

Securing Australia's Cleaner Fuels Industry

Response to consultation paper on a demand mechanism

September 2026

About The Superpower Institute

The Superpower Institute's (TSI's) mission is to help Australia seize the extraordinary economic opportunities of the post-carbon world.

A net zero Australian economy will reduce global emissions by just over 1 per cent. But if Australia successfully seizes the economic advantage in exporting zero emissions goods, this can create an opportunity for full employment with rising incomes for a growing population sustained over more than a generation, and reduce global emissions by up to 10 per cent.

Renowned economist Ross Garnaut and economic public policy expert Rod Sims have joined forces through The Superpower Institute, to focus on practical research and policy to unlock this opportunity. The Institute specialises in the policy settings and market incentives needed to make Australia an economic superpower and provides practical knowledge to governments and industry to realise this opportunity.

TSI works across the building blocks of the superpower economy including: renewable energy, green hydrogen, land carbon and minerals processing; the potential zero carbon export products including green iron and green aluminium; and the enablers of this economy including economic and fiscal policy, trade policy and regional development.

<https://www.superpowerinstitute.com.au/>

About this submission

Please contact TSI with any queries info@superpowerinstitute.com.au.

Executive Summary

The Superpower Institute (TSI) welcomes the Government's consultation paper on developing a clean fuels industry. TSI is supportive of the goals set out in the paper:

- strengthen fuel security and resilience
- unlock economic opportunities
- reduce emissions from liquid fuel use.

Liquid fuels are the largest source of energy used in Australia, a significant source of emissions, and an on-going vulnerability given Australia's limited ability to meet its own needs due to limited and declining crude oil reserves.¹

TSI agrees that there is a role for Government intervention to address market failures that deter investment in solutions to these challenges. The relevant market failures in this case are:

- the non-pricing of carbon emissions
- the innovation spillovers that are necessary for technological development but disadvantage early movers
- private underinvestment in secure supply chains, which have public-good benefits

TSI has made the case for an economy-wide carbon price that would address the carbon emissions externality, in the form of a Polluter Pays Levy.² In the case of liquid fuels, such a mechanism would make clean fuels relatively more attractive than fossil fuels, providing an efficient signal for investment in a low carbon liquid fuels industry in Australia.

TSI has also made the case for Australia to address fuel security by focusing on the levers that will have the most impact: electrification and low-carbon liquid fuels.³ Australia can move from 17 per cent fuel security today to 87 per cent by 2040, increasing our sovereign fuel supply from 4 per cent to about two-thirds sovereign. This work also highlighted the need to address coordination failures in charging infrastructure, innovation spillovers and demand-side risk for new investment. Professor Ross Garnaut has also highlighted the need for policy intervention.⁴

¹ TSI, *How Australia Can Break its Foreign Fuel Dependence*, July 2026
<https://www.superpowerinstitute.com.au/work/australian-fuel-security>

² TSI, *The Case for Pricing Pollution*, January 2026

³ TSI, *How Australia Can Break its Foreign Fuel Dependence*, July 2026

⁴ Garnaut, *The Iran Crisis: Fuel Security and Defeating Climate Change*,
<https://www.superpowerinstitute.com.au/news/the-iran-crisis-fuel-security-and-defeating-climate-change>

Against this backdrop, the Government's conceptual framework could address these market failures. However, TSI has identified three main issues with the Government's proposed phased approach, which will limit the effectiveness of the policy, and substantially weaken the Government's ability to achieve its goals.

1. The two-phase approach undermines timely investment in low-carbon liquid fuels (LCLF), introduces additional sustainability risks, and unnecessarily increases costs.
2. Excluding electrification as a credit-eligible activity limits the benefits of the scheme for fuel security and decarbonisation.
3. Allowing unconstrained imports risks undermining the objectives of fuel security and the development of a domestic LCLF industry.

TSI's assessment is that the two-phase approach is unnecessary and that the second phase of the proposal contains the policy mechanism that is best suited and most likely to achieve the Government's objectives of fuel security, emissions reduction and economic opportunity.

The table below summarises the impact of the two phases in achieving the Government's objectives.

Table - Achieving the Government's Objectives

Policy Objectives	Phase 1 – Volumetric Mandate 2029-2035	Phase 2 – Carbon-Intensity standard 2035-2050 (incl. Electrification)
LCLF Industrial Development	Mandated use of LCLFs, undermined by lack of policy certainty and allowing imports	Aviation sub-targets incentivises LCLF development, but competes with electrification for land-based uses
Least Cost Fuel Security	Incentivises LCLF use to diversify supply, with some domestic production likely	Electrification is the strongest fuel security lever. Aviation sub-target underpins LCLF investment.
Least Cost Decarbonisation	LCLF is expensive near-term abatement – distorts away from least cost abatement	Incentivises most cost effective abatement in transport and aviation.

Notes: Red indicates policy phases are very unlikely to, or undermine, Government objectives. Orange indicates policy phases will partially support Government objectives. Green indicates policy phases are consistent with Government objectives.

Recommendations

1. **Adopt the Phase 2 carbon-intensity standard from 2029 and remove the volumetric Phase 1.** The mechanism proposed for 2035 is the one best suited to the Government's objectives. Deferring it forfeits six years of abatement and leaves projects that depend on it unbankable. (Section 1.2)
2. **Make electrification, including charging infrastructure, a credit-generating activity from commencement.** Electrification is the largest available lever for both fuel security and emissions reduction, and crediting charging infrastructure addresses the binding constraint on its deployment. (Sections 1.2 and 1.3)
3. **Set a separate aviation benchmark.** This underpins investment in low-carbon liquid fuels where there is early demand and demand will endure, and ensures cheaper abatement through road transport electrification does not displace this demand. (Section 1.2)
4. **Set a minimum requirement for domestically produced fuel and allow imports only within limits.** Unconstrained imports substitute one fuel dependency for another and weaken the case for domestic investment, while limited imports retain their value as cost containment. (Section 1.2)
5. **Require certification that captures land use change emissions.** Australia's proposed Guarantee of Origin is the only standard globally that does not consider these emissions by default. Correcting this is essential to the integrity of low-carbon liquid fuels as a source of abatement. Alternatively, consider using international certification that includes land use change emissions. (Section 1.3)

The remainder of this submission focuses on

1. How the government's "conceptual framework" can be measured against the three objectives of the policy: fuel security, economic development and emissions reduction.
2. Important design features of the policy.

1. Policy design measured against objectives

1.1 Economic opportunities

The Superpower Institute has outlined the economic opportunities that can come from low carbon fuels in particular, and green economy industries generally.

- Australia is endowed with abundant renewable energy resources, vast land areas ideal for sustainable biomass production, and an advanced primary industrial base.
- [The New Energy Trade](#) found that green carbon industries, such as low carbon liquid fuels and chemicals like ammonia and methanol, could be \$400 billion export industries for Australia in a 2050 net zero world.

But securing that opportunity will require the right policies to address market failures.

- Australia has an enormous economic opportunity derived from significant comparative advantages in renewable energy and biomass availability.
- Rewarding fuels with high emissions abatement plays to Australia's comparative advantages in sustainable biomass and agricultural wastes.
- Government support for the wrong pathways will hinder our fuel security and our economic prosperity.

As such, policies should address the market failures holding back green industries, not try to protect one solution at the expense of a more efficient technology.

The Government's two-phase policy complicates the business case for LCLF projects and makes securing finance difficult. The government's proposed approach changes the policy mechanism in 2035, and with it the type of project it incentivises before projects have made a return.

The first phase incentivises high volume projects that pass the minimum emissions threshold, whereas after 2035 higher quality and higher abatement fuels are preferred.

- A high-volume low-abatement project favoured by the Phase 1 volumetric approach will only be able to benefit for six years before the regulation changes to a regime that is less favourable, noting high abatement fuels play more to Australia's comparative advantage.
- Six years is typically not sufficient to make a return on capital-intensive projects.
- This weakened incentive would be exacerbated by the addition of broader credit eligible activities further.

Conversely, projects prioritising high abatement LCLF will be disadvantaged under the volumetric regime, potentially delaying investment by nearly a decade given the carbon intensity mechanism is due to arrive in 2035.

Changing incentives six years into a policy's operation also introduces substantial political risk, especially if later changes are more contentious. As such, the projects relying on support in the second phase will not be bankable, fundamentally defeating the purpose of the demand mechanism.

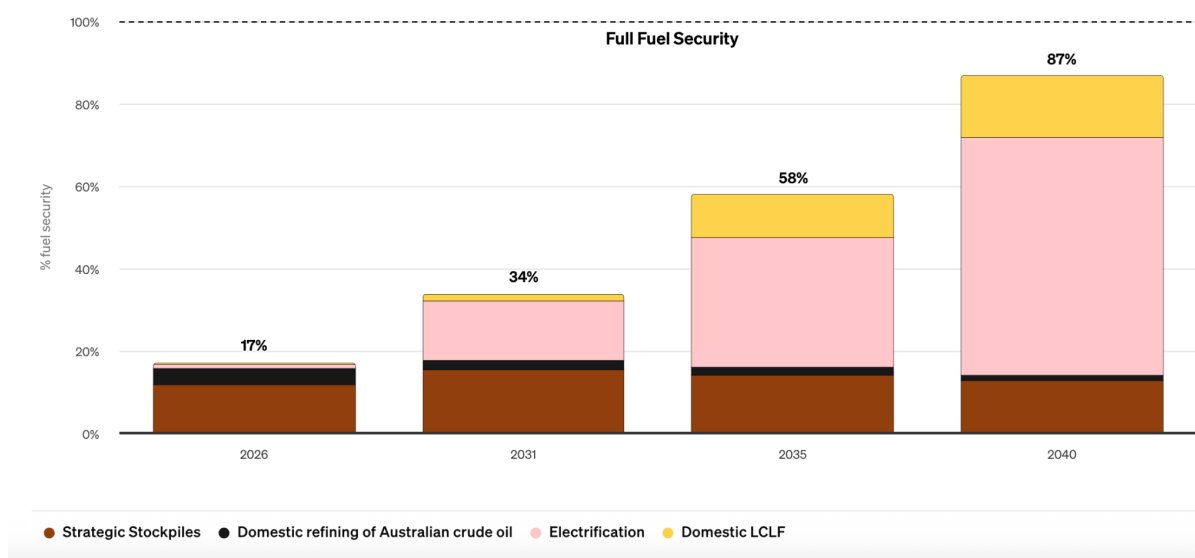
A long term, stable policy that does not change the incentives for investment will be able to underpin projects more successfully than a phased approach. A carbon-intensity basis will encourage use of higher abatement feedstocks, such as waste, residues and marginal land crops, in which CSIRO has identified Australia having a comparative advantage.

Recommendation 1: Adopt the Phase 2 carbon-intensity standard from 2029 and remove the Phase 1 volumetric phase.

1.2 Fuel Security

[The Superpower Institute's analysis](#) finds two clear sources of future fuel security. Electrification is the main lever: it is cost effective, can be deployed quickly and at scale. LCLFs contribute to hard-to-electrify sectors, particularly jet fuel for the aviation sector.

Australia can achieve very high levels of fuel security by 2040



The largest lever is electrification, and a policy excluding electrification will limit the potential full security that can be achieved.

- Land-based fuel uses account for 79 per cent of fuel use. Electrifying roughly three-quarters of it would cut total demand by 46 giga litres a year by 2040.
- Electrification is increasingly available for road freight, mining operations and agricultural equipment.
- The technology is mature; the binding constraint is charging infrastructure and lack of incentive to adopt electrified technology. Allowing electrification as a credit-generating activity would support charging network investment and electrification.

Low-carbon liquid fuels can meaningfully contribute to fuel security, but unlike electrification, their role in the medium term is limited. Broadening the scheme to allow electrification will reduce cost concerns and support cheaper abatement options for most fuel uses.

- Where there are alternative solutions to reduce fuel demand or emissions at a lower cost it is inefficient to mandate the use of LCLF.
- Forcing consumers to use and purchase LCLF, where there are cheaper alternatives available, will unduly increase the cost of both abatement and fuel security, undermining support for the policy.

In addressing Australia's fuel insecurity, electrification should be the key lever. It can provide security on shorter timeframes, at greater scale and lower cost.

Recommendation 2: Make electrification, including charging infrastructure, a credit-generating activity from commencement.

In allowing electrification, it is important that the scheme does not disincentivise investment where there will be enduring demand for liquid fuels, like aviation. Investment in LCLF is needed in hard-to-electrify sectors with long-term demand, not as a widespread solution for all fuel use.

To ensure that cheaper carbon-intensity reductions through road vehicle electrification does not come at the expense of LCLF investment, the Government should implement their proposed separate jet fuel benchmarks to underpin LCLF production.

Australia has substantial existing feedstocks, such as canola, tallow, sugarcane, and forestry and agricultural residues. Currently, Australia exports about 80 per cent of feedstocks, such as canola, to refineries in Europe and Asia. Redirected and scaled, they could meet 95 per cent of Australian aviation demand by 2040.

The value of early investments in LCLFs is necessary to develop these complex supply chains for sovereign supply. As part of a technology-agnostic approach, these

investments would play a moderate but important part in delivering fuel security, without relying on the constrained lever of LCLFs to deliver all of the benefits.

Recommendation 3: Set a separate aviation benchmark.

Importing LCLFs to meet the demand mechanism objectives would undermine the fuel security benefits of the scheme, by simply substituting one import dependency for another. This could be addressed by minimum requirements for domestically produced fuels.

Unconstrained imports of LCLF could be a privately attractive alternative to substantial investments in domestic projects, undermining the public goal of industrial development and sovereign supply. Any benefits from diversifying our fuel sources would be limited, as existing international LCLF providers significantly overlap with our main fossil liquid fuel providers in South East Asia.

That said, allowing LCLF imports as part of the demand mechanism gives some flexibility to manage costs and supply constraints.

- Imported LCLF would act as cost containment if the trajectory of the scheme was too onerous or if domestic supply was delayed or interrupted.
- It should be noted a buy-out price could provide a similar release valve, while generating revenue for the Government.

As such, allowing some imports within limits while also appropriately incentivising domestic production would be the right balance between competitive pressure and fuel security.

To avoid an unnecessarily protectionist approach, the Government should consider an objective benchmark, such as the operational fuel requirements of Australia's defence force or the necessary sovereign supply to meet our 90 Day IEA obligations with existing storage. Given fuel security is hard to quantify, these benchmarks could be used to set minimum domestic production requirements.

Recommendations 4: Set a minimum requirement for domestically produced fuel and allow imports only within limits.

1.3 Emissions Reduction

Australia is not on track to achieve our appropriate contribution to the world reaching net zero by 2050, and will have a very difficult task in meeting our 2035 emissions target without a substantial contribution from transport emissions.

- An economy-wide price on carbon pollution is the most economically efficient way to bring down Australia's emissions.

- In [the Case for Pricing Pollution](#), TSI put forward a model for how to achieve efficient decarbonisation through a 'Polluter Pays Levy'.
- In the absence of such a policy, decarbonisation is more difficult and costly.

The Government's carbon-intensity standard would strengthen incentives for decarbonisations, by covering about 30% of Australia's emissions, including transport emissions, which are currently barely covered by emissions-reduction policies.

- Transport emissions fall outside of the government's main carbon policy, the Safeguard Mechanism, because freight operations are typically below the participation threshold.
- The proposed carbon-intensity standard applies a similar *Polluter Pays* logic to fuel decarbonisation, making fuel producers and importers responsible for their scope 3 emissions.

The cost benefit analysis conducted by the Government demonstrates that "a broad and balanced [carbon-intensity] standard" is the best of the policies presented. The "balanced approach" would deliver 22Mt of abatement and the "high ambition standard" would deliver 43Mt of abatement in 2035.

- In reality the Government could calibrate the carbon-intensity to meet its targets. As such, the modelling that shows the "volumetric mandate" delivering more abatement is dubious, and the Government's modelling to this effect seems to incorporate emissions reduction beyond the contribution of LCLFs.

Carbon-intensity schemes are consistent with international precedents, where the most successful policies are technology agnostic, allowing credits to be generated by a broad range of technologies beyond LCLF. Concerns in the paper about the perceived administrative complexity are overstated, given the size and sophistication of affected entities and international comparators.

- The Californian Low Carbon Fuel Standard is considered international best practice, delivering significant abatement and supporting LCLF.
- The Canadian Clean Fuel Regulations successfully introduced a carbon-intensity based scheme that included electrification from the beginning with no noticeable challenges.

The Government does not propose implementing this policy until after 2035. Phase 1 of the policy promotes a volumetric mandate, which is an inefficient way of delivering emissions reduction at a high cost, as demonstrated by the government's own CBA and findings from the Productivity Commission⁵.

⁵ PC, *Investing in cheaper, cleaner energy and the net zero transformation*, December 2025
 - noting the PC refers to a Low-Carbon Fuel Standard without crediting for electrification.

- The consultation paper describes it as the “second least favourable” policy, because it limits eligible technology and only indirectly targets emissions.
- A volumetric approach does not benefit fuels that provide a greater emissions benefit, after a fuel clears the minimum threshold.
- Emissions reduction through LCLFs come at a significantly higher cost than electrification, about \$500/tCO₂e, where electrification is possible.

Emphasised – Recommendation 2: Make electrification, including charging infrastructure, a credit-generating activity from commencement.

Certification to support emissions reduction

To ensure the integrity of LCLF as a genuine source of emissions abatement, sustainability criteria and emissions standards need to be rigorous. Australia’s proposed Guarantee of Origin certification is currently insufficient to take account of land use change emissions, and is the only standard globally to not consider them by default.

Land use change emissions account for the emissions in land clearing, or forcing food production to expand its footprint. International experience, notably the EU’s early mistakes with palm oil and soy biofuels, is instructive. Blunt volumetric mandates with weak sustainability criteria encourage unsustainable practices, leading to poor climate outcomes and damaged social license.

While Australia has a large land mass and comparatively small population, arable farm land is constrained and we have a recent history of land-clearing. The current proposed approach to certification risks repeating international mistakes.

Including the emissions associated with changes in land use, both direct and indirect, will incentivise LCLFs using waste and residue products from agriculture and forestry, as well as projects that use marginal land or integrated land management techniques for a positive environmental outcome. These feedstocks will not only deliver maximum climate and environmental benefits, but also should play to Australia’s comparative advantages.

In the absence of sustainability criteria that the Guarantee of Origin scheme does not consider, the inclusion of land use change emission will help disincentivise unsustainable projects.

Recommendation 5: Require certification that captures land use change emissions.

2. Design and implementation

2.1 Targets and trajectory

As discussed above, the Government should set an ambitious carbon intensity-based target rather than volumetric targets. Disruption in the Strait of Hormuz has demonstrated the vulnerability of Australia to fuel shocks. Further, the Government has set a 2035 emissions-reduction target that it is not on track to achieve, especially if there is not substantial progress in the transport sector. Climate Analytics' recent analysis suggests a 1.5°C trajectory would require halving transport emissions by 2035.⁶

TSI analysis suggests Australia could reduce its reliance on foreign fuels by 42 per cent in 2035, if investment began today.⁷ Allowing for commencement in 2029, a 2035 target of 20 per cent reduction in the carbon intensity of the fuel pool should be both ambitious and achievable. The inclusion of all available abatement technologies will increase options for proponents to meet this ambitious target, and mitigate risks of delayed delivery of large LCLF refineries.

A sub-target for aviation will be necessary to ensure that Australia is investing in a sovereign supply of jet fuel, while underpinning investment in LCLF production. TSI has identified a 2.2 GL pipeline of low-carbon fuel projects, and a central scenario of 5.9 GL of SAF production from available feedstock in 2035. A 2035 Aviation sub-target of 15 per cent emissions reduction for jet fuel could similarly underpin a substantial portion of this fuel production.

The trajectory of the decline rate should be informed by intelligence from project proponents. For simplicity, a straight decline rate (i.e. 4 per cent emissions reduction per year) would be sensible if there is no other compelling proposal. The Government should also consider implementing an automatic target-acceleration mechanism. This mechanism would manage oversupply of credits by bringing forward reduction targets, maintaining a strong investment incentive for developers.

2.2 Obligated entities

The obligated entities should be fuel producers and importers. As the point of the supply chain with the most control of supply, producers and importers are best positioned to meet government obligations. It is also the most concentrated point of the supply chain, making administration of the scheme relatively simple. The obligation should be at the excise point for ease of measurement and to minimise the regulatory burden.

⁶ Climate Analytics, *A fossil fuel free Australia*, September 2026

⁷ TSI, *How Australia Can Break its Foreign Fuel Dependence*, July 2026

The Government should also allow large fuel users to opt-in to having an obligation. This should mitigate concerns about concentrating market power on fuel suppliers, and minimise anti-competitive behaviour, as has been observed in the European context.⁸ This will allow large fuel users to directly contract with LCLF providers or, if electrification is recognised by the policy, with charging infrastructure. Airlines, miners, some large agricultural operations and heavy freight operators may take up this option.

2.3 Fuel coverage

The types of fuel covered by the proposed policy should depend on the mechanism design. Diesel and jet fuel should be covered under any design. Consideration should be given to covering maritime fuel. Petrol should only be included if the policy is technology neutral, covering electrification activities.

Coverage of Diesel

As the largest single category of imported fuel, diesel is rightly a focus of the policy. Including all uses of diesel across the economy will maximise the effect of the policy on both fuel security and emissions abatement. The majority of diesel use is not currently covered by emissions reduction policy – road freight and agriculture will likely never be covered due to the particular design of Safeguard Mechanism (SGM).

That said, electrification will be possible for most diesel uses. The lack of a carbon price on diesel means that there is no policy efficiently driving abatement. As such, the Government should not assume that investments in freight electrification will happen at a necessary scale to address these challenges, without a new policy signal. The policy proposal currently under consideration, in ignoring electrification opportunities, limits the scope to LCLF blended into the diesel supply. This will force inefficient investment, distort efficient abatement of diesel emissions, and unnecessarily increase the cost of diesel.

Coverage of Jet Fuel

There will be an enduring demand for jet fuel in its liquid fuel form for the foreseeable future. Unlike diesel, there are limited alternatives to the use of liquid fuels for aviation due to energy density requirements. As such, Australia will need to invest in the supply chains and necessary infrastructure to develop a sovereign supply of jet fuel.

From a purely least-cost of abatement view, the obligation would not distinguish between different fuel types, as it does not matter where abatement comes from. However, the Government should have a separate jet fuel obligation to encourage

⁸ IATA, 2025, Access to SAF in Europe Effects of ReFuelEU Aviation (RFEUA), <https://www.iata.org/en/programs/sustainability/reports/access-to-saf-europe-brief/>

sustainable aviation fuel development and to ensure this occurs regardless of efforts to produce other types of LCLFs. Given the additional cost of refining SAF, a separate standard for aviation will be necessary to underpin investment.

Coverage of Petrol

The inclusion of petrol is contestable depending on the policy aims of the Government. If the Government drops the proposed Phase 1 volumetric scheme and proceeds immediately with a carbon intensity scheme, which is technology agnostic, petrol should be included. If the government proceeds with a volumetric scheme, petrol should not be included.

Most uses of petrol are partially regulated through the New Vehicle Efficiency Standard. While this incentivises an increased supply of electric and fuel-efficient vehicles, it does not incentivise investment in charging infrastructure. Crediting electrification would complement, not duplicate, the New Vehicle Efficiency Standard to provide the infrastructure investment to support this increased car supply.

There are limited LCLF options for drop-in replacements for petrol. The pathways for petrol decarbonisation and import substitution is through electrification and ethanol-blending. Under a carbon intensity framework, you would expect strong investment in public charging and an increase in the availability of ethanol-blended fuel, up to the regulated limit. In California, ethanol-blending has been a persistent feature of their market, while recent growth in credit-generating activity has come almost entirely through electrification.

Under a volumetric approach excluding electrification, this ethanol-blending could displace investments in refined LCLF. As such, the inclusion of petrol will undermine the Government's goal to stimulate investment in LCLFs refining capacity. Despite the fuel security and decarbonisation benefits of ethanol blending, it would be simpler to exclude petrol from the scheme and implement a national ethanol-blending mandate, if the Government wants to pursue that outcome.

Coverage of Maritime Fuels

The Government is not currently proposing to include maritime fuels as an obligated fuel. However, since Australia is reliant on sea-borne trade, there will be enduring demand for maritime fuels for the foreseeable future, similar to jet fuel. As such, it would be in Australia's economic and security interest to have a supply of our own green shipping fuels.

As demonstrated in the New Energy Trade, green shipping fuels are a substantial economic opportunity for Australia.⁹ In light of the International Maritime

⁹ TSI, *The New Energy Trade*, November 2024

Organisation's Net Zero Framework potentially creating near-term demand for shipping fuels, the Government should include maritime fuels in the scheme, to support investment consistent with Australia's comparative advantage.

2.4 Credit-eligible activities and credit values

Credits should be as technologically agnostic as possible. While LCLF will have an important role to play in domestic decarbonisation and eventually present a large export opportunity, it is important to recognise that in the medium term, feedstocks are constrained and LCLF prices will be high.

Credit-producing activities should include supply of low-carbon-intensity fuels (e.g. renewable diesel, SAF); and supply of fuel or energy to advanced vehicle technology (e.g. electricity or hydrogen).

Credits should be calculated based on the life-cycle emissions of the displaced fuel minus the lifecycle emissions of the credit generating activity. The value of any given credit is determined by the market. When there is an excess of credits the price will fall and producers can choose to bank their credits for later use. When credits are scarce, the price increases, incentivising investment in new credit-generating activities.

In the case of LCLFs, a litre of renewable diesel is credited with emission reductions compared to fossil diesel. The implementation of this would rely on the LCLFs being certified, likely by the Guarantee of Origin scheme.

In the case of electrification credits, this is calculated using the energy supplied multiplied by an average emissions factor and an estimate of the fuel this is displacing, accounting for the energy-efficiency of electric vehicles. Typically this credit is applied to the charging infrastructure, similar to applying the obligation on fuel providers. International schemes of credit charging infrastructure for their capacity initially, before transitioning to a usage basis.

2.5 Credit market

Credit trading is an integral part of the scheme's design. While obligated entities will have incentives to invest in their own supply of LCLFs, credit trading allows new LCLF producers to enter the market and sell credits to existing obligated entities. Credit trading also allows obligated entities to manage supply shortfalls, delays in production and price instability.

California's Low Carbon Fuel Standard has demonstrated the efficiency of a credit market; Australia should aim to emulate it as much as possible. It has cut the carbon intensity of the state's fuel mix by 22.4 per cent, displaced more than 114 GL of

petroleum fuel, and grown renewable diesel consumption from 1 million to 72 million barrels a year between 2011 and 2025, consistently outperforming its targets.

Banking is a normal and useful feature of a credit market. When credits are in excess and the price falls, producers can bank them for later use, which smooths prices between periods. Further, to meet their obligations, entities may over-purchase credits and carry these credits into the next period as needed. Scheme targets should be reviewed on a published schedule, ideally through an auto-acceleration mechanism, to ensure that credit banking does not undermine the goals of the scheme.

2.6 Carbon Intensity and certification requirements

Carbon intensity certification

A minimum carbon-intensity threshold for fuels will not be needed, if the Government is pursuing a carbon-intensity standard. Carbon-intensity standards reward abatement continuously, rather than granting equal treatment to every fuel that clears a threshold. That said, the Government should consider a minimum threshold of carbon reduction to ensure new investments are genuinely low-carbon fuels, rather than locking in high emissions fuel for the life of that investment.

TSI has previously advocated for a minimum 53 per cent reduction in emissions intensity, relative to the standard fossil comparator on an energy-based, well-to-wake basis.¹⁰ There is currently a broad range of carbon intensity thresholds for aviation, with CORSIA requiring only a minimum 10 per cent emissions reduction, and the EU RED III requiring a 65 per cent reduction on the fossil baseline. A 53 per cent threshold is achievable for projects using sustainable feedstocks and predominantly renewable energy.

Life-cycle accounting and certification

Life-cycle accounting must include land use change emissions — the emissions from land clearing, or from forcing food production to expand its footprint. Australia's proposed Guarantee of Origin certification is currently inadequate in this regard, and is the only standard globally not to consider land use change emissions by default. Including land-use change emissions is essential to the integrity of LCLF as a genuine source of abatement.

Further, the Guarantee of Origin does not certify international feedstock or fuels. As such, it will be necessary for the Government to recognise international certification schemes, such as ISCC or RSB.

¹⁰ TSI, *TSI Clean Fuels Program Consultation*, 2025

If the Government allows imported LCLF fuels to be certified against international schemes, it should allow domestic schemes to be certified against them. This would reduce the burden on fuel producers who wish to export fuels, by only requiring one certification process. It would also smooth interactions with international schemes, especially for aviation.

2.7 Policy reviews

Where possible, the Government should establish stable and enduring policy conditions, rather than implementing a partial policy in 2029 and using future reviews to expand eligible fuels or credit-generating activities.

If the Government determines there is long-term merit in the inclusion of a fuel or credit-generating activity, it should be included from commencement. As with concerns about the phased program design, a review that changes the investment case for projects will undermine the policy.

Of the proposed topics, a review in the early 2030s should focus on the performance of the policy against the Government's stated aims, the ambition of the trajectory and any further actions that are required to meet the objectives. Additionally, the Government should include new credit generating fuels or activities as they become available.

3. Recommendations

To address the issues TSI has identified, the Government should adopt the following:

Recommendations

1. **Adopt the Phase 2 carbon-intensity standard from 2029 and remove the volumetric Phase 1.** The mechanism proposed for 2035 is the one best suited to the Government's objectives. Deferring it forfeits six years of abatement and leaves projects that depend on it unbankable. (Section 1.2)
2. **Make electrification, including charging infrastructure, a credit-generating activity from commencement.** Electrification is the largest available lever for both fuel security and emissions reduction, and crediting charging infrastructure addresses the binding constraint on its deployment. (Sections 1.2 and 1.3)
3. **Set a separate aviation benchmark.** This underpins investment in low-carbon liquid fuels where there is early demand and demand will endure, and ensures cheaper abatement through road transport electrification does not displace this demand. (Section 1.2)
4. **Set a minimum requirement for domestically produced fuel and allow imports only within limits.** Unconstrained imports substitute one fuel dependency for another and weaken the case for domestic investment, while limited imports retain their value as cost containment. (Section 1.2)
5. **Require certification that captures land use change emissions.** Australia's proposed Guarantee of Origin is the only standard globally that does not consider these emissions by default. Correcting this is essential to the integrity of low-carbon liquid fuels as a source of abatement. Alternatively, consider using international certification that includes land use change emissions. (Section 1.3)

Further Information

Please contact TSI's Policy Lead, Sam Burt at samuel.burt@superpowerinstitute.com.au