19th December 2025

Dept. of Infrastructure, Transport, Regional Development, Communications, Sport and the Arts
111 Alinga Street,
Canberra ACT 2601

Submitted via DITRDCSA's Cleaner Fuels Program Webpage

Dear Cleaner Fuels Program Team,

Qantas Group and Airbus Joint Submission to the Clean Fuels Program Consultation

The Qantas Group and Airbus welcome the opportunity to provide consultation comments on the Federal Government's proposed $1.1 billion Cleaner Fuels Program (***"CFP"*** or ***"The Program"***). We see this as an important pillar within the Government's broader Low Carbon Liquid Fuels (***"LCLF"***) agenda alongside demand-side policy and the Guarantee of Origin certification scheme.

Qantas and Airbus have jointly committed US$200m to invest in businesses seeking to catalyse and produce SAF in Australia and help Australian aviation decarbonise. We have a common interest in the right policy frameworks to make these investments more successful and catalyse more SAF production, so we offer a joint view that we hope will be helpful to Government as it considers the approaches to developing supply side support.

Australia can seize a generational opportunity to develop a thriving LCLF industry with benefits including regional employment, fuel security and decarbonisation. Given this is a new industry, we note that policy support will be required through a transition period.

We believe that policy should be designed with the following key principles:

- Ensure that local production is competitive with imports; and
- Ensure that local projects are capable of being financed by institutional lenders.

Our submission focuses on mechanisms which have the potential to deliver on these principles. Our submission also recognises that these principles cannot be met by supply-side incentives alone and that demand-side policy must be developed in parallel.

We thank you for the opportunity to have our feedback considered and we look forward to discussing any questions you may have throughout the consultation process.

Yours Sincerely,

Matthew Hudson
Executive Manager – SAF
Qantas

Stephen Forshaw
Chief Representative – Australia, NZ and the Pacific
Airbus

Executive Summary

The Qantas Group (***"Qantas" or "The Group"***) and Airbus ("**Airbus**", or together, "**the Responding Parties**") support the CFP and the Government's Future Made in Australia (***"FMA"***) agenda. The Responding Parties believe that the proposed supply-side incentives through the CFP must be deployed alongside a demand-side mandate.

Demand-side policy is critical to help decarbonise aviation, achieve fuel security and unlock regional jobs, as well as to help stimulate investable production projects through offtake certainty. Supply-side incentives through the CFP can ensure that domestically produced Sustainable Aviation Fuel (***"SAF"***) can meet at least some portion of this demand.

Funding from the CFP should only be deployed to support the decarbonisation of truly hard-to-abate sectors of the economy such as aviation, shipping, and where electrification is not viable, mining, heavy freight, rail and construction. The Responding Parties support CFP monies being allocated to SAF, Renewable Diesel (***"RD"***) and any other LCLF which support this principle. The Responding Parties' view is that SAF should take priority given aviation has no non-LCLF alternative to decarbonise in the long term.

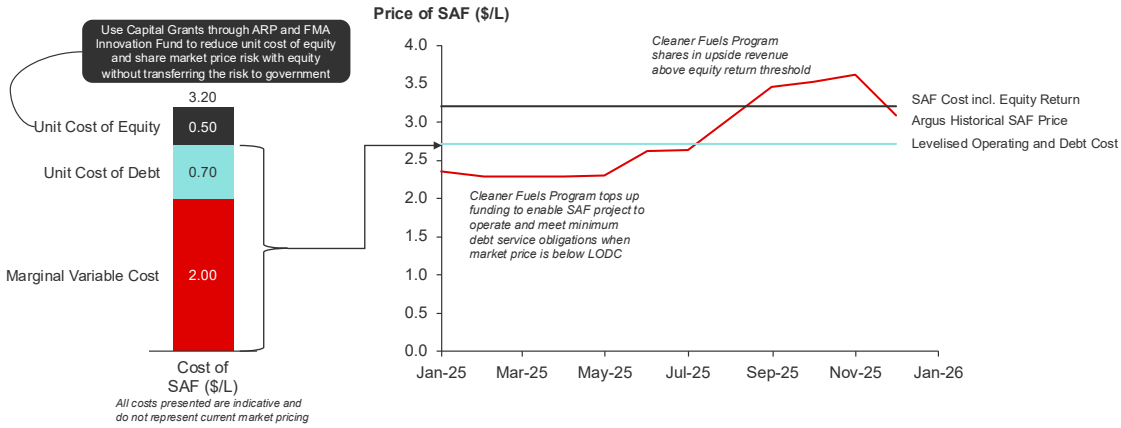
We recognise that the CFP has a defined cap of $1.1 billion. This is likely to limit domestic production to between 100 and 200 million litres per annum and could result in good quality local projects which could potentially reach import price parity over time do not receive essential transitional support from the Government.

We believe that a well-designed supply-side incentive program of ~$5 billion over ten years, coupled with a Carbon Intensity (***"CI"***) mandate, could unlock significant volumes of local SAF production by 2040.

We expect that LCLF projects will require long term price and volume certainty to be capable of being financed by institutional lenders. On the other hand, customers operating in competitive environments typically require price competitiveness and volume flexibility. Customers therefore cannot provide the certainty required by financiers without imposing unacceptable risks on their businesses.

In our view, policy which recognises and addresses this disconnect between producer and customer risk tolerance can be effective in ensuring Australian projects can be financed and can deliver meaningful volumes of LCLF.

In this submission, the Parties have proposed a policy mechanism under which the Government addresses this by providing a revenue floor for projects by underwriting operating costs and debt service but does not guarantee equity returns. Airbus supports this proposal in the context of the Australian market.



The Responding Parties acknowledge that catalysing the LCLF manufacturing industry would likely also require capital grants to minimise equity return risk without the adverse effects associated with underwriting an equity return through a program like the CFP.

The proposed structure is broadly similar to the Government's Capacity Investment Scheme (***"CIS"***) Program, the NSW Government's Long Term Energy Service Agreement (***"LTESA"***) Programs and the UK Government's Hydrogen Production Business Model.

Separately, we acknowledge that the incorporation of Indirect Land Use Change (***"ILUC")*** is a complex topic and we are pleased that the Government is intending to conduct consultation on the proposed GO Scheme. This process should take input from a diverse range of stakeholders, and we would encourage the Government to seek advice from independent experts as part of this process. Further, we advocate for the development of this process to occur in parallel to the broader demand-side policy development work streams.

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

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

a. Should LCLF suitable for particular sectors or uses be prioritised? For example, should sustainable aviation fuel be prioritised over renewable diesel?
b. Should LCLF for certain sectors or uses be de-prioritised due to other viable decarbonisation pathways?
c. What market impacts are anticipated by influencing prioritisation of particular fuel types?

The Responding Parties support the CFP, highlighting its importance as a central pillar of the FMA agenda and as a fundamental driver for the development and deployment of LCLF across the nation.

We believe the Program's focus should be on fuels which not only deliver verifiable reductions in lifecycle emissions compared to their fossil fuel counterparts but also meet stringent, internationally recognised sustainability standards. Both SAF and RD should be deemed eligible for support under the Program for sectors which have no alternative to decarbonise without LCLF.

It is important to acknowledge that SAF faces unique cost and technological barriers and is essential for the decarbonisation of aviation. As such, SAF warrants a greater allocation of Program support relative to other LCLFs.

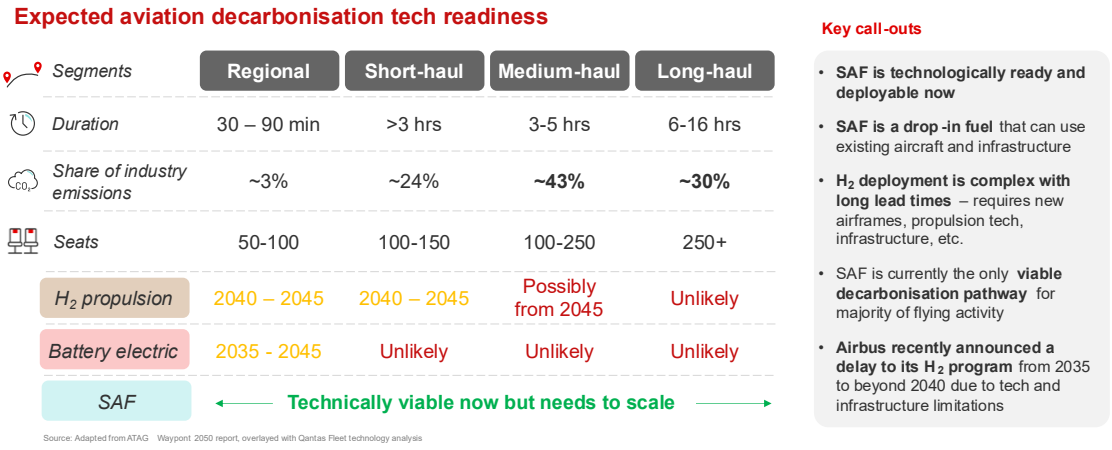


Figure 1 Summary of Aviation Decarbonisation Pathways

For the aviation sector, the challenges are particularly acute:

- Unique Sectoral Needs: Aviation is fundamentally different from most other fuel-consuming sectors:
    - For medium- and long-haul flights, there are **no technically and commercially viable substitutes** for liquid hydrocarbon fuels within the timelines outlined in the Government's decarbonisation agenda;
    - Technologies such as battery-electric or hydrogen propulsion are not expected to play a material role in aviation decarbonisation within the timeframe addressed by this Program;
    - This is particularly exaggerated in Australia given the vast distances over which aircraft operate; and
    - Consequently, SAF represents the only scalable pathway to meaningfully reduce aviation emissions while maintaining essential connectivity.

- Cost and Technology Barriers: SAF production is currently characterised by a higher and more persistent cost premium to its fossil alternative than RD due to the additional refining steps required to produce a fuel in the kerosene range:
    - The production process is capital-intensive, projects are often first-of-their-kind, and Australia has yet to establish a domestic SAF production facility;
    - In the absence of targeted support, it is unlikely that domestic SAF will reach final investment decision (***"FID"***) at a meaningful scale, especially when competing against lower-cost RD; and
    - In such a scenario, RD will absorb most available subsidies due to its lower production costs resulting in broader RD use, including in sectors where alternative decarbonisation options exist, at the cost of aviation which has no non-LCLF pathway to decarbonise in the long term (2050+).

The Responding Parties therefore recommend the following approach:

- The Program should be open to all LCLFs utilised in genuinely hard-to-abate sectors, including SAF for aviation and also RD for long-haul heavy road transport, mining, and maritime uses; and
- The Program should explicitly prioritise or weight SAF more heavily, ensuring that Australian projects producing SAF — either as stand-alone ventures or in conjunction with RD — are competitive for support and able to progress to final investment decision. There is precedent for this approach - for example, in the European road fuel mandates SAF was incorporated with a higher multiplier which enabled the higher cost of production to be overcome.

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. Are there any potential benefits, risks or constraints considering the two different production credit options?
b. What outcomes do you think can be delivered with the available funding?
c. What type of mechanism provides the greatest investment certainty or level of bankability to projects?
d. How can this support be structured to prevent substantial upside to producers?
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?

We propose that the production credit should be a variable amount linked to the cost of production and market prices, rather than a fixed amount per litre.

Cleaner Fuels Program Instrument Design

This instrument should be designed to underwrite operating costs and debt service to support project finance, but not guarantee equity returns.

The Responding Parties however recognise that equity should not be penalised for taking the risk to create a domestic industry. We therefore encourage the Government, through ARENA, to negotiate and deliver capital grants using other pools of capital such as the Advancing Renewables Program (***"ARP"***) and the Future Made in Australia (***"FMA"***) SAF Innovation Fund in the event producers are unable to secure the requisite equity capital.

Alternatively, the Government could consider a structure to underwrite a nominal return to equity (e.g., risk free return on Government bonds).

Precedent for this exists in the renewable energy Battery Energy Storage System (***"BESS"***) industry where early movers, with capital grant support combined with revenue underwriting for ancillary services, unlocked equity with the right risk appetite to secure an early mover advantage.

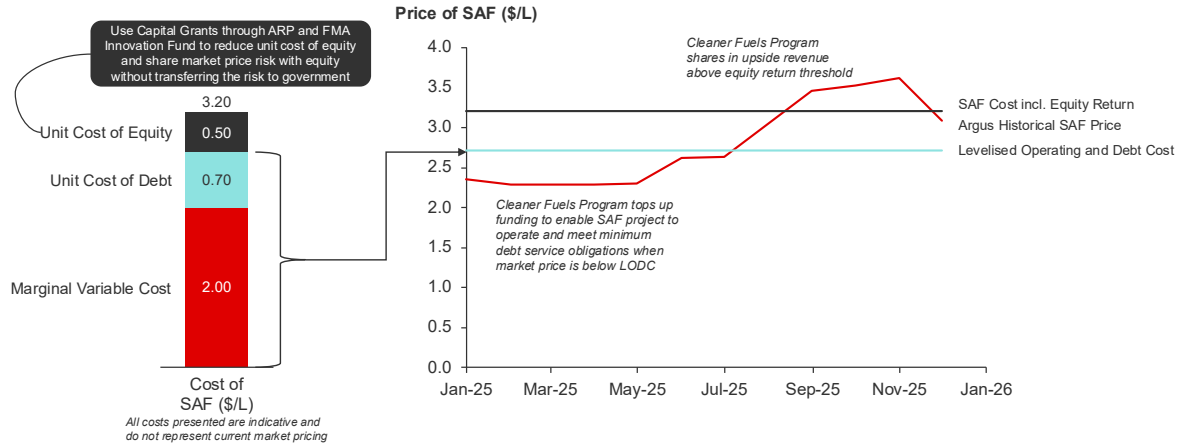


Figure 2 Summary of Proposed Design for CFP Supply-side Incentive Instrument

Under the proposed model, each project submits a verified Levelised Operating & Debt Service Cost (***"LODC"***) and a minimum underwrite volume per year as part of its application. Government, via a competitive and independently assessed process, agrees a Support Floor

($/litre) and a minimum volume per annum (litres/year) to ultimately underwrite a minimum annual revenue for the project.

For a defined volume and term, the Program then compares the Support Floor to a transparent market reference price for SAF:

- If the reference price is at or above the Support Floor, no payment is made;
- If the reference price is below the Support Floor, the Program pays the difference per litre for the pre-agreed minimum volume; and

The CFP design should be similar to the Government's existing Capacity Investment Scheme (***"CIS"***) or NSW Government's Long Term Energy Service Agreement (***"LTESA"***) schemes. We recognise that electricity markets are different to liquid fuels markets and may require market specific changes but believe the broad structure to providing a revenue floor to underwrite operating and debt costs to be a reasonable basis to design the CFP instrument.

We prefer this approach to a fixed per-litre credit that is blind to actual market conditions.

If the true cost gap between Australian SAF and the relevant benchmark (imported SAF or fossil jet) is larger than assumed, a fixed credit may be inadequate to make projects bankable. Conversely, if the gap narrows, a fixed credit structure can deliver windfall gains with no automatic tapering. Government would likely have to periodically reset the rate in response to market conditions, which is administratively and politically difficult.

A revenue floor which protects project revenues in the downside scenario with a link to a variable price is more targeted. It provides support only when and to the extent that the market price falls below verified LODC. Payments cease automatically when prices are strong.

The initial additional complexity (for instance the LODC must be standardised and independently assessed, and the reference price must be defined in a robust manner[1]) is manageable and proportionate to the investment at stake.

We recognise that the CFP has a defined cap of $1.1 billion. This is likely to limit domestic production to between 100 and 200 million litres per annum.

This will create a real risk that good quality local projects that are capable of reaching import price parity over time do not receive essential transitional support from the Government.

As summarised in Figure 4, we believe a supply side incentive program of ~$5 billion over ten years, when coupled with a Carbon Intensity (***"CI"***) mandate could unlock significant volumes of SAF uplift by 2040, with the likelihood that this drawdown would be more heavily weighted in the back end of this period as production facilities come online.

We therefore recommend that the Government considers expanding support for the CFP to ensure that projects with a clear pathway to import price parity receive the support required.

[1] For example, through the emerging SAF market indices (e.g., Argus SAF Index).

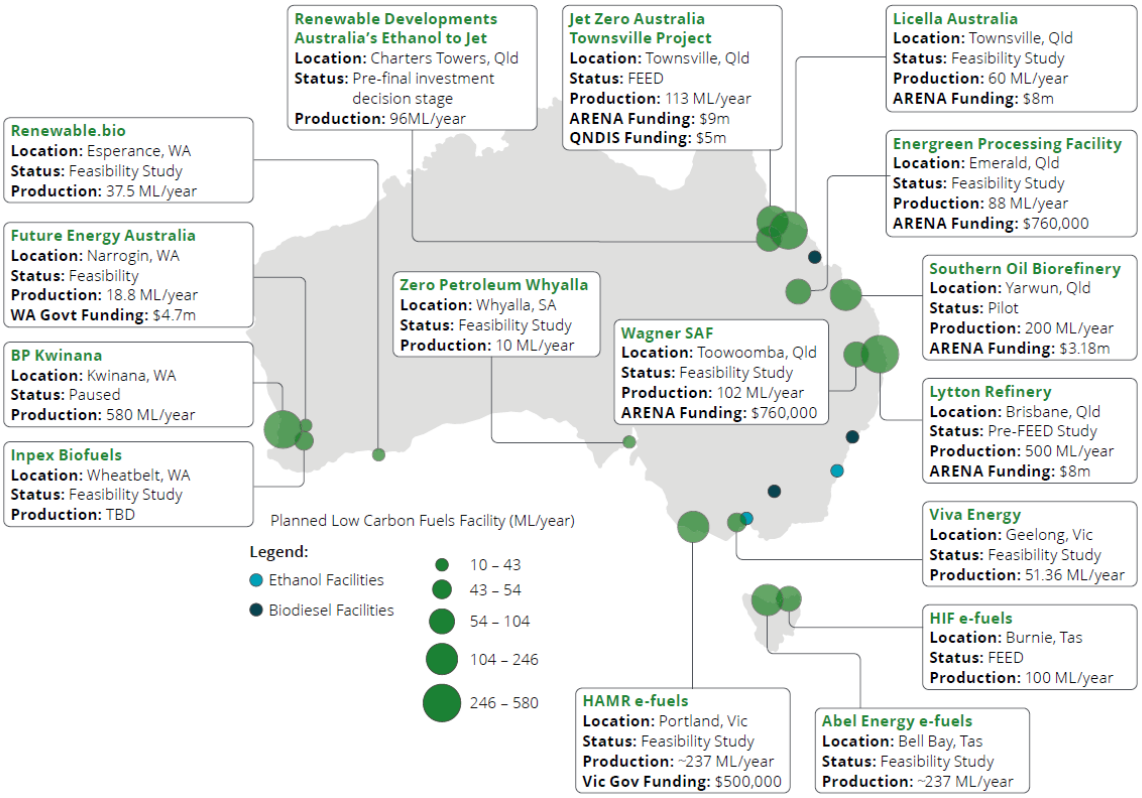
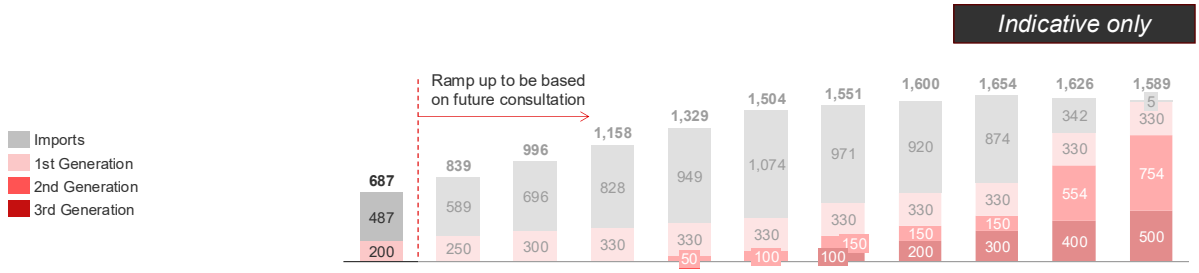


Figure 3 Australian Project Pipeline Identified in CEFC's Refined Ambitions: Exploring Australia's LCLF Potential

Interaction with Demand-side Mandate

The presence or absence of a SAF mandate materially changes the impact of this instrument. Should a mandate be in place the relevant cost differential would be between Australian SAF and imported SAF used for compliance.

In the absence of a mandate, the reference price would be fossil jet fuel, and the cost gap is larger. Hence, in the absence of a mandate, a supply-side incentive package of $1.1 billion will likely deliver materially lower, or possibly no material SAF capacity in Australia.



	Unit	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040
Market volume	ML	687	839	996	1158	1329	1504	1551	1600	1654	1626	1589
Subsidy required	AUD millions	224	265	308	352	396	442	489	538	590	642	696
Effective subsidy	AUD / litre	1.12	1.06	1.03	1.07	1.04	1.03	0.84	0.79	0.76	0.50	0.44

Figure 4 Expected SAF Uplift Within a Broader Demand-side + Supply-side Policy Package

CFP Risk Profile, Project Bankability and Windfall Profits Scenario

We note that the CFP policy instrument should not carry project development, project execution or operations (uptime) risk. We believe these risks are best carried by the producer and should not be transferred to the government through this policy instrument.

The Responding Parties recognise that the principal stakeholders of a mandate and supply-side incentive are the financiers, both private and other Government Special Investment Vehicles (***"SIVs"***) like the Clean Energy Finance Corporation (***"CEFC"***) and the National Reconstruction Fund Corporation (***"NRFC"***). From a financier's perspective, the lender is primarily concerned that projects can cover operating costs and service debt under plausible downside price scenarios.

The proposed floor price structure does precisely that:

- For each successful project, a support floor is agreed, equal to verified LODC; and
- For a capped volume and term, government commits to top up revenue to that floor when the market price is lower.

This structure is likely to give the lender confidence that, provided the plant operates as expected, there will be sufficient revenue to meet scheduled debt service, even in a weak market. Equity returns remain dependent on actual prices achieved above the floor. It is our view that equity should be willing to take market price risk, but we encourage further consultation on this point.

Our proposed structure is therefore strictly limited in scope but extremely powerful from a bankability perspective: it de-risks default and closure, without socialising equity risk.

We consider it inappropriate for a project receiving substantial taxpayer funding to benefit from major windfall / substantial upside since the LODC support floor is deliberately designed to avoid underwriting excess upside. We note that:

- The Support Floor is based only on operating and debt costs (LODC) - no equity return is built into the guaranteed level;
- Top-ups are paid only when the market reference price is below the floor and cease entirely when the reference price meets or exceeds it. There is no support in periods of high prices; and
- Projects are selected through a competitive process, with LODC scrutinised and bids ranked on expected dollars of support per tonne of abatement. High-cost or inefficient projects will simply not be funded.

These features ensure that public funds are focused on avoiding downside outcomes (shut-in plant, default), as opposed to locking in equity returns above a reasonable risk adjusted threshold.

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?

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

The Responding Parties' preference is that any production incentive under the Cleaner Fuels Program be implemented alongside a carbon-intensity ("CI") based mandate. In that context, the Group considers that the mandate and the production incentive should play distinct, complementary roles:

- The CI-based mandate should be the primary instrument driving down the average lifecycle emissions intensity of the fuel mix over time; and
- The production incentive should focus on lowering the cost of complying with that mandate and de-risking viable domestic projects, rather than re-running the CI optimisation inside the payment formula.

Where a CI-based mandate is in place, we do not support linking the payment formula itself to CI (for example, by paying a higher per-litre credit purely in proportion to CI performance). Instead, under the proposed operating and debt support floor, "lowest cost" should be defined as the lowest expected cost to government per tonne of lifecycle CO_2-e abated in line with the annual revenue top-up required, with CI reflected through eligibility thresholds and merit criteria—not through the top-up calculation.

This design recognises that, under a CI-based mandate, the regulatory instrument is already doing the heavy lifting on emissions intensity. Using CI as a gatekeeper (through minimum thresholds) and as a merit factor (through cost-per-tonne metrics), rather than as the basis for the payment formula, the scheme can remain focused on cost-effective abatement while avoiding over-penalising medium-CI but bankable projects.

If Government were to proceed with a purely volumetric SAF mandate (for example, a requirement that a fixed percentage of uplift be SAF, without an embedded CI trajectory), the Responding Parties' view is that the production incentive would need to be more explicitly CI-linked to avoid simply maximising litres without regard to climate outcome.

In such a scenario, supply-side support would need to carry more of the responsibility for driving down emissions per litre. This could be achieved by giving greater weight to CI and dollars of support per tonne abated in project selection, and by differentiating Support Floors or support terms for projects that deliver substantially deeper emissions reductions (subject to overall cost-effectiveness and program caps).

In all cases, whether the mandate is CI-based or volumetric, we consider it essential that the framework balances two objectives:

- Enabling near-term, scalable production from first-generation pathways (such as HEFA) which are most likely to deliver meaningful volumes this decade; and
- Supporting second- and third-generation pathways (such as Alcohol to Jet, Methanol to Jet, Fischer Tropsch and Power to Liquid) that are higher-cost today but critical to increase decarbonisation in the 2030s and 2040s, as well as to diversify Australia's capacity to produce volumes of SAF when HEFA feedstocks become globally constrained by high demand.

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?

Our analysis indicates that there will be an Australia premium for SAF in the near term, particularly for first-generation pathways, but that this premium reduces over time and can disappear – or even reverse – on a carbon-intensity basis as 2nd- and 3rd-generation projects scale.

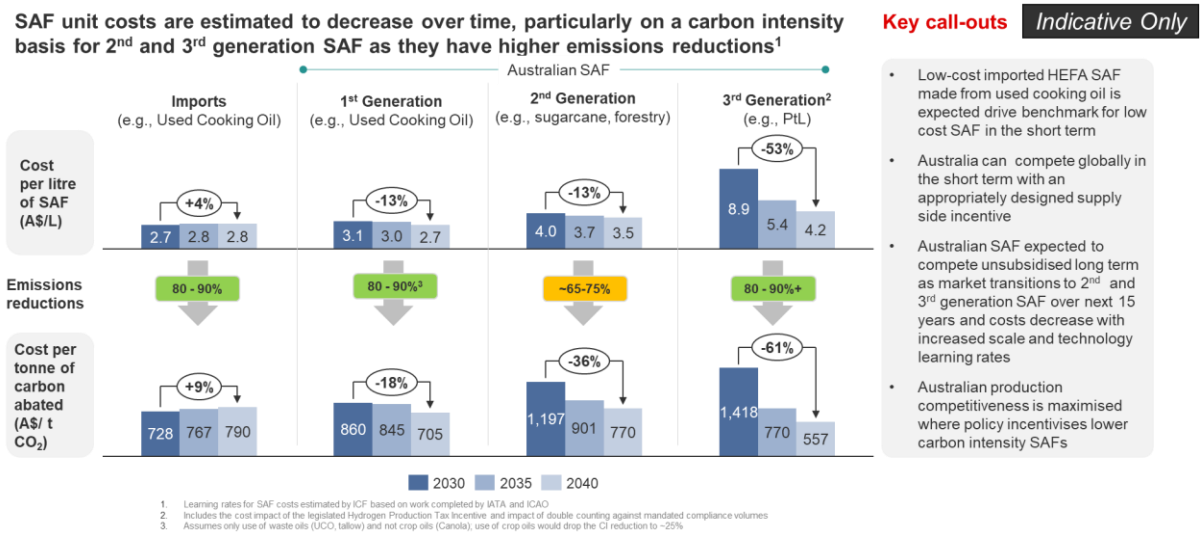


Figure 5 Expected Temporal and Cross Sectional SAF Market Price Dynamics

In the short term (~2030), we expect Asian HEFA SAF produced from used cooking oil (***"UCO"***) to be the lowest-cost global benchmark for SAF. Australian first-generation HEFA SAF is currently expected to be more expensive than imported UCO SAF, reflecting:

- Higher capital and financing costs for first-of-a-kind plants in Australia;
- Smaller initial scale; and
- Higher delivered feedstock, construction and operations costs.

On a cost-per-litre basis, this implies that there exists an Australia premium for early domestic HEFA. On a cost-per-tonne-of-CO_2-abated basis, domestic first-generation SAF is also more expensive than imported UCO SAF in the early years. Our internal modelling suggests that, in this period, Australia can compete globally if domestic SAF receives a production subsidy of around $1.20 per litre. When structured as LODC based floor price, this figure could potentially be significantly lower pending equity hurdle rates. At that level, Australian SAF can compete with low-cost imports in mandated or quasi-mandated markets.

Over the longer term, as more projects are delivered and supply chains mature, costs are expected to fall. We anticipate that Australian projects will become price competitive over the longer term, particularly as the industry begins to require second and third generation SAF technologies.[2]

A downside-only support floor is well suited to both phases. Initially, it can bridge the critical portion of the Australia premium needed to cover the LODC. As domestic and global costs fall

[2] Our analysis indicates that second- and third-generation Australian SAF can be competitive without production subsidies in global markets. While their per-litre cost may remain above imported first-generation UCO SAF, these pathways can deliver higher emissions reductions, and their cost per tonne of CO_2-e abated falls sharply with scale and learning effects.

and SAF pricing increasingly internalises the value of carbon abatement, the frequency and magnitude of top-ups should decline, allowing support for new projects to be reduced over successive rounds and eventually phased out as the market matures.

Overall, we therefore expect:

- An Australia premium in the first decade, which justifies targeted support to bridge the gap to imported SAF;
- A narrowing premium in the 2030s as local projects scale and learn; and
- Little or no Australian premium – and potentially an advantage on a cost-per-tonne-abated basis – for advanced Australian SAF pathways by around 2040, especially when accompanied by a CI-based mandate.

For Program design, this suggests that:

- Early rounds should explicitly recognise and bridge the Australia premium so that Australian SAF can compete with low-cost imported UCO SAF; and
- Over time (as second and third generation Australian SAF costs decline and deliver deeper emissions reductions) the level of support can taper, with domestic production increasingly able to compete unsubsidised in both domestic and international markets.

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?

Under the proposed operating and debt support floor, the Government is taking on part of the downside revenue risk for selected projects. Since both market prices and actual operating costs have a degree of uncertainty, it is possible that, in a prolonged low-price environment, the top-up required to lift revenues to the Support Floor could be higher than initially expected.

If a cap is incorporated and set too low relative to the project's expected support needs under conservative price assumptions, the value of the floor as a bankability tool is undermined: lenders will discount its value if they believe it will be exhausted early in the contract term.

If combined with an aggregated $1.1 billion cap, this amount of capital is likely to limit domestic production to one or two small projects with combined volumes of between 100 to 200 million litres per annum. For that reason, we do not support a one-size-fits-all nominal cap per project. Instead, we suggest the following approach:

- First, determine, for each shortlisted project, the expected profile of support over the contract term using a conservative price scenario (for example, a low SAF price scenario that is materially less favourable than the central case used for broader policy analysis);
- Second, form a view on the level of support that provides a meaningful buffer above that expected support – for example, so that under the conservative scenario the expected cumulative payments are in the range of 70–90 per cent of the gap; and
- Third, ensure that, when summed across all successful projects, the quantum of capital deployed is consistent with the overall Program envelope and any policy decisions about diversification (for example, how many first-generation and second/third-generation plants the Government wishes to support)

This approach ensures that Government exposure in extreme downside scenarios is mitigated. It also preserves the bankability of the floor from the financier's perspective.

We also recognise that most LCLF projects in Australia today are at a Pre-FID stage and carry development and project execution risk. As such, the Program should take this risk into account when determining the number of projects to support through an appropriate

conditional stage gating process that retains competitive tension whilst minimising the risk of misallocated development funding.

Whilst recognising the $1.1 billion Program envelope, the Responding Parties would prefer that the Government does not apply an aggregated cap to the support provided.

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 Group believes that the Program should be focused on supporting the decarbonisation of Australian industries, improvement of national fuel security and benefit Australian consumers. Projects should therefore have at least a minimum portion of production dedicated towards domestic consumption.

We do however encourage the Government to strongly consider the large export opportunity available by creating green lanes with regional partners including Singapore, Korea, Japan, and New Zealand.

SAF which is consumed in Australia and is allowed to retire credits with regional partners creates a win-win opportunity, and can help ensure that Australian industrial capacity achieves scale more quickly. It further creates an international market with Australian producers' participation, via which pricing from Australian producers will become more competitive through the normal supply and demand levers of the market.

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

As noted in our response to Question 2.1, the Responding Parties believes the CFP policy instrument should be designed to underwrite operating costs and debt service to support the projects getting financed but not guarantee equity returns. Guaranteeing an equity return minimises the incentive for a producer to innovate to reduce cost and transfers the risk of forming a view on the market price, which equity is best placed to carry, to the government.

However, we recognise that equity should not be penalised for taking the risk to create a domestic industry. Against this backdrop, the Group encourages the Government, through ARENA, to negotiate and deliver capital grants using other pools of capital such as the Advancing Renewables Program (***"ARP"***) and Future Made in Australia (***"FMA"***) SAF Innovation Fund. Alternatively, the Government could consider a structure to underwrite a nominal return to equity (e.g., risk free return on Government bonds).

There exists an ability for the Government to leverage additional pools of capital through agencies like ARENA to support LCLF projects. Capital grants can play a critical role in bridging a funding gap, particularly where technology or scale-up risk exists. Grants could play another critical role in the event the proposed production incentive is not indexed to inflation.

We are encouraged by the implied "whole-of-government" approach taken by the Program, and further, see opportunities to extend cooperation to new schemes being developed and announced by the states and territories to support growth of production in their jurisdictions.

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

The Group believes that concessional financing from Special Investment Vehicles (SIVs) like the CEFC and NRF are important to supporting LCLF projects. We believe the SIVs can be a crucial role by providing longer tenor, lower margin, lighter covenant financing, and leverage additional private capital deployment towards LCLF projects.

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

Our view is that support is needed across the supply chain on the following points:

- An Australian SAF mandate must be incorporated on a national book and claim approach, so that domestic production can be utilised at ports where it is most cost effective to do so, potentially, over time, also involving accredited trading partners in green lanes, such as those outlined in our answer to 2.6 above;
- Fuel supply chains into airports must provide for genuine open access for all suppliers, to ensure that domestically produced SAF has a clear pathway to market; and
- Fast track approvals and mitigate regulatory barriers leading to the development of the SAF industry (e.g., development approvals).

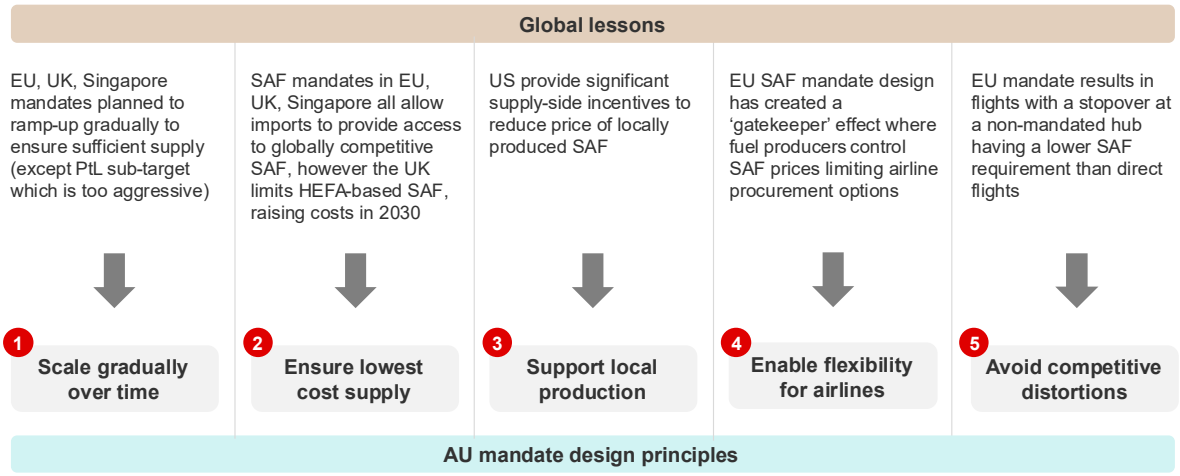


Figure 6 Summary of Key Learnings from Global LCLF Policy Programs

We note also that aviation is increasingly subject to broader cost pressures – including from increased costs in existing fuel supply chains, enroute charges and regional security charges. Government policies which effectively alleviate broader cost pressures impacting aviation can be useful in supporting the introduction of SAF into the market.

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

The Responding Parties' view is that support under the CFP, while necessary, will not be sufficient on its own to deliver the scale of investment and fuel switching required. A credible, long-term demand-side policy framework is just as important as supply-side support. In particular, we see a carbon-intensity (CI)–based SAF mandate, underpinned by a robust Guarantee of Origin scheme, as the cornerstone demand measure that should sit alongside any production incentive.

International experience with renewable road fuels demonstrates that it is the combination of production subsidies and binding demand-side obligations that has scaled industry, rather than

either instrument in isolation. For example, in the United States, the federal Renewable Fuel Standard (***"RFS"***) has, for nearly two decades, required refiners and importers to blend increasing volumes of renewable fuels into the national fuel pool, with nested categories for different levels of greenhouse gas (***"GHG"***) reduction.

At the same time, California's Low Carbon Fuel Standard (***"LCFS"***) has imposed a CI target on the state's transport fuel mix and allowed fuel suppliers who over-comply to generate tradable credits. The LCFS has substantially transformed California's liquid fuels market: biomass-based diesel (biodiesel and renewable diesel) now supplies around 75 per cent of the state's diesel pool and delivers roughly 45 per cent of total LCFS compliance, reflecting very large shifts away from conventional diesel in response to the CI standard and associated credit price. Renewable diesel consumption in California alone increased from about 1 million barrels per year in 2011 to 28 million barrels by 2021—an 18-fold increase after the LCFS took effect.

At a national level, these policies, together with federal tax incentives, have underpinned the emergence of the United States as the world leader in biofuel production. Over the last decade, the US has accounted for roughly 47 per cent of global biofuel output, and total US biofuel production capacity has risen to around 100 billion litres per year by early 2024, including roughly 75 billion litres of ethanol, about 10 billion litres of biodiesel and nearly 15 billion litres of renewable diesel capacity.

This is a clear demonstration that well-designed CI mandates and subsidies can scale a low-carbon fuels industry from the margin to tens of billions of litres per year in under two decades.

The key lessons we draw from this experience are that a durable and enforceable demand-side CI-based mandate is essential to give financiers confidence that there will be a sustained market for low-carbon fuels over the life of their assets.

Performance-based instruments like the LCFS, which reward lower CI through tradable credits, create a continuous incentive to improve lifecycle emissions, not just to meet a one-off blending target. Supply-side incentives (tax credits, grants, production support) are most effective when they are clearly tied into this demand architecture, bridging the residual cost gap and de-risking projects, rather than trying to create demand on their own.

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

a. Should priority be given to projects that use more-established production pathways (e.g. HEFA and HVO) than nascent production pathways that may present a higher level of technology risk?
b. How can nascent production pathways compete with more-established production pathways (e.g. HEFA and HVO)?
c. What minimum stage of project development (and evidence) should be expected by projects under the program?

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

We are agnostic to the type of technology and minimum facility sizes used to develop an Australian LCLF industry provided the projects can supply in line with the principle of import price parity supply from domestic production. We encourage the Government to engage with a broad set of project proponents. It is critical to design a winning mechanism which unlocks choice as opposed to picking individual winners. Given how much SAF Australia will require in the decades to come, we need SAF to be available from every viable production pathway.

Question 3.3: Should LCLF be required to meet a carbon intensity threshold (% 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? If not, why not?

a. If the production incentive is based on carbon emissions reduced, rather than volume of LCLF produced (see Question 2.3), is a minimum carbon intensity threshold still needed as part of the eligibility criteria?
b. Should Indirect Land Use Change be included in the method for determining carbon intensity, for the purpose of the Program?
c. Should any feedstocks be prioritised or otherwise considered out of scope?

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

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

A minimum carbon intensity threshold that is broadly aligned with international frameworks should be adopted by the Government when considering taxpayer support for specific projects.

We recommend that any domestic certification schemes (for example, the proposed GO Scheme) adopt a dual track certification for SAF, allowing for automatic certification where fuel has either been certified under internationally agreed frameworks such as CORSIA (compliance), EU RED III (compliance), ISCC Plus (voluntary), RSB Global (voluntary) or a GO-specific certification.

We recognise that where default factors of certain feedstocks (as attributed by international frameworks) are not aligned in an Australian context due to Australian farming practices, a streamlined process to recognise and manage these differences should be adopted. We would look to Government to develop pathways to accelerate international certification of these feedstocks under CORSIA particularly, even if already domestically certified. Aviation is a global business, and the supply of fuels should be standardised internationally to the greatest extent possible, as exists today with jet kerosene.

We note also that the incorporation of ILUC is a complex topic, and we are pleased that the Government is intending to conduct consultation on the proposed GO Scheme. This process should take input from a diverse range of stakeholders, and we would encourage the Government to seek advice from independent experts as part of this process. Further, we advocate for the development of this process to occur in parallel to the broader demand side policy development.

Further, we acknowledge that carbon intensity is not the only factor associated with the broader goal of sustainability and decarbonisation. For example, higher CI reductions can be achieved in the short term by degrading nature. The design of all policy instruments associated with LCLF should ensure that broader sustainability considerations are taken into account.

Question 4.1: What are your views on the aforementioned factors affecting the merit of a proposal?
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 (see Appendix D). 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?

The Responding Parties support the Government taking into account the broad principles noted under the preamble to Question 4.1 and the community benefit principles of the FMA.

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 (LTAG) of net-zero carbon emissions by 2050.

The Responding Parties see material and growing momentum for LCLF within the Asia Pacific market. While this is promising, we note that policy support in this market is increasingly being tied to export restrictions of feedstocks.

There is a narrow window of opportunity to develop an Australian LCLF production industry, after which Australian feedstocks may be increasingly exported to offshore production facilities, where Australia will lose the economic and sovereignty benefits of domestic production.[3]

As noted in our answer to Question 2.6, we expect that growing policy momentum will create the opportunity for the development of green lanes through existing framework agreements such as the Green Economic Agreement between Australia and Singapore.

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?

We expect that for LCLF projects to achieve final investment decisions, they will typically require long term price and volume certainty. This is particularly so given the cost of LCLF is typically higher than the incumbent fuels that they are replacing.

On the other hand, customers operating in competitive environments typically require price competitiveness and volume flexibility. Customers cannot provide the certainty required by projects without imposing unacceptable risks on their businesses.

As the LCLF industry scales and matures, we expect product to simply be traded on liquid markets similar to how incumbent fuels are traded today. However, this is unlikely for some time, and in the transition, we expect that government will need to cover the risks that private enterprise is unable to meet through market mechanisms.

We remain open to further discussions on alternative measures that could assist projects achieve final investment decisions by bridging these risks.

[3] The Responding Parties issued a paper in 2023 modelling the economic and sovereignty benefits that would accrue to Australia through domestic production. See https://www.qantas.com/content/dam/qantas/pdfs/qantas-group/icf-report-australia-saf-policy-analysis-nov23.pdf

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

The Responding Parties believes the CFP should be viewed as a supply-side policy instrument which can be deployed in parallel with a demand-side CI mandate. Further, we acknowledge the importance of designing both supply-side and demand-side policies with an appropriate internationally harmonised certification scheme including clarity on the role for the proposed GO Scheme.