisation outcomes.

A balanced approach that recognises where substitute technologies exist and where they do not, will ensure that public funding is directed to the areas of greatest strategic need and highest marginal abatement value.

Question 1.2c: What market impacts are anticipated by influencing prioritisation of particular fuel types?

Prioritisation will affect investment allocation, feedstock contracting and industry development pathways. Clear prioritisation of SAF will give proponents confidence to structure projects, secure finance and negotiate offtake agreements with airlines and airports. Failure to prioritise SAF will likely entrench renewable diesel projects at the expense of SAF because renewable diesel pathways are already more commercially mature.

This would result in limited domestic SAF supply, higher reliance on imports and reduced ability for Australian airports and airlines to meet international emissions obligations. Without a near-term pathway for SAF refining in Australia, inaction risks undermining airports' social licence to operate and grow. There is growing pressure on airports to reduce their Scope 3 emissions and

SAF is the only viable solution to creating a meaningful Scope 3 reduction for airports. This expectation to reduce emissions is expected to grow over time and will negatively impact travellers through greater commercial challenges in attracting new international airlines that favour destinations with an established source of SAF. This risk, in turn, will have negative effects on Australia's wider economy, particularly for our tourism and export industries.

Clear prioritisation also supports the development of verification and chain of custody systems that investors and international buyers increasingly require. High integrity accounting reduces the risk of double counting, improves the credibility of book and claim arrangements and increases investor confidence. A transparent prioritisation framework sets clear expectations for producers and feedstock suppliers and reduces market uncertainty.

2. Type of production support

Question 2.1: Should the production credit be a fixed amount per litre of production, or a variable amount that depends on the market price of LCLF?

A fixed credit provides producers and investors with the highest level of certainty because it allows the credit value to be incorporated directly into financial modelling and investment decisions. For SAF projects, which are capital intensive and have long development horizons, predictable support is essential to secure finance and negotiate long-term offtake agreements.

International experience shows that fixed production incentives significantly increase investor confidence when paired with clear sustainability rules.[13] A fixed credit also aligns with the commercial reality that SAF is likely to remain more expensive than renewable diesel for some time. A stable support mechanism helps reduce investor risk and encourages early movement toward final investment decisions.

The United States model demonstrates that fixed credits can unlock SAF investment by allowing proponents to rely on the credit value across the life of a project.[14] Variable mechanisms introduce revenue volatility and weaken bankability at the precise time certainty is most needed.

Question 2.1(a): Are there any potential benefits, risks or constraints considering the two different production credit options

A fixed per litre credit provides greater certainty because proponents can incorporate the value directly into financial modelling and offtake negotiations. SAF projects face higher capital intensity and longer payback periods, so certainty on revenue support is a core requirement for investment committees and lenders.

A variable credit may appeal from a budget management perspective, but it introduces revenue volatility that layers onto existing fluctuations in feedstock prices, fossil fuel benchmarks and

[13] ICF (2025), pp.2-3, 10-11.
[14] ICF (2025), pp.9-11.

exchange rates. This volatility is particularly problematic for SAF, which is expected to maintain a structural cost disadvantage relative to renewable diesel.

A variable credit also requires agreement on reference indices and reset rules, increasing administrative complexity. For a nascent SAF market, simplicity and predictability outweigh the theoretical responsiveness of a variable approach.

Question 2.1(b): What outcomes do you think can be delivered with the available funding?

With a fixed per litre credit calibrated at an appropriate level, the available funding can underpin early commercial SAF projects that establish domestic production capacity, demonstrate technical and economic viability and anchor long-term offtake agreements. ICF modelling commissioned by the AAA, indicates that a stable production credit could enable two to three commercial scale SAF projects to reach investment decision this decade, delivering between 300 and 500 million litres of annual supply by 2035, provided complementary demand settings are also in place.[15] To maintain market discipline and avoid long-term distortion, such a fixed credit should apply for a defined support period per facility, with periodic review points applying to future projects only.

A fixed credit enables government to define a predictable budget envelope and estimate the volume of eligible production it expects to support. Proponents can then assess whether the combination of the credit, expected SAF price and co product revenues is sufficient to reach investment decision.

Variable credit designs would produce less predictable outcomes. In periods where price spreads narrow, the credit may fall below what is needed to unlock SAF production, resulting in underutilisation of funding and limited additional supply. In periods of high spreads, the credit may escalate unpredictably, complicating budget management and weakening investor trust.

For aviation, the key outcome is not simply litres supported in any single year, but the creation of a stable domestic SAF supply base that grows over time. A fixed credit better aligns with that objective.

Question 2.1(c): What type of mechanism provides the greatest investment certainty or level of bankability to projects?

Bankability for SAF projects depends on demonstrating stable long-term revenue streams. A fixed per litre production credit provides clarity for lenders, investors and airlines entering offtake agreements.

Variable credits introduce uncertainty that increases the cost of capital or prevents projects from securing finance altogether. Given strong overseas competition for capital, Australian SAF projects require policy stability to remain investable.

[15] ICF (2025), pp.17-18

A simple, legislated fixed credit over a defined period, supported by clear eligibility rules, provides the greatest certainty. Lenders have indicated that at least ten years of predictable support is required to underwrite long tenor debt for SAF projects.[16]

Question 2.1(d): How can this support be structured to prevent substantial upside to producers?

The AAA recognises the need to manage the risk that, over time, a fixed credit could generate windfall gains for producers if technology costs fall faster than expected or if market prices for SAF rise sharply. There are several design features that can address this risk without undermining certainty for early movers.

First, the production credit can be set for a defined period, for example ten years per facility, with the rate fixed at the time of final investment decision and no retrospective changes once a project is committed. This approach gives early investors confidence, while allowing the Government to adjust the rate offered to later projects in light of observed cost trajectories and market conditions. Second, the legislation can include scheduled review points for the headline rate applying to new projects, with the explicit proviso that rates can be reduced for future facilities as costs come down, but not for projects that have already taken a decision on the basis of the earlier settings. Third, eligibility criteria can require transparent reporting of costs, production volumes and co-product revenues, which would inform those periodic reviews and support evidence-based adjustment.

These structural features allow the Program to avoid locking in unnecessarily high support levels indefinitely, while still providing the stability SAF projects require at the point where they are competing for capital against opportunities in other jurisdictions.

Question 2.1(e): How do you consider pricing for LCLF will be set over the short-medium term and longer term? Will pricing be matched to a premium on equivalent fossil fuel or price of imported LCLF or be on a carbon abatement basis?

In the short to medium term, SAF and other low carbon liquid fuels will trade at a premium to fossil equivalents, reflecting higher production costs, limited supply and concentrated demand from users with regulatory obligations or strong voluntary targets. Prices will be shaped by the marginal cost of domestic production, the landed cost of imported fuels from regions with strong policy support and the willingness of end users to pay for emissions reductions.

Over time, as global production increases and technologies mature, unit costs should decline, although the extent will depend on feedstock availability and competition across sectors. Prices may increasingly be influenced by carbon abatement value under schemes such as CORSIA or domestic carbon markets.

Program design should therefore assume that SAF premiums will persist. A fixed per litre credit calibrated with realistic assumptions about price differentials is essential to enabling domestic

[16] ICF (2025), pp.10-11.

producers to compete with imports and providing airlines with confidence to enter long-term offtake agreements.

Question 2.2: To deliver the policy intent of the Program while maximising the value for taxpayers, do you agree that projects with the lowest cost should be prioritised under the Program, with the cost being measured either as per unit of LCLF produced or as per unit of carbon emissions abated?

Cost effectiveness is important, but a strict lowest cost approach would not deliver the objectives of the Program. Renewable diesel pathways will almost always appear lower cost than SAF, particularly in the early years and a purely cost based ranking would therefore direct support away from aviation despite its lack of alternatives.

Renewable diesel would outcompete SAF on a cost per litre or cost per tonne basis unless policy frameworks explicitly recognise aviation's unique decarbonisation constraints. This would result in public funds supporting sectors with multiple abatement options while aviation continues to face a substantial emissions gap.

Cost should therefore be treated as one criterion among several. Projects should also be assessed against strategic importance, contribution to fuel security, scalability and alignment with international obligations. Within this broader frame, cost per tonne of abatement is more meaningful than cost per litre but must still be interpreted in the context of sectoral need.

A SAF project with a somewhat higher cost per tonne may still deliver greater national value if it enables decarbonisation of an otherwise locked in source of emissions and strengthens Australia's long-term connectivity and competitiveness.

Question 2.3: Should the production of credit be linked to the quantum of LCLF produced, or the carbon emissions saving potential of the fuel?

There are advantages and disadvantages to both approaches. For aviation, the most effective design is a hybrid that retains the simplicity of a volume-based credit while incorporating emissions performance through eligibility thresholds or modest scaling.

A per litre credit provides clear and predictable revenue, supporting bankability and long-term contracting. A pure abatement-based credit would reward deeper emissions reductions but introduces complexity and potential dispute over lifecycle assumptions.

The AAA therefore favours a primary linkage to volume, conditional on robust minimum lifecycle emissions standards and sustainability criteria. If government wishes to further differentiate fuels, this could be done through limited scaling according to carbon intensity bands rather than adopting a fully abatement indexed design.

Volume based credits paired with minimum emissions thresholds provide the strongest balance between administrative simplicity, environmental integrity and compatibility with aviation's need for predictable supply.

Question 2.4: What are your views on the cost to deploy LCLF domestically compared to internationally? Is there a local premium for domestic production?

Domestic production of low carbon liquid fuels is likely to carry a local premium in the near term, particularly for SAF, given Australia's higher construction and labour costs, the need to establish new supply chains and the absence of large refining assets that some competitors can repurpose. Imported SAF will also carry a premium reflecting transport, certification and international policy incentives embedded in producer pricing.

From the perspective of airports and airlines, a modest local premium can be justified where it delivers broader national benefits including fuel security, regional economic development and alignment with Australian sustainability standards.

A stable production credit calibrated with realistic assumptions about Australian deployment costs is essential to making domestic production viable. Australia's cost base is between 10 and 35 per cent higher than leading competitor jurisdictions, reinforcing the need for predictable long-term support.[17]

Robust SAF accounting and reporting frameworks will be important to ensure that both domestically produced and imported fuels are assessed on a consistent and transparent lifecycle basis. Clear accounting of transport emissions, certification pathways and sustainability attributes will allow airlines, airports and regulators to make informed decisions, support environmental integrity and ensure that any cost differentials between domestic and imported SAF accurately reflect their full lifecycle impacts rather than unobserved externalities.

Public understanding will also be an important enabler of SAF uptake. Where passengers and freight customers understand that a modest premium reflects genuine emissions reductions, improved fuel security and domestic economic benefits, there is likely to be greater acceptance of SAF-related costs. Transparent reporting and clear communication will therefore play a role in supporting long-term demand and reducing resistance to the transition.

Question 2.5: Should the total value of production credits be capped for each project? If yes, what should the capped amount be and why?

A project level cap could be justified to manage budget exposure and ensure support is distributed across multiple facilities. However, any cap must be designed so that it does not undermine bankability for large SAF projects or force facilities to operate below efficient scale.

If adopted, a cap should be linked to indicative maximum annual production volumes and applied over a defined support period. Caps should avoid undermining economies of scale, which are essential to driving down unit costs in later project waves.

The key principle is to manage extreme outliers while preserving the viability of projects capable of materially contributing to domestic SAF supply.

[17] ICF (2025), pp.17-18.

Question 2.6: Should production be focused on domestic supply only or should export also be permitted? What impact could restriction have for projects or the market?

The primary objective should be securing sufficient domestic SAF supply for Australian based airlines and international carriers serving Australian airports. However, allowing exports can help projects reach scale, reduce commercial risk and attract investment. Restricting export entirely could reduce the competitiveness of Australian projects compared with those in jurisdictions where full market access is available.

A balanced approach is preferable. Projects could be required to demonstrate that a material share of production is contracted domestically or that domestic needs are met before export volumes are released. This approach preserves investment attractiveness while ensuring the Program delivers genuine benefits for Australian aviation.

Question 2.7: Is there a role for combined production support with capital grants for first of a kind facilities?

Yes. For first of a kind SAF facilities in particular, a combination of capital support and production support can be critical. First of a kind plants carry higher construction risk, greater uncertainty about operating performance and long payback periods. A well targeted capital grant can reduce the upfront equity requirement, improve project economics and make it easier to reach financial close, especially when combined with a predictable production credit. This is consistent with the approach taken in several overseas jurisdictions, where early demonstration and commercial scale plants have received one off capital support to overcome initial barriers, followed by ongoing production incentives that reward actual volumes delivered.

For airports and airlines, the priority is that at least some early SAF projects get built, prove their performance and lay the foundations for subsequent, lower cost deployments. Combined support for first of a kind facilities is an efficient way to do this. Over time, capital support can taper as technologies mature, while production credits remain the primary instrument.

Question 2.8: What other types of funding or concessional finance could support LCLF projects (for example funding from CEFC and NRF)?

Concessional finance from institutions such as the CEFC and NRF can materially improve the capital stack for SAF projects. Lower cost debt, credit enhancement and risk sharing instruments reduce the weighted average cost of capital and improve project viability. In many cases, a combination of CEFC debt, NRF equity or quasi equity and private capital, underpinned by a production credit, will be required for projects to proceed in Australia's competitive global context.

State based financing vehicles, export finance agencies and targeted grants for enabling infrastructure may also play a role. These supports should complement, not replace, production credits.

Question 2.9: Is any other support required across the supply chain to enable domestic production of LCLF?

Yes. Beyond plant level support, targeted assistance is needed across the supply chain. Feedstock supply is one of the most significant barriers. Aggregating and transporting sustainable feedstocks at scale is costly and complex, particularly for residues and wastes.

Feedstock mobilisation and preprocessing are key constraints and support for aggregation hubs, waste stream certification and long-term contracting frameworks is recommended. Certification and verification systems also require investment to ensure lifecycle emissions and traceability can be demonstrated in line with international standards.

Downstream, some airports may face transition costs related to storage, blending and quality assurance systems. Demand side measures, including clear signals from the Jet Zero Council or future blending targets, will also be essential to give airlines confidence to commit to long-term offtake.

Question 2.10: What lessons can Australia learn from other jurisdictions that have already implemented LCLF production support measures?

Overseas experience shows that production support alone is insufficient. Meaningful SAF outcomes are achieved when production incentives sit within a broader policy package that includes demand side obligations and robust sustainability frameworks.

In the United States, the Renewable Fuel Standard, state level standards and federal production tax credits have created strong commercial conditions for SAF. In Europe, the RED framework and ReFuelEU Aviation Regulation provide both eligibility rules and binding SAF usage obligations. Singapore is developing a SAF levy and incentive scheme tailored to aviation.

Common features include stable long-term policy settings, recognition of SAF as distinct within broader fuel strategies and strong sustainability and lifecycle accounting rules. These characteristics underpin successful SAF scale up and reduce investment risk.

Australia should draw on these lessons by ensuring the Program is predictable, SAF focused and integrated with demand side measures and international sustainability frameworks.

3. Fuel production

Question 3.1: Considering this objective, what production pathways should be focused on or prioritised?

Australia should prioritise production pathways that are technically mature, commercially scalable and capable of delivering SAF suitable for aviation's near and medium-term decarbonisation needs. Pathways such as HEFA and alcohol to jet can be deployed earlier because they draw on proven technologies with established international reference projects.[18]

[18] ICF (2025), pp.13-14.

These pathways offer the highest probability of delivering domestic SAF within the timeframe required for Australia to meet aviation emissions targets and remain competitive with global markets that are already scaling production, noting that feedstocks for pathways such as HEFA are inherently limited and unlikely to meet the full volume of SAF required to decarbonise aviation over the long-term.

At the same time, it is important that the Program does not restrict innovation. Emerging pathways, including gasification and power to liquids, will be essential for long-term supply because Australia has extensive renewable energy resources and a strong comparative advantage in renewable hydrogen and electricity generation, and because biomass-based feedstocks alone are unlikely to be sufficient to meet long-term SAF demand at scale. Power-to-liquids pathways will therefore be critical to enabling sustained growth beyond the limits of available biomass resources.[19] A balanced approach that accelerates deployment of established pathways while preparing the ground for next generation fuels will support both early availability and long-term resilience.

Question 3.1(a): Should priority be given to projects that use more established production pathways (for example HEFA and HVO) than nascent production pathways that may present a higher level of technology risk?

In the initial stages of the Program, there is a strong case to prioritise more established pathways to ensure that Australia achieves early runs on the board, builds operational experience and demonstrates that SAF can be produced and supplied into Australian airports at scale. For airlines and airports, early availability of SAF is important both to meet corporate emissions commitments and to establish the practical systems for handling, blending and accounting. Established pathways are better placed to deliver this in the short term.

However, this should not mean that nascent pathways are excluded. Some proportion of Program support, particularly in the form of capital grants or concessional finance, should be accessible to higher risk, higher reward technologies that can materially improve emissions performance or expand feedstock options in the longer term. The objective is a balanced portfolio, rather than a narrow focus on incumbent technologies.

In practice, this means supporting feedstock optimisation and conversion technologies alongside early commercial deployment. This could include pilot plants and demonstration projects to test new conversion pathways, such as Alcohol-to-Jet processes well suited to Australian sugarcane feedstocks. Complementary investment in agricultural research to improve sugarcane yields and maximise the use of sugar by-products would further strengthen the viability and scalability of a domestic SAF industry over time.

Question 3.1(b): How can nascent production pathways compete with more established production pathways (for example HEFA and HVO)?

[19] ICF (2025), pp.17-18.

Nascent pathways will find it difficult to compete purely on cost with mature technologies, especially where assessment frameworks emphasise lowest cost per litre or per tonne of abatement. To allow them to play an appropriate role, the Program can include dedicated windows or separate streams for innovative or early-stage technologies, with tailored assessment criteria that recognise their potential rather than only their current cost position. Additional capital support, higher production credit levels for early volumes or access to specialised risk sharing instruments may also be warranted.

For aviation, the value of supporting nascent pathways lies in unlocking future SAF supply that is less constrained by existing feedstock limits and potentially capable of deeper emissions reductions. The Program should therefore ensure that these options are not crowded out by more established pathways, even while it leans on mature technologies for near term deployment.

Question 3.1(c): What minimum stage of project development (and evidence) should be expected by projects under the program?

Projects seeking support under the Program should be able to demonstrate that they have progressed beyond conceptual stages and have a realistic pathway to construction and operation within the expected timeframe. As a minimum, proponents should have completed preliminary feasibility assessments, identified a viable site, undertaken initial engagement with regulators and key stakeholders and developed indicative feedstock and offtake strategies. Evidence of serious engagement with airlines, airports or other offtakers will be particularly important for SAF projects.

That said, the minimum stage requirements should be calibrated carefully so that they do not exclude promising SAF projects that are progressing in an orderly way but have longer development cycles, or that are waiting on policy clarity before investing heavily in detailed design. The threshold should be high enough to filter out purely speculative proposals, but not so high that it shuts out exactly the kind of complex integrated projects that the Program is intended to unlock.

Question 3.2: Should there be a minimum facility size to be eligible?

A minimum facility size may be appropriate to ensure that Program funds support projects capable of making a meaningful contribution to national SAF supply and delivering economies of scale. Very small facilities are unlikely to materially move the dial on aviation emissions and may struggle to remain commercially viable without ongoing high levels of support. Facilities below 40 to 60 million litres per year struggle to achieve competitive unit costs or attract long tenor finance, suggesting a practical lower boundary for commercial viability.[20] However, rigidity should be avoided. Some smaller scale facilities may be justified in regional contexts, where they are closely linked to particular feedstock sources or serve specific airport markets that would otherwise have no access to SAF.

[20] ICF (2025), pp. 17–18.

The Program could therefore signal an indicative minimum size for typical projects, while retaining discretion to consider smaller facilities where they have strong strategic justification, such as supplying remote or regional aviation markets or demonstrating an innovative pathway in an operational setting.

Question 3.3: Should LCLF be required to meet a carbon intensity threshold per cent carbon intensity reduction compared to fossil equivalent to be eligible for the program? If yes, what would be a reasonable threshold, and how should that threshold be calculated and verified?

Carbon intensity thresholds are essential to ensure that public funds support fuels that deliver genuine emissions reductions. The AAA supports requiring all fuels supported under the Program to meet a minimum percentage reduction in lifecycle emissions relative to the relevant fossil comparator. In the early years, thresholds should be set at a level that allows a range of SAF pathways to participate, while excluding marginal improvements that do not align with Australia's net zero goals. Over time, thresholds can increase in line with improvements in technology and data.

Calculation and verification should be based on recognised international methodologies, such as those used under ICAO CORSIA and leading certification schemes like ISCC, tailored as necessary to Australian conditions.[21] Airports strongly support alignment with CORSIA sustainability criteria to ensure that SAF used at Australian airports can be recognised in international reporting frameworks and airline compliance obligations. Independent verification by accredited bodies is important to maintain integrity and to give airlines confidence that using supported SAF will count toward their regulated and voluntary emissions targets.

Question 3.3(a): If the production incentive is based on carbon emissions reduced, rather than volume of LCLF produced, is a minimum carbon intensity threshold still needed as part of the eligibility criteria?

Yes. Even if the incentive is expressed on a per tonne of emissions reduced basis, a minimum threshold remains necessary to avoid supporting fuels that deliver only marginal improvements or that might even create perverse outcomes once indirect effects are considered. Without a threshold, it would be possible for fuels with relatively modest carbon intensity improvements to receive the same structural support as those with much stronger performance, which would dilute the Program's environmental impact and risk reputational damage. A threshold provides a baseline level of ambition that all supported fuels must meet.

Question 3.3(b): Should Indirect Land Use Change be included in the method for determining carbon intensity, for the purpose of the Program?

[21] ICF (2025), pp. 3–5.

Indirect land use change is complex to quantify, but it can materially affect the true climate impact of some biofuel pathways. For credibility and alignment with international norms, the method for determining carbon intensity under the Program should at least be capable of taking Inderect Land Use Change (ILUC) into account, particularly for feedstocks where there is a significant risk that expanded production will displace other land uses or drive deforestation. Where robust ILUC factors are available and accepted internationally, they should be applied. Where they are not, conservative assumptions and strong feedstock sustainability criteria can help manage risk. For aviation, which is under close international scrutiny, it is important that SAF supported by public funds is not later challenged on the basis of omitted ILUC impacts. Clear and consistent treatment of ILUC is also essential to ensure that future emissions reporting is transparent, credible and defensible across domestic and international frameworks.

Question 3.3(c): Should any feedstocks be prioritised or otherwise considered out of scope?

Feedstock choices have significant implications for sustainability, social licence and long-term scalability. Residues, wastes and by products are generally preferable, as they avoid direct competition with food production and can offer strong emissions performance. Certain dedicated energy crops may also be appropriate where they are grown on marginal land and managed to protect biodiversity and water resources. Feedstocks that pose high risks to food security, land use change or local environmental values should either be deprioritised or deemed ineligible. Clear guidance on feedstock eligibility, aligned where possible with international standards, will provide certainty to producers and help protect the integrity of the Program. Strict and transparent sustainability criteria for feedstocks and SAF production are critical to ensuring that emissions reductions can be credibly reported over time and that SAF supported under the Program retains environmental integrity and public confidence.

Question 3.4: Other than carbon intensity, should any other sustainability criteria be included?

Yes. Sustainability is broader than carbon intensity alone. Additional criteria might include impacts on biodiversity, soil health, water use, local air quality, and social and labour conditions in feedstock production and processing. For projects located near or interacting with First Nations lands and communities, consideration of cultural heritage and economic participation opportunities will also be important. The AAA considers that the sustainability criteria applied under ICAO CORSIA provide an appropriate and internationally recognised starting point, with adaptation to the Australian context where necessary. Including a limited set of clear, measurable sustainability criteria alongside carbon intensity ensures that SAF development supports, rather than undermines, broader environmental and social objectives and aligns the Program with emerging international expectations around sustainable aviation fuels.

Question 3.5: Which international and domestic sustainability schemes should be allowed to verify sustainability claims?

The Program should recognise established international sustainability schemes that are widely used in aviation fuel markets, such as ISCC and the Roundtable on Sustainable Biomaterials, as

well as schemes developed for compliance under ICAO CORSIA. At the same time, it should align with domestic frameworks such as the Guarantee of Origin scheme where relevant, so that producers are not subjected to inconsistent or duplicative requirements. Allowing a defined set of trusted schemes, rather than an open-ended list, will reduce administrative burden while maintaining high standards. For airports and airlines, using recognised schemes is vital, because it allows SAF used in Australia to be counted toward international commitments and avoids the risk of Australian specific approaches that are not acknowledged by key international partners.

4. Other policy considerations

Question 4.1: What are your views on the aforementioned factors affecting the merit of a proposal?

The factors outlined in the consultation paper provide a useful starting point for assessing the merit of proposals, particularly those relating to cost effectiveness, emissions performance, project readiness and regional impact. From an aviation and airport perspective, two refinements are important. First, the assessment framework should explicitly recognise the strategic value of projects that supply SAF to Australian airports and airlines, given aviation's lack of alternative abatement options and its importance to national connectivity and trade. Second, merit should be understood not only in terms of lowest cost in isolation, but in terms of contribution to a balanced and resilient SAF supply system. A portfolio of projects that collectively supports multiple regions, a mix of pathways and both major and regional airports may deliver greater overall merit than a single lowest cost project that does not align well with aviation's needs.

Question 4.2: Recipients under the Program will need to deliver benefits according to the Community Benefit Principles under the Future Made in Australia Act. How do you consider the Community Benefit Principles in relation to LCLF projects? Are there specific Community Benefit Principles that are more or less relevant?

For SAF projects in particular, the Community Benefit Principles are highly relevant. Development of SAF production facilities can drive significant regional economic benefits through new jobs, supply chain opportunities for farmers and other feedstock suppliers and associated investment in infrastructure. These outcomes speak directly to principles relating to secure, well-paid work, regional development and diversification of local economies. There is also strong alignment with principles focused on emissions reduction and environmental protection, provided sustainability criteria are robust.

Some principles will be especially important in the aviation context. Engagement with First Nations communities, where projects affect their lands or interests, is critical to achieving positive outcomes and maintaining social licence. Similarly, principles related to workforce development, training and skills will be significant because SAF projects can support the

emergence of a specialised clean fuels workforce that benefits multiple regions and sectors. The least relevant principles are those that relate to sectors or policy objectives unrelated to energy or regional development, but overall, the Community Benefit Principles align well with the kind of projects the aviation sector would expect to see under the Program.

Question 4.3: How will overseas policy developments interact with domestic policy settings to support projects reaching final investment decisions? For example, LCLF demand side targets or mandates, and international frameworks such as the International Civil Aviation Organisation long-term global aspirational goal for international aviation of net zero carbon emissions by 2050.

Overseas policy developments will strongly influence both the supply of and demand for SAF in Australia. Without a coordinated national framework, Australian airlines will face materially higher abatement costs than competitors in the United States, Europe and Singapore, where coherent SAF architectures reduce both price volatility and compliance uncertainty.[22]

International mandates, production credits and carbon pricing schemes will shape global trade flows and determine how much SAF is available for export and at what price. At the same time, frameworks such as ICAO's long-term aspirational goal and CORSIA will exert increasing pressure on airlines to secure emissions reductions, either through SAF use or alternative measures. If domestic policy settings are significantly weaker or less predictable than those in other jurisdictions, investment capital and feedstocks are likely to flow where returns are better supported and Australian projects may struggle to reach final investment decision. [23]

Conversely, if Australia can offer a coherent package of production support, clear sustainability rules and credible indications of future demand, it will be better placed to attract investment in SAF projects that supply its airports. Recent policy work commissioned by the AAA on SAF accounting highlights that international alignment and interoperability with frameworks such as CORSIA, NGER and emerging global registries are critical to ensuring credibility, avoiding double counting and enabling emissions reductions to be recognised consistently across jurisdictions.[24]

That work also demonstrates that credible, internationally aligned accounting and reporting frameworks materially improve investor confidence by enabling SAF to be traded, claimed and valued across borders, supporting larger scale investment decisions and long-term offtake arrangements.[25]

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[22] European Commission, *ReFuelEU Aviation Regulation* (2023); Civil Aviation Authority of Singapore (CAAS), *Singapore Sustainable Air Hub Blueprint* (2023). Accessed 18 December 2025.
[23] ICF (2025), pp. 2–3, 17–18. International Civil Aviation Organization (ICAO), *Long-Term Global Aspirational Goal for International Aviation* (2022); ICAO, *Annex 16, Volume IV – Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)*. Accessed 18 December 2025.
[24] ICF (2025), pp.34-36.
[25] gg International Air Transport Association, *Net Zero Carbon Emissions by 2050* (2021); European Commission, *ReFuelEU Aviation Regulation* (2023); Government of Singapore, *Sustainable Air Hub Blueprint* (2023).

The interaction between domestic and overseas policy is therefore not abstract. It will directly affect whether Australian airports and airlines have access to competitively priced SAF or whether they are forced to compete on unfavourable terms in international markets. Aligning the Program with global trends and recognising aviation's international obligations, is essential to give projects the confidence they need to proceed.

Question 4.4: In addition to production support, what other measures are considered critical to achieve final investment decisions for projects? What are their key features?

Beyond production support, final investment decisions for SAF projects will depend on credible and durable demand side measures, as well as a supportive regulatory environment. Demand side measures could include indicative or binding SAF use targets for aviation over time, signals from the Jet Zero Council on expected SAF uptake pathways and policies that allow airlines to recover a portion of SAF costs in a transparent way. Long-term offtake agreements between airlines and SAF producers, sometimes with involvement from airports or other intermediaries, will be central to bankability. Government can help catalyse these agreements by providing clarity on reporting frameworks, recognising book and claim arrangements and ensuring that SAF used in Australia counts toward international obligations. A national SAF accounting system is also a critical enabler of investment decisions because investors and airlines require certainty on how emissions reductions will be attributed across the supply chain.

Regulatory certainty is also critical. Projects need confidence that planning, environmental and licensing processes are predictable and proportionate, that sustainability rules will not change arbitrarily and that there is a stable approach to carbon accounting. Where possible, government can assist by streamlining approvals for strategically important SAF projects, while maintaining appropriate environmental safeguards and by coordinating between relevant agencies to avoid conflicting requirements.

Question 4.5: What are the intersecting policies you expect need to be considered to unlock a domestic LCLF production industry?

Several policy domains intersect with the Cleaner Fuels Program and will influence its success. For aviation, these include the work of the Jet Zero Council, the development of a Guarantee of Origin framework that covers SAF, any future low carbon fuel standard or similar obligation and the treatment of SAF under the Safeguard Mechanism. Critically, these policy settings must be supported by a clear, endorsed SAF accounting and regulatory framework that defines sustainability criteria, minimum emissions thresholds and traceability requirements across the supply chain.

Fuel security policies, including those dealing with strategic stockholding and refining capacity, will also be relevant, as will policies that shape agricultural production, waste management and land use, given their impact on feedstock availability.

Alignment across these policies is vital. For example, if the Safeguard Mechanism and any future aviation specific policies recognise and value SAF use appropriately, airlines will have stronger incentives to enter into offtake agreements. If Guarantee of Origin rules for SAF align with

international certification schemes, Australian producers will find it easier to participate in global markets. The AAA's recent submissions on the Guarantee of Origin Scheme and SAF accounting report, highlight the importance of embedding robust sustainability criteria, emissions thresholds and chain of custody requirements into both production and certification frameworks, to ensure emissions reductions can be transparently accounted for, avoid double counting and meet international compliance and reporting expectations.[26] A whole of government approach that treats SAF as a strategic priority will therefore be more effective than isolated measures.

Question 4.6: Is there any other feedback you would like to provide that is not covered by questions above?

The AAA's overarching message is that the aviation sector has very limited alternative pathways to decarbonise and is uniquely reliant on liquid fuels. The Cleaner Fuels Program will only realise its full potential if it explicitly recognises SAF as a strategic priority within the broader low carbon liquid fuels landscape and designs its incentives, eligibility and assessment criteria accordingly. Aviation is central to Australia's economic prosperity, regional connectivity and participation in global trade and tourism. Ensuring that Australian airports and airlines have access to domestically produced, sustainable SAF is therefore not only an environmental priority, but an economic and strategic one. The AAA stands ready to work with government and other stakeholders to refine Program design and to support the successful deployment of SAF across Australia's airport network.

Conclusion

The AAA strongly supports the Cleaner Fuels Program and welcomes the Government's commitment to accelerating the production of low carbon liquid fuels in Australia. Aviation is uniquely reliant on liquid fuels and requires SAF to meet its emissions reduction obligations. The Program represents a crucial opportunity to catalyse the development of a domestic SAF industry that will improve fuel security, drive regional investment, support high value jobs and strengthen Australia's international competitiveness. The AAA urges the Government to explicitly prioritise SAF within eligibility, assessment and funding settings to ensure the Program delivers the greatest strategic, economic and environmental benefit. The AAA looks forward to further engagement as Program design progresses.

[26] Australian Airports Association, submission to the *Future Made in Australia (Guarantee of Origin) Scheme – Exposure Drafts and Consultation Papers*, 30 July 2025. Accessed 18 December 2025.

About AAA

The Australian Airports Association (AAA) has connected Australian airports for over 40 years, representing more than 340 airports and aerodromes across the country, from major international gateways to regional and remote community airstrips, alongside more than 150 corporate members. We advocate for policies that support infrastructure investment, operational excellence and equitable access for people and communities.

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