CLEANER FUELS PROGRAM

POWERING LOW CARBON LIQUID FUEL PRODUCTION IN AUSTRALIA

1. MGH ENERGY

MGH Energy (Mobility Green Horizon) is an innovative company dedicated to the decarbonisation of transport, with a particular focus on heavy mobility in both the maritime and aviation sectors. It develops sustainable fuel production projects based on synthetic fuels, or e-fuels, designed to replace conventional fossil fuels such as kerosene, methanol, ammonia, diesel, and liquefied petroleum gases.

As a subsidiary of the Soper Group, MGH Energy is wholly owned by Jean-Michel Germa, a pioneer who installed the first wind farms in France in 1991 and in Morocco in 2000 through La Compagnie du Vent, later sold to Engie in 2017. Building on this legacy of innovation in renewable energy, MGH Energy has positioned e-fuels at the core of its business and established itself as an early mover in this emerging sector.

The company now develops sustainable fuel projects in France and abroad through several subsidiaries, including a dedicated Australian entity. In partnership with the Grid-Link team, MGH Energy Australia is advancing the Oaka'Jet project to produce e-kerosene in Western Australia, harnessing the region's abundant wind and solar resources to deliver a sustainable, drop-in aviation fuel compatible with existing aircraft and airport infrastructure.

With more than four years of dedicated work in the e-fuel sector, MGH Energy has built its expertise around designing robust and replicable project architectures. This strategic approach allows efficient adaptation to diverse geographical, regulatory, and market environments, supporting the scale-up of e-fuel technologies and meeting the growing international demand. It also facilitates the transfer of lessons learned, the optimisation of development costs and timelines, and the reduction of risks across regions.

Today, MGH Energy is driving several large-scale developments in Morocco, France, and Australia. Each project is tailored to local conditions while benefiting from a shared technological and project-development framework. At the same time, the company is actively exploring new opportunities in promising markets, demonstrating its ambition to build a diversified global portfolio and contribute to the emergence of competitive, low-carbon e-fuels worldwide.

Through these initiatives, MGH Energy is establishing a portfolio of strategic industrial projects aimed at the large-scale production of low-carbon e-fuels to support the decarbonisation of both the aviation and maritime sectors.

2. OUR PROJECTS

OAKA'JET PROJECT – AUSTRALIA

Our project in Western Australia, called Oaka'jet, is described in detail in section 8 Project Details form below.

JANASSIM PROJECT – MOROCCO

Janassim project, led by MGH Energy Maroc, aims to produce e-kerosene for the aviation and e-methanol for maritime sectors. MGH Energy Maroc, the Moroccan subsidiary of MGH Energy created in 2023 by Jean-Michel Germa and Driss Benhima (former Minister of Transport and former CEO of Royal Air Maroc), relies on the strategic expertise of Nataeej to strengthen its local presence and develop partnerships. In October 2025 Holsatek Group, whose subsidiary Petrom is the fourth-largest Oil & Gas distributor in Morocco, has committed to take 20% of Janassim project bringing the power of its distribution channels to the project.

Located in Dakhla-Oued Ed-Dahab, Janassim project leverages the region's exceptional solar and wind resources to generate low-cost renewable electricity and, consequently, competitive e-fuels, further reinforcing Morocco's position as a strategic fuel supplier for Europe. Production will unfold in two phases: by 2030, an initial capacity of 70,000 t/year of e-kerosene will be deployed using Methanol-to-Jet (MtJ) technology. Then, by 2033, the project will reach a total output of 140,000 t/year of e-kerosene and 190,000 t/year of e-methanol. From a technical side, this project will be able to offer lot information to Western Australia project because prefeasibility with same pathway has been done, Pre-FEED is ready to launched with Technip (through Rely), CO_2 capture studies are ongoing with our partner - emitter from paper industry Navigator (a JV will be created to launch FEED), CO2 transport studies are ongoing too with partners such as MOL, HAFNIA & Zephyr et Borée.

L'ARDOISE'JET PROJECT – FRANCE

L'Ardoise'Jet, developed by MGH Energy, positions itself as a strategic commercial scale project aimed at producing low-carbon e-kerosene on a former industrial site supported by "France 2030" scheme and perfectly suited for rapid scale-up. Located on the turnkey L'Ardoise industrial site, in the south of France, it benefits from unique logistics advantages in the region: direct access to the Rhône River for the water and the inland port for the secure transport of feedstocks and the export of e-fuels, an operational rail connection, and immediate proximity to major road networks. Like Janassim, L'Ardoise'Jet has an industrial capacity of 70,000 tons per year of e-kerosene using MtJ technology, thereby establishing itself as a key European link in the sustainable aviation fuel value chain. By combining immediately available land, efficient multimodal logistics, and MGH Energy's expertise in developing similar projects, L'Ardoise'Jet stands out as a decisive production platform for the French sovereignty regarding energy transition of the aviation sector.

3. OUR KEY RECOMMENDATIONS

1. Demand Activation Through SAF and e-SAF Mandates

As e-fuel project developers considering investment in Australia, we see strong potential for Australia to become a competitive producer of power-to-liquid fuels, including e-Sustainable Aviation Fuel (e-SAF). However, the viability of these projects depends fundamentally on credible demand creation. Without clear demand signals, the commercial and technical risks associated with first-of-a-kind e-fuel projects remain prohibitive.

Our primary recommendation is the introduction of SAF mandates that include a specific sub-target for synthetic fuels (e-SAF) in Australia associated with non-exempt penalties payable by fuel suppliers in the event of non-compliance with mandates. In our view, such mandates are essential to enable domestic SAF production in Australia.

Experience in Europe shows that SAF mandates are the most effective mechanism to create demand for capital-intensive PtL projects. Given the high uncertainty associated with technology scale-up, feedstock integration, and cost reduction pathways, demand-side incentives are as important as supply-side support. A mandate would provide the long-term visibility required to support investment decisions and anchor early production in Australia.

2. International Demand and Energy Diplomacy with the EU and UK

Australia also has an opportunity to support e-SAF development through targeted international cooperation. The European Union and the United Kingdom currently have the most advanced SAF mandates, including dedicated quotas for synthetic aviation fuels. At the same time, the cost-effective production of e-SAF is expected to occur in regions with abundant, low-cost renewable electricity, such as Australia, rather than in Europe itself.

We therefore recommend that Australia pursue energy and climate diplomacy with the EU and the UK, grounded in shared decarbonisation objectives, long-standing partnerships, and, particularly with the UK, Commonwealth ties. This cooperation should aim to enable a high-integrity book-and-claim framework for e-SAF, supported by bilateral recognition agreements.

Under such a framework, e-SAF produced and used in Australia could generate certified emissions-reduction attributes that are transferable to EU or UK obligated parties, without requiring physical delivery of fuel into those markets. This would preserve environmental integrity while removing logistical barriers that currently limit access to globally competitive production regions.

To support such cooperation, Australia would need to establish:

- sustainability criteria aligned with EU RFNBO and UK PtL requirements
- full traceability of electricity, hydrogen, CO_2 inputs, and production facilities
- a transparent and auditable certificate registry to prevent double-counting

This approach would allow Australia to support international mandate compliance while accelerating domestic e-SAF production and investment.

3. **Designing an ecosystem of complementary regulatory tools**

Strengthen existing tools and create new ones related to reducing risk in the development phase through grants or other types of aid to finance technical and environmental studies. Grants to fund pre-FEED, FEED, or environmental impact assessment studies are highly valuable in supporting the risky and uncertain phase of project development prior to obtaining permits and approvals.

Specific tools to facilitate offtake security, such as state-backed intermediation mechanisms or double-sided auction schemes currently being developed in Europe, are important to support first-of-a-kind projects.

Downstream in the chain, to facilitate project financing, a government-backed credit enhancement mechanism, such as partial loan guarantees, first-loss coverage, or performance guarantees, would materially improve project bankability by reducing lender risk and lowering the cost of capital. Similar instruments have proven effective in other emerging clean energy sectors and could play a critical role in enabling first-of-a-kind e-fuel investments.

In the following recommendations, we aim to provide guidance not only from the perspective of project developers — identifying the support, incentives, and policy settings necessary to enable LCLF projects to reach commercial maturity in Australia — but also from a strategic national perspective. In each case, we consider how Australia can **leverage its abundant renewable energy potential, enhance energy sovereignty, stimulate domestic industrial development, and create export opportunities, positioning itself as a** a global leader in renewable fuel production.

4. ELIGIBLE FUELS (Q1.1 - Q1.2C)

Please refer to the 'Policy Design Engagement Information - 1. Eligible fuels' section of the Policy Design and Engagement Paper, for further context about the questions.

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

We consider that e-jet (SAF), e-methanol, and e-ammonia should be eligible under the program. These fuels target hard-to-abate sectors, where alternatives are limited, such as aviation and shipping. Eligibility should be limited to fuels produced from renewable hydrogen and recycled CO_2, achieving the lowest lifecycle carbon intensity.

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

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

Prioritisation should focus on fuels targeting hard-to-abate sectors, namely e-jet, e-methanol, and e-ammonia. Fuels for sectors where decarbonisation alternatives exist, such as light-duty road transport, could be de-prioritised.

This approach mirrors policy choices already made in leading jurisdictions. Under *ReFuelEU Aviation*, the European Union has concluded that SAF, and especially e-SAF, must be prioritised due to the absence of scalable alternatives for aviation. Similarly, *FuelEU Maritime* identifies synthetic fuels such as e-methanol and e-ammonia as long-term decarbonisation pathways for shipping.

Prioritising these fuels supports the creation of a robust domestic market, encourages investment in critical industrial capacity, and ensures that funding delivers maximum environmental benefit.

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

LCLFs intended for sectors where electrification or direct renewable hydrogen solutions are technically and economically feasible (e.g., light road transport, domestic heating) could be de-prioritised. This ensures program resources target sectors where low-carbon fuels have the greatest incremental impact.

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

- **Domestic market**
  The primary market effect of this prioritisation is to support the rapid development of the e-SAF and e-methanol value chains, thereby stimulating the domestic market. Coupled with demand-stimulating regulations to kick-start these sectors, this approach leverages

Australia's exceptional renewable energy resources to develop highly competitive, very low-carbon fuels based on virtually unlimited renewable feedstocks, unlocking enormous medium- and long-term potential.

- **Export market:**
  Australia can leverage its abundant renewable energy to produce globally competitive SAF and e-methanol, generating export revenue and strengthening energy sovereignty.
- **Innovation and investment:** Prioritisation attracts technology and capital investment, accelerating the deployment of large-scale projects (e.g., Oakajee Tranche 1 – e-jet, Tranche 2 – e-jet + e-methanol).
- **Cost and competitiveness:** Structured markets for LCLFs reduce production costs through scale-up and secure long-term offtake arrangements.

5. TYPE OF PRODUCTION SUPPORT (Q2.1 - Q2.10)

Please refer to the 'Policy Design Engagement Information - 2. Types of production support' section of the Policy Design and Engagement Paper, for further context about the questions.

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?

For early-stage LCLF projects, a **fixed production credit per litre** is the more appropriate mechanism. At this stage, developers, investors and banks require stable, predictable revenue streams to enable investment decisions and secure project financing. A fixed credit offers this stability without exposing projects to immature and volatile international LCLF price benchmarks.

Given the limited liquidity of current LCLF markets and the absence of robust price, a variable credit linked to market prices would introduce uncertainty, increase risk premiums, and ultimately hinder the deployment of first-wave projects. A fixed incentive therefore provides the clarity and risk mitigation necessary to accelerate project development, while allowing for future adjustments as the sector matures.

In our view, early-stage low-carbon liquid fuel markets require mechanisms that address both supply-side cost gaps and demand uncertainty. Germany's H2Global program provides a useful reference point. Under this model, a government-backed entity offers producers long-term contracts at a fixed price, while reselling the fuel to end users at market prices, with the public sector covering the difference.

In our opinion, the strength of this approach is that it simultaneously provides revenue certainty for producers and activates demand, without requiring end users to commit to long-term offtake at early-stage prices. We consider that a mechanism inspired by these principles would be highly useful in the Australian context, particularly for first-of-a-kind e-fuel projects.

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

Fixed production support: Producers will be paid a fixed amount of production incentive for each litre of LCLF produced, with the amount determined through a competitive process to ensure best value-for-money.

Contract for Difference mechanism: A strike price for each litre of LCLF produced is determined through a competitive process. If the strike price is higher than the international LCLF price, producers are paid the difference (or a portion of) for each litre of LCLF produced. If the international LCLF price is higher than the strike price, producers are required to pay the government the price difference (or a portion of).

A fixed production credit per litre is the preferred mechanism for early-stage projects. It provides predictable revenue, which is crucial for financing and bankability. While periodic review is necessary to account for cost reductions, technological improvements, and market changes, fixed credits avoid the volatility associated with market-linked indices, which are unsuitable for small volumes and emerging LCLF markets.

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

The $1.1 billion Cleaner Fuels program will enable significant outcomes across environmental, industrial, and economic dimensions, particularly for hard-to-abate sectors such as aviation and maritime transport:

1. Decarbonisation of hard-to-abate sectors

- Enable the production and uptake of e-jet, e-methanol, and e-ammonia, directly reducing greenhouse gas emissions in sectors where electrification is not viable.
- Support measurable scope 1–3 emissions reductions, contributing to national climate targets.

2. Acceleration of domestic industrial capacity

- Stimulate local renewable fuel production facilities fostering industrial development and job creation.
- Encourage innovation in electrolysis, CO_2 capture, and fuel synthesis technologies.
- Strengthen Australia's energy sovereignty by leveraging domestic renewable energy resources to produce low-carbon fuels for both domestic and export markets.

3. Market stimulation and investment leverage

- Provide the revenue certainty needed to attract private investment, enabling large-scale deployment of LCLF projects.
- Encourage early-stage market creation, supporting infrastructure development (storage, blending, bunkering) and enabling downstream supply chains.
- Lay the groundwork for export-ready renewable fuel production, positioning Australia as a leading global supplier of SAF and e-methanol.

4. Support for regulatory and policy development

- Enable early demonstration projects that validate demand-side mechanisms such as mandates or book-and-claim systems, informing policy frameworks for scaling the sector nationally.

5. Catalysing cost reductions and innovation

- Funding at the early stage helps reduce costs through scale-up, improve production efficiencies, and accelerate the adoption of cutting-edge technologies, thereby lowering the future cost of LCLFs for domestic and international markets.

With the available funding, Australia can achieve direct emissions reductions in critical sectors, stimulate domestic industrial development, enhance sovereignty in renewable energy utilization, attract private investment, and create a foundation for a globally competitive LCLF export market.

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

For early-stage LCLF projects, particularly for e-jet, e-methanol, and e-ammonia, the mechanism that provides the greatest investment certainty and bankability is a fixed production credit per litre of fuel produced, supplemented by clear, predictable policy frameworks and demand-side incentives.

1. Fixed production credit

- Predictable revenue stream: A fixed credit per litre gives developers and financiers certainty over future cash flows, which is critical for securing debt and equity financing.
- Bankability: Lenders prefer predictable, contractible revenue streams; fixed credits reduce perceived financial risk, enabling project finance structures.
- Ease of valuation: Simplifies financial modeling, allowing more accurate assessment of project returns and risk profiles.
- Early-stage market suitability: For emerging LCLF markets (SAF, e-methanol, e-ammonia), market prices are volatile and illiquid; a fixed credit protects projects from market fluctuations.

2. Supplementary regulatory and market mechanisms

- Demand-side support mechanisms (e.g., mandates, book-and-claim schemes, credit trading) enhance offtake certainty, creating a stable domestic market for low-carbon fuels.
- Periodic adjustment mechanism: While the credit is fixed, periodic reviews allow adjustments to reflect technological innovation, cost reductions, and evolving market conditions without undermining bankability.

3. Market-linked or variable credits: limited suitability

- While variable credits tied to market indices theoretically align support with market prices, they introduce revenue uncertainty, especially problematic for early-stage projects with low volumes and illiquid markets.
- Variable credits may hinder project finance because lenders are less able to underwrite debt against fluctuating or unreliable revenue streams.

Conclusion

A fixed production credit, combined with regulatory clarity and demand-side mechanisms, offers the highest level of investment certainty and bankability for LCLF projects. This approach allows projects to secure financing, scale industrial capacity, and develop domestic supply chains, while still retaining the flexibility to adapt support levels as markets mature.

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

To ensure that government support provides targeted assistance without generating excessive windfall profits, several measures can be implemented. First, the level of production credits should be reviewed periodically to reflect changes in production costs, technological improvements, and LCLF market prices, ensuring support remains aligned with actual project economics.

Second, a cap or sliding scale of support can be introduced, where the credit decreases if market prices exceed defined thresholds, preventing excessive benefits from rising market prices. Third, revenue reconciliation or clawback mechanisms can adjust support payments if project revenues surpass predetermined targets.

Fourth, production credits should be linked to carbon intensity performance, so fuels with lower lifecycle emissions receive higher support, thereby incentivising genuine emissions reductions rather than rewarding production volume alone. Finally, support should be provided for a limited eligibility period, for example, the first five to ten years of operation, encouraging commercial viability while avoiding indefinite subsidies.

By combining these approaches, periodic review, caps or sliding scales, revenue reconciliation, carbon intensity-based incentives, and a defined support period, the program can deliver targeted assistance to early-stage e-jet, e-methanol, and e-ammonia projects, avoid windfall profits, maintain investment certainty, and promote industrial scale-up and domestic market development while preserving fiscal prudence.

Question 2.1e: 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?

1. Short to medium term (0–5 years)

Pricing is likely to be set as a premium over equivalent fossil fuels.

- Early-stage domestic LCLF projects face higher production costs compared to conventional fuels.
- Premium pricing allows producers to recover costs while demonstrating value for emissions reductions.
- This is consistent with nascent global markets for e-jet, e-methanol, and e-ammonia, where domestic volumes are small and market liquidity is limited.

Consideration of imported LCLF prices:

- Benchmarking against imported LCLFs may help establish competitive price signals and inform offtake agreements.
- However, import parity may fluctuate due to global supply-demand conditions and shipping costs.

2. Longer term (5–15+ years)

Pricing may transition toward a carbon abatement or lifecycle emissions basis.

- As markets mature, the value of LCLFs should reflect the avoided CO_2 emissions per litre, aligning with international carbon markets, trading schemes, and sustainability standards.
- This approach incentivises continuous improvement in production efficiency and encourages adoption of lower carbon intensity fuels.

Market convergence:

- Over time, production costs for renewable fuels are expected to decline due to economies of scale, technology improvements, and learning effects.
- Pricing could gradually align more closely with fossil fuel parity, reducing reliance on fixed or subsidised credits, while still rewarding carbon abatement performance.

3. Hybrid approach

A combination of premium over fossil fuel pricing in the short term, with a transition to carbon abatement/value-based pricing in the longer term, is likely to be most effective.

- This provides:
    - Revenue certainty for early-stage projects (bankability)
    - Incentives for low-carbon performance over the lifetime of the program
    - Flexibility to adapt to global LCLF markets and domestic policy developments.

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?

Projects should prioritise low lifecycle carbon intensity fuels (e-jet, e-methanol, e-ammonia) targeting hard-to-abate sectors.

Cost per unit of carbon abated is the most effective metric to maximise environmental benefit for taxpayers.

Production cost per litre can be considered as a secondary factor to ensure bankability and industrial scalability.

This approach balances environmental impact, financial prudence, and industry development, fully aligning with the Program's objectives.

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 production credit should be linked to the quantum of LCLF produced.

1. Alignment with international practices

Subsidies and production credits in established renewable fuel markets (e.g., EU Renewable Energy Directive, US SAF and biofuel programs) are predominantly linked to volume of fuel produced, providing a clear and standardised framework.

- Aligning with international norms facilitates comparability, reporting, and potential export credit recognition.

2. Simplicity and reliability

- Linking support to fuel volume is straightforward to measure and verify, reducing administrative complexity and risk of dispute.
- Volume-based credits avoid uncertainties associated with lifecycle carbon accounting, which can be complex, variable, and dependent on assumptions regarding feedstocks, energy inputs, and emissions factors.

3. Investment certainty and bankability

- Volume-based credits provide a predictable, contractible revenue stream, which is essential for securing project finance and attracting private investment.
- Early-stage LCLF projects (e-jet, e-methanol, e-ammonia) require stable cash flow projections to ensure industrial scale-up and bankability.

4. Complementary mechanisms for carbon integrity

- While credits are volume-based, carbon performance standards and lifecycle carbon intensity thresholds can be maintained as eligibility criteria.
- This ensures that only low-carbon fuels meeting minimum GHG reduction standards benefit from the production credit, maintaining environmental integrity without introducing undue complexity.

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 LCLFs is strategically and economically advantageous, even if initial production costs are higher than for imported fuels.

1. Economic and carbon rationale for local production

- Selling and consuming fuels domestically avoids long-distance transportation, reducing:
  - Logistical costs (shipping, handling, storage)
  - Associated lifecycle carbon emissions from transport
- Domestic production leverages Australia's abundant renewable energy resources, enhancing energy sovereignty and supporting local industrial development.

2. Local premium at early stages

- At the outset, domestic LCLFs may carry a premium compared to international prices due to:
  - Early-stage technology and plant scale
  - Limited domestic volumes and infrastructure
- This premium is justified to stimulate market uptake, ensure bankability, and incentivise investment in nascent domestic production.

3. Role of market signals

- To facilitate the transition to a competitive market, a pricing signal or mechanism is required during the early phase of deployment.
  - Examples: production credits, mandates, or book-and-claim schemes.
  - These mechanisms support domestic demand until the industry reaches sufficient scale to reduce costs and compete with imports.

4. Long-term perspective

- As domestic LCLF production scales and technology matures, costs are expected to decline rapidly, narrowing or eliminating the local premium.
- Domestic deployment then provides competitive, low-carbon fuel with strong supply security and industrial benefits.

Summary

- Domestic production is economically and environmentally advantageous, even if a short-term premium exists.
- Early-stage price support is needed to stimulate domestic demand and bankability.
- In the long term, domestic LCLFs will achieve cost competitiveness, delivering both carbon reduction and industrial growth benefits.

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 cap on total production credits is recommended to prevent windfall profits and ensure efficient use of public funds. The cap should be proportional to expected production volumes and carbon abatement potential and periodically reviewed to reflect market and technological developments. Sliding or tiered caps can balance investment certainty with fiscal prudence.

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?

Production should be permitted for both domestic supply and export, while providing **incentives or bonuses for domestic offtake**.

1. Rationale for allowing export

- Export markets can provide **additional revenue streams**, improving **bankability and commercial viability** of large-scale LCLF projects.
- Global demand for **e-jet, e-methanol, and e-ammonia** is growing, and export opportunities support **scale-up, technology deployment, and industrial development** in Australia.

2. Importance of domestic supply

- Prioritising domestic supply through **incentives, bonuses, or credit weighting** ensures:
    - Support for **national decarbonisation goals**, particularly in **hard-to-abate sectors** like aviation and maritime.
    - Development of a **robust domestic market**, including industrial adoption and infrastructure build-out.
    - Strengthening **energy sovereignty** and domestic resilience.

In order to stimulate the domestic market, additional measures are needed to create demand. Progressive blending mandates for low-carbon liquid fuels (LCLF), potentially combined with a CO_2-content-based tax on consumption, appear to be important tools to complement production support schemes.

3. Impact of restricting exports

- Restricting exports could:
  - Limit revenue potential, reducing **financial attractiveness** of projects.
  - Slow deployment of **large-scale facilities**, potentially delaying **carbon abatement outcomes**.
  - Reduce opportunities for Australia to **capture high-value international markets** and develop a globally competitive renewable fuel industry.

4. Recommended approach

- Allow exports but **design the production credit or incentives to favour domestic supply** (e.g., higher credit per litre used domestically).
- This ensures early-stage projects can achieve **bankability and scale**, while still **meeting domestic climate and industrial objectives**.

Summary

- **Exports should be allowed** to support project viability and market development.
- **Domestic supply should be prioritised** via targeted incentives or bonus mechanisms.
- This approach balances **financial viability, domestic decarbonisation, and industrial development**, while positioning Australia as a **leader in both domestic and international LCLF markets**.

International practice shows that export-permitted production frameworks can be combined with targeted domestic incentives and fiscal support. For example, **Morocco's Green Hydrogen Offer** provides tax and customs incentives, including VAT and import duty exemptions, to attract investment into green hydrogen and derivative fuel projects aimed at both domestic use and export, demonstrating how fiscal measures can support industrial scale-up while linking to global markets.

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

Yes, combined production support and capital grants are strongly recommended for first-of-a-kind (FOAK) LCLF facilities. These projects face high upfront capital costs due to electrolyzers, synthesis units, CO_2 capture, and associated infrastructure, while revenue uncertainty from unproven technologies or limited offtake agreements can further hinder development. By providing both capital grants and production credits, governments can offer upfront financial support alongside predictable revenue, enhancing bankability and attracting private investment.

This combined approach accelerates deployment by lowering financial barriers, supports the commercialisation of innovative low-carbon fuels, and helps validate new technologies for subsequent projects. It also shares early-stage investment risk, with production credits incentivising operational efficiency and carbon reduction. Implementation should include capital grants covering part of the FOAK investment, complemented by volume-based production credits to ensure predictable revenue, with eligibility criteria tied to lifecycle carbon intensity to maintain environmental integrity.In the EU, the **Innovation Fund** provides substantial capital grants to FOAK and early commercial projects, covering technology and scale-up risks. Grants are typically combined with operating support or mandate-driven demand, recognising that early projects need both capital risk-sharing and long-term revenue visibility. Since its launch, the Fund has committed over **€12 billion** to more than **210 clean-tech projects**, several of which are now under construction or reaching financial close.

Strategically, this framework encourages rapid domestic scale-up of LCLF capacity, positions Australia as a global leader in renewable e-fuels for both domestic and export markets, and shortens the path to commercial maturity, reducing costs for future facilities and accelerating carbon abatement. In summary, combining capital grants with production credits is essential for FOAK projects, balancing risk reduction, bankability, and policy objectives while delivering industrial, environmental, and economic benefits.

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

In addition to domestic sources such as the Clean Energy Finance Corporation (CEFC) and the National Reconstruction Fund (NRF), a range of international and concessional finance mechanisms have been used globally to support the commercialization and scaleup of lowcarbon fuels, including lowcarbon liquid fuels (LCLFs). These instruments can help bridge financing gaps for capitalintensive projects, reduce risk, and attract private capital ahead of final investment decisions.

Multilateral and regional concessional funds:

• Climate Investment Funds (CIF) provide concessional loans, grants, and equity to earlystage clean technology projects, often leveraging significant private cofinance and lowering the cost of capital for hardtodeploy technologies. Their programmes have supported industrial decarbonisation and lowcarbon energy solutions by mobilising additional financing through lowcost debt and risk mitigation instruments.

• Other multilateral climate funds, such as the Green Climate Fund (GCF) and Global Environment Facility (GEF), offer a mix of grants and concessional finance explicitly targeted at climate mitigation, including investments in clean fuels and enabling infrastructure. They have established mechanisms for climate finance that combine concessional lending with technical assistance and capacity building, helping projects negotiate policy and bankability challenges.

Innovation and demonstration grants:

• The European Innovation Fund (supported by EU ETS revenues) is one of the largest climate funding program in the world, offering competitive grants specifically aimed at bringing innovative low carbon technologies to commercial scale. The fund supports breakthrough technologies across energy and industry, including renewable fuels and hydrogen based pathways, by sharing technology and deployment risk.

Public/private blended finance:

• Blended finance facilities, where public capital is combined with private investment, are increasingly used to derisk projects in emerging sectors. For example, private investors like Breakthrough Energy Catalyst coinvest alongside public and philanthropic partners to help early e-fuel projects progress towards commercial volumes, demonstrating how blended structures can catalyse larger capital flows.

• Investment vehicles such as dedicated low carbon transition equity or debt funds (e.g. low carbon transition funds launched by global asset managers) provide flexible capital that can be deployed to viable LCLF projects, absorbing some early stage risk and demonstrating commercial potential to other market players.

Guarantee and risk sharing mechanisms:

• Government or multilateral loan guarantees and partial risk sharing facilities have been used in sectors such as renewable energy and energy efficiency to reduce lender risk and lower financing costs. These instruments offer a template for LCLF projects, enabling commercial banks and institutional lenders to participate in financing with reduced perceived risk.

Collectively, these models show how a mix of grants, concessional loans, equity investments, blended finance and risk sharing instruments can significantly lower barriers for capital-intensive LCLF projects, crowd in private investment, and accelerate commercial deployment complementing domestic funding from CEFC, NRF, and similar vehicles.

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

Additional support across the entire supply chain is critical to enable domestic production of low-carbon liquid fuels (LCLF). Beyond production incentives and capital support, **infrastructure development** is essential, including the expansion of renewable electricity generation, CO_2 capture and storage facilities, and hydrogen transport and storage networks, which underpin the production of e-jet, e-methanol, and e-ammonia.

Feedstock availability and logistics also require attention. Ensuring reliable access to low-carbon hydrogen, captured CO_2, and other inputs at competitive prices reduces operational risk and improves project bankability. **Incentives or cost-sharing mechanisms for feedstock production and transport can help develop a robust domestic supply chain**. The U.S. regulatory framework known as the Inflation Reduction Act, for example, offers a wide range of tools such as tax credits and subsidies across different segments of the value chain. There are indeed specific supports for hydrogen production, e-fuels production, and CO_2 capture, as well as targeted tax incentives for renewable assets. All these mechanisms coexist, and several can be applied to a single project.

Regarding CO_2, it is important to clearly define eligible sources. We suggest accepting only **biogenic CO_2 and unavoidable industrial CO_2.**

Additionally, offtake and market development support is needed to create demand across aviation, shipping, and industrial sectors. Policies such as SAF mandates, low-carbon fuel standards, or government procurement programs can guarantee a stable market and revenue certainty.

Finally, skills development and R&D support along the supply chain are necessary to build local expertise in LCLF technologies, operations, and maintenance, ensuring long-term sustainability and reducing reliance on imported technology or expertise.

In summary, coordinated support across infrastructure, feedstock supply, market mechanisms, and workforce capability is essential to enable viable domestic production of LCLF in Australia.

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

Australia can draw several important lessons from jurisdictions that have already implemented support measures for low-carbon liquid fuels (LCLF):

1. Integrated policy frameworks accelerate deployment: Countries like the European Union, United States, and Japan have combined capital support, production incentives, and demand-side mandates (e.g., Renewable Fuel Standard in the US, EU SAF blending mandates) to reduce investment risk, secure markets, and accelerate first-of-a-kind projects. This shows that a single type of support is rarely sufficient; coordinated, multi-layered policies are more effective.

2. Stable, long-term incentives are critical: In the EU and California (for example), predictable long-term financial incentives, including feed-in tariffs, tax credits, and SAF mandates, have enabled project bankability. Short-term or frequently changing incentives can delay investment and increase financing costs.

3. Demand certainty drives investment: Jurisdictions with explicit blending mandates or government procurement targets for sustainable aviation fuels have successfully stimulated domestic LCLF production. Guaranteed offtake or credit trading schemes reduce revenue uncertainty and encourage early commercial deployment. In Europe, a consortium of over 40 companies, brought together under the SkyPower project, is advocating for the implementation of a double side auction in which public support is determined competitively on both the producer and the buyer sides, in contrast to traditional systems where the government sets a fixed purchase price or provides unilateral support. This type of mechanism is also inspired by models already used in the hydrogen sector, such as the German H2Global program, which conducts auctions where volumes are purchased long term from international producers and resold to European buyers, with the gap subsidized by the government.
4. Supply chain and infrastructure support matters: Lessons from the EU and US highlight the importance of investing in hydrogen, CO_2 capture, storage infrastructure, and logistics networks. Supporting the upstream and midstream supply chain is essential to reduce costs and ensure reliable feedstock availability.
5. Coordination with R&D and innovation programs: Countries that integrate demonstration projects with research, technology validation, and local workforce development achieve faster technology learning and cost reductions, enabling broader scale-up.
6. Flexible and adaptive frameworks reduce risk: Successful jurisdictions have designed policies that can evolve with technology maturity and market conditions, ensuring that incentives remain effective while avoiding over-subsidization.

In summary, Australia can accelerate domestic LCLF deployment by combining capital and production support, implementing demand-side mechanisms, coordinating supply chain infrastructure, and ensuring stable, long-term, and adaptive policies that learn from international best practices.

6. FUEL PRODUCTION (Q3.1 - Q3.5)

Please refer to the 'Policy Design Engagement Information - 3. Fuel production' section of the Policy Design and Engagement Paper, for further context about the questions.

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

The Program aims to support projects at a mature stage of development and late-stage Technology Readiness Level technologies that can deliver meaningful volumes of LCLF to the market to help decarbonise hard-to-electrify sectors.

Question 3.1a: 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?

Priority should not be limited to more-established pathways such as HEFA and HVO. While these technologies are more mature and already deployed at scale, they rely on sustainable biomass **feedstocks that are structurally limited** and increasingly contested across sectors. As a result, they cannot deliver the volume of low-carbon fuels required for long-term decarbonisation. To meet future demand and ensure durable emissions reductions, policy should proactively support innovative, scalable pathways, including **e-SAF and other power-to-liquid routes**. Prioritizing their development, rather than concentrating support on established biomass-based pathways, is therefore essential to building a resilient and future-proof LCLF supply base.

Question 3.1b: How can nascent production pathways compete with more-established production pathways (e.g. HEFA and HVO)?

Alternative pathways such as e-fuels **can compete effectively with more-established biofuel routes** if support mechanisms explicitly recognise their long-term strategic value. Unlike HEFA and HVO, which are constrained by **limited and competing biomass resources**, e-fuels offer a scalable production model based on **abundant low-carbon electricity and non-fossil CO_2**. Their environmental performance is more consistent, with **strong and predictable potential for deep emission reductions**, whereas the emission performance of biofuels varies significantly depending on the feedstock. Targeted early-stage support is therefore essential to de-risk these technologies, accelerate cost reductions, and enable them to reach commercial viability alongside, rather than behind, mature biomass-based pathways.

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

A minimum project development threshold should ensure that proposals are technically credible and capable of progressing toward production, while remaining broad enough to support the full development pipeline needed for Australia’s emerging LCLF industry. The Program should be accessible not only to near-FID or advanced engineering projects but also to earlier-stage developments that can demonstrate a clear and realistic pathway toward maturity.

A reasonable minimum stage could include:

- completion of **feasibility studies** establishing technical and commercial viability;
- a **defined project concept** and indicative technology pathway;
- **engagement with key stakeholders** such as feedstock and equipment providers, energy suppliers, potential offtakers, or relevant communities;

- a **clear development plan** outlining the steps and requirements to reach FEED and FID.

This level ensures that projects are grounded in substantive analysis and planning, without restricting eligibility solely to projects already at advanced engineering stages.

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

A minimum facility size can help ensure that supported projects deliver material emissions reductions and operate at a scale that enables competitive production costs. While the Program should remain inclusive of different technologies, international experience shows that plants below a certain threshold often struggle to achieve economies of scale, whereas mid-scale facilities combine technical robustness and replicability.

An indicative minimum of around 50,000 tonnes e-fuels per year would strike a practical balance: it is large enough to generate meaningful impact and cost efficiency, yet flexible enough to accommodate a range of pathways. Projects at or above this scale are more likely to contribute significantly to Australia's long-term decarbonisation goals while supporting the development of a sustainable and scalable domestic LCLF industry.

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?

Low-carbon liquid fuels should be required to meet a carbon intensity (CI) threshold to be eligible for support. The European Union's Renewable Energy Directive (RED II/III) provides a relevant precedent, requiring sustainable aviation fuels and other renewable fuels to achieve a minimum 65% lifecycle greenhouse gas (GHG) reduction compared to fossil fuel equivalents to qualify for incentives and blending mandates. This approach ensures that only genuinely low-carbon fuels benefit from policy support, maintaining environmental integrity and aligning investment with climate objectives.

A reasonable threshold for Australia could mirror the EU approach, starting at 60–65% lifecycle GHG reduction for first-of-a-kind e-fuels projects, with progressive tightening over time as technology matures and production scales up. The calculation should follow a standardized lifecycle assessment (LCA) methodology, including upstream emissions from feedstock production, hydrogen generation, CO_2 sourcing, and fuel synthesis, similar to the EU RED methodology. Verification can be achieved through independent third-party auditing, certification schemes, or alignment with international standards such as ISO 14067 or the ICCT e-fuels guidelines.

This ensures that LCLF incentives support genuine decarbonization, prioritizing e-fuels and other renewable fuels that deliver measurable carbon reductions, while providing clarity and predictability for investors and developers.

Question 3.3a: 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?

Yes, a minimum carbon intensity (CI) threshold would still be needed, even if the production incentive is based on carbon emissions reduced rather than the volume of LCLF produced. Linking incentives to emissions reductions alone may favor high-volume production without guaranteeing that each unit of fuel delivers substantial carbon abatement. The EU's Renewable Energy Directive (RED II/III) provides a useful precedent, as it requires fuels to meet a minimum lifecycle GHG reduction (typically 65% for aviation fuels) to qualify for incentives, ensuring that support is granted only to genuinely low-carbon fuels.

A minimum CI threshold ensures environmental integrity by excluding fuels with marginal carbon benefits and provides clarity for developers and investors. The threshold should be calculated through a standardized lifecycle assessment (LCA), covering feedstock production, hydrogen and CO_2 sourcing, synthesis, and transport, and verified through independent auditing or recognized certification schemes. This approach ensures that the incentive program drives meaningful emissions reductions while promoting deployment of e-fuels and other truly low-carbon liquid fuels.

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

The methodology for determining carbon intensity should account for Indirect Land Use Change (ILUC). Including ILUC ensures that fuels derived from feedstocks can cause land-use changes, such as some biofuels, reflect their full lifecycle emissions, promoting an accurate assessment of their climate impact. By considering ILUC, the program takes into account the effects of land-use risks for fuels that depend on large quantities of agricultural feedstocks.

The CI calculation should integrate ILUC using recognized modeling approaches consistent with international best practice, such as those applied under the EU Renewable Energy Directive (RED II/III), ensuring transparency and comparability across fuel pathways. This approach both preserves environmental integrity and provides a clear signal to developers and investors about which technologies deliver genuine low-carbon outcomes.

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

Feedstocks should be prioritised based on their sustainability, scalability, and potential for cost reductions and efficiency gains. Renewable and inexhaustible resources, such as renewable electricity for hydrogen production and captured CO_2 for synthetic fuels, should be the primary focus, as they can support large-scale, low-carbon fuel production without competing with food or land resources. These feedstocks offer significant potential for declining costs and increasing yields over time, improving the commercial viability of LCLF projects.

Conversely, feedstocks that rely on agricultural commodities or are associated with land-use change, deforestation, or water stress should be considered out of scope, as they carry environmental and social risks that could undermine the climate benefits of the program. Prioritising sustainable, abundant, and scalable feedstocks ensures that the incentive framework drives genuine decarbonisation while supporting the growth of e-fuels and other synthetic low-carbon liquid fuels.

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

Yes, additional sustainability criteria should be included beyond carbon intensity to ensure that supported fuels deliver robust environmental benefits. Building on international practice—particularly the European Union's Renewable Energy Directive (RED II/III)—the program should incorporate criteria related to land use, biodiversity, water use, and resource efficiency, ensuring that eligible fuels do not create unintended environmental or social impacts.

Fuels produced from renewable electricity and captured CO_2, such as e-fuels, inherently avoid many of the sustainability risks associated with biomass-based pathways. Criteria such as no competition with food production, no deforestation or land degradation, minimal water stress, and traceable sourcing of all inputs help prioritise scalable, low-impact technologies and ensure long-term alignment with Australia's climate and biodiversity objectives.

Including these broader sustainability safeguards will reinforce environmental integrity, guide investment toward the most future-proof solutions, and ensure that the program supports fuels that are both low-carbon and environmentally responsible.

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

A range of established international and domestic sustainability schemes should be allowed to verify sustainability claims, provided they offer transparent, science-based methodologies and robust verification processes. Internationally, widely recognised schemes such as the EU Renewable Energy Directive (RED II/III) certification systems including ISCC EU, RSB (Roundtable on Sustainable Biomaterials), and CertifHy for renewable hydrogen and e-fuel pathways provide credible frameworks for lifecycle assessment, traceability, land-use criteria, and verification of renewable electricity sourcing. These systems are already used extensively in aviation and renewable fuel markets and offer harmonised, internationally accepted methodologies.

Domestically, Australia could rely on schemes aligned with international standards, such as Climate Active, supplemented by certification frameworks developed under the Guarantee of Origin (Product GO) scheme for renewable hydrogen and its derivatives. Ensuring interoperability between Australian schemes and leading international certifications will facilitate export readiness and reduce administrative burden for producers.

Allowing only schemes with rigorous auditing, lifecycle transparency, and clear sustainability safeguards will ensure that fuels supported by the program meet high environmental standards and align with global e-fuel market expectations.

7. OTHER POLICY CONSIDERATIONS (Q4.1 - Q4.6)

Please refer to the 'Policy Design Engagement Information - 4. Other policy considerations' section of the Policy Design and Engagement Paper, for further context about the questions.

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

Carbon emissions reduction potential: how well the project contributes to decarbonising sectors reliant on liquid fuel use; for example, the total amount of emissions abated by the LCLF produced, where this abatement would occur, and the relative importance of this abatement to the sectors achieving net zero.

Economic benefit: how well the project contributes to new economic and regional development opportunities. Consideration may be given to a range of indicators, including but not limited to new jobs for regional Australia, better economic opportunities for First Nations communities, and diversified income streams for farmers.

Fuel security: how well the project contributes to Australia's sovereign liquid fuel capability and security. Consideration may be given to the extent to which the project helps to diversify Australia's liquid fuel use and mitigate risks to global supply chain disruptions.

Sustainability: how well the project meets sustainability criteria throughout its supply chain. Consideration may be given to potential environmental impacts (e.g. land use change), food security considerations, and competing feedstock uses, as well as the ability of the project to produce LCLF in the long-term without government support and to secure long -term access to feedstocks to enable continuing production of LCLF.

Supporting an efficient market: how well the project contributes to supporting an efficient market, such as the ability of the project to secure offtake agreements, enable price discovery, reduce barriers for future projects, and facilitate knowledge sharing.

The factors identified are appropriate, comprehensive, and well aligned with what is required to build a bankable and globally competitive e-fuel industry in Australia. From an e-fuel project developer's perspective:

Carbon emissions reduction potential:

E-fuels provide deep, durable emissions reductions in hard-to-abate sectors—particularly aviation, shipping, mining, and heavy transport. Because e-fuels are derived from renewable electricity and captured CO_2, they avoid land-use, feedstock, and sustainability concerns associated with bio-derived fuels. This makes them a strong fit for Australia's long-term decarbonisation goals and net-zero strategy.

Economic benefit:

E-fuel projects stimulate significant regional economic development. They create long-term operational jobs, high-skill technical roles, and demand for engineering, electrolyser maintenance, CO_2 capture, and renewable energy services. Many high-quality locations overlap with regional and First Nations communities, enabling meaningful local participation, partnerships, and supply chain development.

Fuel security:

Domestic production of e-jet, e-diesel, and e-methanol improves Australia's sovereign fuel capability by reducing dependence on imported refinery products and by diversifying supply sources. Since e-fuels are compatible with existing logistics and storage systems, they provide a credible pathway to enhanced energy security without major downstream infrastructure upgrades.

Sustainability:

E-fuels offer strong sustainability performance across the supply chain, including minimal land-use impacts, high traceability, and reliance on renewable inputs. Because the key feedstocks—renewable electricity, water, and captured CO_2—are scalable and domestic, long-term production is not constrained by competition with food or land needs.

Supporting an efficient market:

Early projects can play a catalytic role by establishing cost benchmarks, supporting offtake market development, and sharing technical learnings on electrolysis, CO_2 capture, and fuel synthesis integration. This reduces barriers for future market entrants and accelerates cost reductions across the entire sector. High-merit proposals should strengthen Australia's strategic capabilities, including renewable electricity deployment, hydrogen production, CO_2 capture and utilisation infrastructure, and workforce development.

Overall, the merit criteria correctly capture the areas where e-fuel projects are well positioned to deliver measurable national benefit. Proposals should demonstrate consistency with Australia's broader net-zero strategy, aviation and transport decarbonisation pathways, and export ambitions. Projects that position Australia as a competitive global supplier of sustainable e-fuels and low-carbon energy carriers have particularly high strategic value.

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 of the Policy Design and Engagement Paper). 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 Community Benefit Principles are highly relevant as assessment criteria for LCLF projects because e-fuel and green hydrogen production deliver long-term regional, economic, social, and industrial outcomes that extend well beyond emissions reduction alone. These principles ensure that public investment supports projects that build lasting national capability, strengthen communities, and contribute to Australia's strategic objectives under net zero. From the perspective of an e-fuel project developer, each principle is a meaningful and appropriate lens for evaluating merit, though some are more directly tied to the nature of e-fuel production than others.

Most relevant principles:

- **Positive outcomes for local and First Nations communities:** Many high-quality e-fuel sites overlap with renewable energy zones where communities—particularly First Nations custodians—have direct interests in land use, water access, and long-term regional development. E-fuel projects provide opportunities for:
- Indigenous land partnerships and co-design of project benefits
- training pathways for young people in energy and industrial careers
- local procurement strategies that prioritise regional businesses
- arrangements ensuring communities share in economic outcomes over the project's life
- Embedding Indigenous engagement from the earliest project stages ensures benefits are equitable and culturally appropriate.**Safe, secure, well-paid jobs:** E-fuel projects create enduring operational workforces and high-skilled engineering and technical jobs, supporting regional industrial capability.
- **Skilled and inclusive workforces:** The need for electrolysis technicians, process operators, and renewable energy specialists incentivises training and upskilling programs. Partnerships with TAFEs and universities can be built into project design.

- **Strengthening domestic industrial capability:** E-fuel projects anchor supply chains for electrolysers, storage systems, fuel synthesis equipment, CO_2 capture units, and renewable energy infrastructure. This directly supports the "Future Made in Australia" ambition.

Less relevant—but still applicable—principles:

- **Tax transparency and compliance:** While fundamental to all proponents, this is a baseline governance requirement rather than a project-specific differentiator.

Overall, e-fuel projects are naturally aligned with the Community Benefit Principles and can deliver strong, measurable outcomes across each dimension.

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.

- **ICAO's LTAG (net-zero aviation by 2050):**
  This is driving global long-term demand for SAF, particularly e-SAF. Alignment between Australian domestic policy and international aviation demand targets will materially improve offtake certainty.
- **Foreign subsidies and credit schemes (EU RFNBO mandates, UK SAF mandate):** These mechanisms can improve the economics of e-fuel production in competitor regions, stimulating demand in regions with an existing SAF and e-SAF mandate. For Australia to secure FID for domestic projects, support settings must be predictable and competitive with alternative global investment destinations.
  Moreover, if Australia manages to produce e-fuels in a way that the e-fuel produced domestically complies with the regulatory framework of other countries, this can serve as further incentive to produce, and consequently export to foreign markets.
- **Airline and corporate sustainability commitments:**
  Airlines globally are entering into long-term SAF purchase agreements in response to regulatory and voluntary commitments. Clear Australian policy—such as demand-side blending mandates or SAF certificates—will determine whether this demand can be met domestically.
- **Bilateral cooperation and certification frameworks (e.g., EU RFNBO, CORSIA):** Harmonisation of certification rules is essential to ensure that Australian e-fuels can be exported into regulated markets with recognised standards.

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?

In addition to production support, setting up complementary measures is critical to secure final investment decisions for low-carbon liquid fuel projects.

First, targeted corporate tax incentives either through full exemptions during the first years of plant operation or significantly reduced corporate tax rates are essential. By lowering the effective tax burden of first-of-a-kind facilities, these incentives improve project bankability and free up capital for investment in critical infrastructure such as electrolyzers, synthesis units, and CO_2 capture systems. The key feature is that the incentive must be time-bound and tied to the scale and low-carbon performance of the project, ensuring that it supports genuine decarbonization while providing meaningful financial relief to investors.

Second, demand-side mechanisms, such as a Sustainable Aviation Fuel (SAF) mandate, play a decisive role. By creating a guaranteed market for e-jet and other LCLFs, an alternative clean fuels mandate reduces off-take risk and provides predictable revenue streams. Key features include volume-based obligations for fuel suppliers, compliance flexibility through tradeable credits, and alignment with lifecycle carbon intensity targets, which together drive consistent demand and encourage early commercial-scale production.

Combined, these measures tax incentives to improve financial viability and demand-side policies to secure long-term market certainty create the conditions necessary for developers to commit to final investment decisions, accelerating the deployment of LCLF projects in Australia.

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

Several intersecting policies need to be coordinated to unlock a domestic LCLF production industry, building on existing Australian initiatives such as Hydrogen Headstart and the Hydrogen Production Tax Incentive (HPTI).

First, energy and hydrogen policies form the foundation. The rapid deployment of renewable energy zones and clear rules under the Guarantee of Origin (Product GO) scheme are essential to secure low-cost renewable electricity and certified renewable hydrogen for e-fuels. Programs like Hydrogen Headstart, which provides production-linked support for early hydrogen projects, demonstrate the value of long-term revenue certainty but need to be complemented by similar frameworks for synthetic fuels.

Second, coherent carbon and fuel regulation is required. Strong lifecycle-based carbon intensity standards, aligned with international benchmarks such as the EU's RED III, are necessary to guide investment toward genuinely low-carbon pathways. Demand-side policies, including a domestic SAF mandate or integration with a low-carbon fuel standard, are critical to creating predictable offtake for LCLF and ensuring project bankability.

Third, infrastructure and industrial policy should foster common-use assets such as hydrogen pipelines, CO_2 transport and storage hubs, expanded port capacity, and renewable energy zones. These reduce costs for first-of-a-kind projects and align with efforts under state and federal infrastructure planning strategies.

Fourth, tax and investment policy must work in concert. The HPTI is a strong signal but may need to be extended to cover LCLF pathways directly, especially e-fuels. Complementary fiscal measures such as corporate tax incentives, accelerated depreciation and concessional finance via Clean Energy Finance Corporation and National Reconstruction Fund, can meaningfully reduce the cost of capital and unlock private investment.

Fifth, a dedicated fund focused on e-SAF and e-methanol initiatives could provide matched grant funding for projects with credible pre-FEED work, enabling the completion of detailed FEED studies with top-tier engineering partners. This support would sharpen assessments of technical and commercial viability, helping to attract a broader base of equity investors willing to commit at more moderate risk-adjusted return thresholds. Offtake pricing could also be optimised, ultimately lowering costs for airlines and maritime companies. For developers and their project delivery partners, robust FEED outputs would provide a firmer foundation for structuring delivery risk-sharing mechanisms, thereby reducing exposure and enhancing bankability for both commercial and PFI lenders.

The funding mechanism could take the form of a recoverable grant, designed to transition into a subordinated repayable obligation once predefined milestones are met. For example, the funds would be considered a grant upon disbursement, and only once the project reaches FID would it become recoverable.

Finally, planning, permitting, and workforce development frameworks must be aligned to avoid delays, address skill shortages, and provide project developers with a clear and predictable pathway from feasibility to FID.

Together, these intersecting and mutually reinforcing policies, anchored by Hydrogen Headstart, the HPTI, and emerging GO certification, can create the certainty, infrastructure, and economic conditions required to establish a competitive domestic LCLF and e-fuels industry in Australia.

Question 4.6: Is there any other feedback you would like to provide that isn't covered by questions above?

Australia should enable a **high-integrity book-and-claim system** for e-SAF that functions domestically and through **bilateral agreements with the EU and UK**, where SAF mandates already exist. Because PtL fuels will be produced where renewable energy is abundant and competitive—such as Australia—foreign airlines and fuel suppliers will need access to compliant e-SAF even when physical delivery is inefficient.

Under this model, **e-SAF produced and consumed in Australia** would generate **audited emissions-reduction certificates** that can be transferred to EU/UK obligated parties. This would allow them to meet SAF/PtL mandates **without requiring physical entry** of Australian fuel into their domestic supply chains—removing transport barriers while maintaining full environmental integrity.

This is necessary because the **UK RTFO currently prohibits book-and-claim**, and mandates that SAF must physically enter the UK fuel system to generate compliance certificates. A **bilateral agreement** recognising Australia's certificate system would allow UK/EU airlines to comply using Australian e-SAF, while supporting Australia's competitive production advantage.

To ensure international acceptance, Australia should establish early:

- **sustainability verification** aligned with EU RFNBO and UK PtL standards
- **full traceability** to electricity, hydrogen, CO_2 feedstocks and production facilities
- **a digital, auditable registry** to guarantee certificate integrity and prevent double-counting

This framework would allow Australia to become a credible supplier of e-SAF to global compliance markets, even where physical delivery is impractical, and would accelerate mandate compliance for jurisdictions such as the EU and UK.

[redacted]