2025-26 PRE-BUDGET SUBMISSION

AUSTRALIAN SUGAR MILLING COUNCIL
31 JANUARY 2025

The Australian Sugar Milling Council is the peak industry body for the Australian sugar manufacturing sector - contributing $4.4 billion annually to the Australian economy and supporting more than 23,000 jobs. The ASMC works with its members, industry stakeholders, other industry representatives and government to develop and promote policies that enhance the sustainability, viability and economic contribution of the sugar industry in Australia.

1. Executive summary

A successful Australian sugar industry is uniquely positioned to address some of the nation's most critical challenges through ensuring an affordable and reliable energy transition, ensuring enhanced manufacturing capability and employment for regional Australia and maintaining our global market access through our sustainability credentialing. As a $4.4 billion industry supporting around 23,000 jobs, we are not just the economic backbone of regional communities but also a pivotal player in the production of food, fuel and fibre. Sugar is the second largest agricultural export from Queensland, with the industry exporting on average $2.4 billion worth of raw sugar annually. With targeted government collaboration and support, we can amplify our sector's ability to drive regional growth, ensure energy and national security, and grow our national manufacturing capability.

Background on the Australian sugar industry

The sugar industry is one of Australia's largest rural industries. Queensland produces 95% of the country's raw sugar, with New South Wales accounting for the remainder. In 2023 the industry produced 4.04 million metric tonnes of sugar and exported 2.77 million metric tonnes, placing us as the 10th largest producer and the 4th largest net-exporter in the world.[1] The industry is responsible for 23,000 jobs in Queensland and New South Wales year on year and also produces 65 million litres of bio-ethanol.

Our sector has around 340 megawatts (MW) of cogeneration capacity installed across its mills, which on average produce over 1 million megawatt hours (MWh) of renewable electricity per year, effectively displacing 1.5 million tonnes of greenhouse gases from non-renewable sources. Typically, 56% of the electricity generated is used to power manufacturing operations and 44% is exported to the grid, powering the equivalent of 135,000 households.

[1] International Sugar Organization, Sugar Yearbook 2024, iii.

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With respect to global demand, it remains strong for raw and refined sugar, and Queensland's sugar value chain enjoys significant competitive advantages in global markets. World market prices for both raw and white sugar remained strong throughout 2023[2] and the current season.

The sugar industry has identified opportunities for market growth in Southeast Asia with the Philippines and Vietnam identified as net importers with rising domestic demand. Managing quotas and tariffs while producing enough sugar for export is essential to leveraging these markets.[3]

Opportunities to unlock a vibrant bioeconomy

The energy transition and national energy security:

Sugar manufacturing has a successful track-record of providing renewable electricity through the cogeneration of electricity using our fibrous byproduct bagasse as fuel. With the right investment incentives, we have the potential to expand our installed capacity to approximately one gigawatt.

Preliminary modelling undertaken by LEK Consulting for the ASMC, and co-funded by the Queensland Government, suggests that if potential investments in cogeneration are fully utilised, our sector could influence a reduction in wholesale electricity prices in Queensland by 10-15% from the base-case in the next 5-10 years.[4]

Similarly, sugar and its byproducts have been identified as one of the main feedstocks for low carbon liquid fuels in Australia. While sustainable aviation fuel has garnered most of the media's attention, the sugar industry is uniquely placed to secure Australia's national security objectives, by providing an indigenous supply of biodiesel to our Defence capabilities that are geographically collocated (i.e. North Queensland). Bio-energy represents a diversification opportunity for the sugar industry, providing the industry with exposure to markets other than sugar, and in turn reducing the market risk for our businesses.

Regional manufacturing and economic growth:

The sugar industry already supports around 23,000 jobs up and down the eastern coast, from Northern NSW to beyond Cairns. For many regional Queensland communities, it is the anchor industry that provides the economic impetus for other activities such as engineering services, transport and logistics, and the production of plant and equipment.

The industry can grow this manufacturing base by utilising opportunities in the bioeconomy including bioenergy and bioproducts such as bioplastics. To ensure these

[2] International Sugar Organization, Sugar Yearbook 2024, ii.
[3] House of Representatives Standing Committee on Agriculture, 'Inquiry into the role of Australian agriculture in Southeast Asian Markets, November 2024, 16.
[4] LEK study to be completed and released in April 2025.

opportunities are economically viable we need certainty that we are investing in the opportunities with the highest economic value, noting the finite feedstock (cane and land under cane) available in Australia.

Sustainability and expanding our international market access:
The Australian sugar industry needs to demonstrate its sustainability credentialing if it wants to maintain and expand international market access that is worth $2.4 billion p.a.

To ensure that sustainability is an economic enabler for the Australian sugar industry, the industry is currently finalising the Australian Sugar Sustainability Framework and seeks collaboration with the Australian Government to promote the strength and validity of this framework in international markets and within various trade related forums.

Our Framework will not just underpin our industry's market access, but Australia's ability to participate in new opportunities for the provision of low carbon liquid fuels.

Challenges facing the sector

While sugar manufacturing offers transformative opportunities, systemic challenges not only threaten its potential but its long-term viability too. It is sobering to note that close to $65 million of state and federal government funding was provided to the Mossman Mill, one of the smaller mills in Australia, but this was not enough to prevent its liquidation. The Mossman Mill closure also highlights the amazing commercial acumen of other mills in Australia. These mills have managed to maintain operations and seek new commercial opportunities despite volatile sugar markets and a regulatory and policy environment that has not been favourable to sugar manufacturing. Challenges facing the sugar manufacturing sector include:

- *Distorted global markets:* Global sugar markets are highly distorted and defined by trade restriction and supply-side subsidies in many jurisdictions. This not only reduces the potential economic gains for the Australian sugar industry but creates highly volatile international prices for sugar, defined by regular booms and busts.

  The recent announcement by the Indian government to resume sugar exports has posed a significant risk to the stability of the global sugar market. Ignoring WTO rulings, India's decision to export one million tonnes of raw sugar will affect global sugar prices, undermining efforts to maintain fair trading conditions. Such actions threaten the sustainability of export-dependent industries like Australia's, where over 80% of sugar production is exported, contributing more than $2 billion annually to the economy and supporting regional communities.

- *Regulatory barriers:* Poorly structured policies, such as environmental and land-use regulations, increase costs and restrict innovation, impeding the long-term viability of the sugar industry. Of particular concern to any long-term investment in the sector are Federal and Queensland sugar industry regulations on marketing choice and pre-contract arbitration. These have created significant risks for any large-scale investment in the sector. These regulations were deemed by the Productivity

Commission and the Queensland Productivity Commission as being unnecessary and lacking in any justification, as there was no market failure or abuse of market power.

The Sugar Code of Conduct (Code) was designed to provide a regulatory framework for contractual relationships between growers, millers, and marketers in Australia's sugar industry, and was intended to govern the relationship for raw sugar, as was communicated by the Federal Government publicly and in representations made directly to the sugar industry.

A Department of Agriculture, Fisheries and Forestry (DAFF) review highlighted that the Code's current application does not align with its original intent and has contributed to inefficiencies in the sugar industry. DAFF recommended that the Code be re-focused to address its initial purpose of regulating raw sugar marketing alone, reducing redundancy and ambiguity. This recommendation was initially accepted by the Federal Government, signalling a potential pathway for reform.

- *Workforce shortages:* A declining and aging workforce, coupled with insufficient training and career pathways, and restrictive skilled migration intake and inconsistent visa requirements, risks the long-term viability of sugar manufacturing.
- *Freight infrastructure:* Sugarcane is a highly perishable feedstock, requiring immediate processing to maintain its sugar content and quality. This makes timely and efficient freight networks vital to the success of the sugar industry. The sugar manufacturing sector has single handedly maintained vital cane rail networks that now have a replacement value of more than $2.5 billion. With the increased incidence of extreme weather, floods and cyclones, and significant damage to freight infrastructure like bridges, sugar manufacturers will not be able to maintain these networks and will need to increasingly rely on already overstretched regional roads.

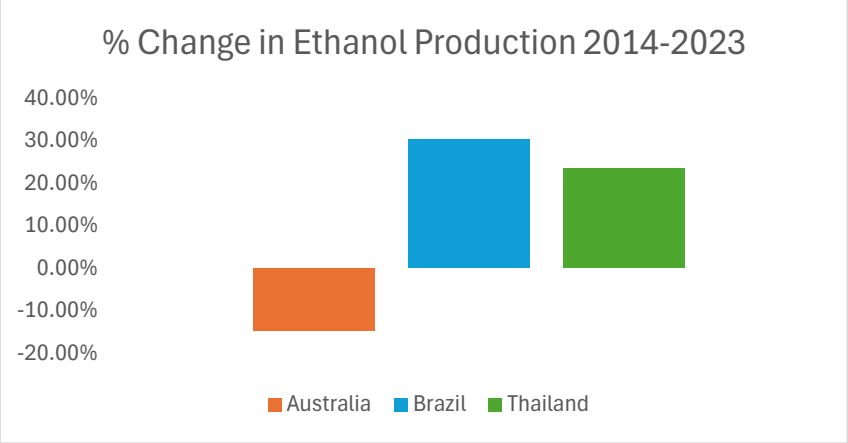
Why Government action and collaboration is imperative

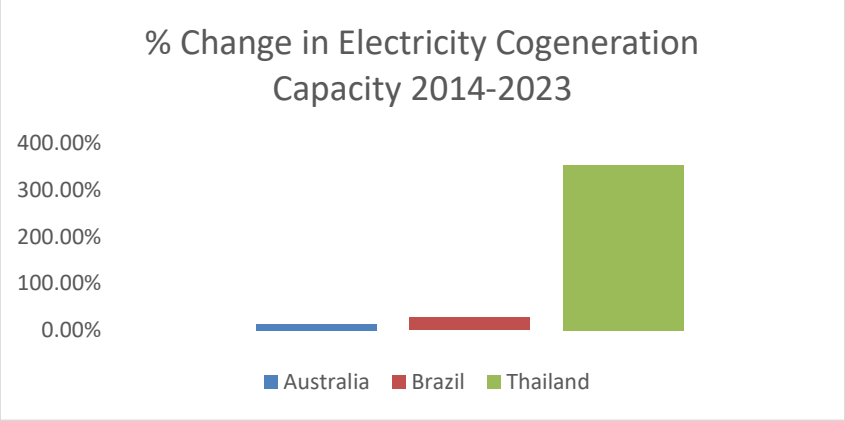
Put simply, without close industry and government collaboration we will not be able to capture the benefits that the sugar industry can provide to regional economies and communities, and will not be able to further the Government's policy priorities. The need for Government collaboration includes:

- *Industry diversification and energy and national security:* Sugar can be a solution to the cost-of-living pressures faced by many Australians. Increased investment in the cogeneration of renewable electricity from sugar byproducts has the potential to reduce wholesale electricity market prices by 10-15% from the base case in Queensland starting in 2029 (when investments will be fully operational). However, the business case for these investments is on the margins of viability, and unlikely to go ahead without government incentives.

Energy and national security have become intertwined, as pressing national priorities meet with an uncertain geopolitical environment. As the AdBlue shortages demonstrated, Australia is overly reliant on international fuel supply chains. Promoting sovereign energy capabilities through low carbon liquid fuels production will reduce reliance on unstable international fuel supply chains, ensuring strategic autonomy. The colocation of the sugar industry and Australia's Defence capabilities in North Queensland, provides an opportunity for an affordable, reliable and indigenous biofuels supply chain to underpin our national security.

The tables below demonstrate that diversification in the sugar industry is possible with the aid of supportive government policies, as shown in Brazil and Thailand. The Australian sugar industry has become less diverse, concentrating risk and missing bioeconomy and renewable energy production opportunities and benefits. We do not wish to see this trend continue.





- *Ensuring a successful Northern Australia and Future Made in Australia agenda through a strong sugar manufacturing sector:* The sugar manufacturing sector has long been an economic development driver for North Queensland and provides significant manufacturing capabilities throughout Queensland and Northern NSW. A successful Northern Australia and Future Made in Australia agenda must leverage the core economic capabilities that the sugar manufacturing sector provides.

  Sugar manufacturing has a bright future if we maintain our international competitiveness, and our processes can underpin new opportunities in bioenergy and bioproducts.

- *Overcoming the split incentives challenge with investments in the supply chain*: While the costs of potential commercial investments are fully borne by the sector, many of the resulting benefits occur outside the sector. This misalignment undermines the business case for such investments, even when they demonstrate a positive cost-benefit outcome. As an example, the significant benefits from investments in cane rail including better road safety outcomes, reduced congestion and reduced maintenance of regional road networks, does not provide a financial benefit to sugar manufacturers.

Recommendations

The ASMC is seeking $44.25 million over four years to ensure a strong, viable and sustainable sugar industry. This can allow us to be a solution to the further economic development of Northern Australia through the continuation of a sustainable regional manufacturing capability. It will also allow us to be a solution to an affordable and reliable energy transition and contribute to Australia's fuel and national security.

2. Summary of recommendations

The recommendations throughout this submission can be summarised as follows:

Industry diversification, energy, and national security

1. The establishment of a National Bioenergy Feedstock Strategy ($500,000 over four years): A Future Made in Australia starts with feedstocks grown and processed in Australia. To ensure we have a truly indigenous low carbon liquid fuel capability in Australia, the Federal Government must invest in scoping the availability and accessibility of feedstocks for bioenergy, identify the highest economic value for the feedstock (food, fuel or fibre), map out enabling freight and supply chain infrastructure, and identify any policy regulatory enablers or challenges.

   It is recommended that a bioenergy feedstock working group is established to guide the strategy and can report into existing government forums including the Jet Zero Council.

2. Government incentives that recognise the energy market benefits of sugar cogeneration capacity expansion: Sugar manufacturers can provide base-load renewable electricity capacity through the cogeneration of electricity using byproducts such as bagasse. Industry has an installed capacity of approximately 340MW, and with an energy and boiler efficiency upgrade agenda, this can be increased to close to 1 gigawatt.

   Initial modelling suggests that the expansion of cogeneration capacity is likely to reduce wholesale electricity prices in Queensland by 10-15% from the base-case in the next 5-10 years. The challenge is that the business case for expanded capacity on current market payments is marginal for mills, particularly with the cessation of the Large-scale Generation Certificates (LGC) program, requiring the creation of tailored government incentives.

3. Government-sector collaboration on synergistic opportunities between sugar and Australian Defence ($300,000 over four years): There are significant opportunities in North Queensland between Australian Defence capabilities and the sugar industry, both from a national security (ensuring security of fuel supply for our Defence capabilities) and economic (use of common supply chain infrastructure) perspective. These opportunities must be scoped and captured.

   The sugar industry provides the opportunity for an indigenous biodiesel capacity that can help fuel our defence assets in Northern Australia, providing our forces with a secure fuel supply chain.

From an economic perspective, there are synergistic freight and supply chain infrastructure that can optimise outcomes for both sectors, and these must be identified and implemented.

Overcoming the split incentives challenge with investments in the supply chain

4. Establishment of a Cane Rail Strategy and fund ($30 million over four years): The ASMC seeks $30 million from the Federal Government to go towards the $60 million Cane Rail Strategy to make much needed upgrades to infrastructure including rail bridges and level crossings. The funds will go towards projects, via a competitive tendering process, that provide the highest productivity gains for the sugar industry and highest public benefits through improved safety outcomes and reduced road maintenance.

   The recently announced federal funding package to improve safety on Queensland's Bruce Highway presents an opportunity to remove thirteen level crossings across regional Queensland, including those that intersect the Highway, while reducing costs and minimising highway downtime by completing multiple projects simultaneously. This approach would take advantage of the existing workforce and lane closures, increasing efficiency.

   With over 4,000 kms of rail used to transport sugarcane in Queensland, at-grade crossings pose significant safety risks and operational inefficiencies. Grade separations would not only enhance safety for road users but also improve the reliability of sugarcane logistics, supporting just-in-time harvesting and processing schedules critical to the industry's economic viability. Upgrading these crossings aligns with broader infrastructure goals to support regional industries and reduce supply chain bottlenecks, along with the national level crossing safety strategy.

5. Addressing supply chain pinch points in the harvesting sector (<$10 million over four years): One of the biggest immediate challenges facing the sugar supply chain is the lack of availability of contract harvesters. Simply put – without harvesters we cannot get the cane to the mills for processing.

   An aging workforce has meant many in the sector are reaching retirement age, while business owners are opting out of renewing equipment noting the costs can now be counted in the millions. The Government could provide instant asset write-off benefits to the sector for the purchase of harvesting equipment, to stimulate the growth and retention of harvesting sector businesses in the sugar supply chain.

Ensuring a successful Northern Australia and Future Made in Australia agenda through a strong sugar manufacturing sector

6. Promoting the Australian Sugar Sustainability Framework ($450,000 over four years): Ensuring our sustainable practices are recognised in the markets we operate will no longer be a 'nice-to-have' but a future requirement for market access and demanded by customers. The sugar industry is working with Sugar Research Australia to finalise an Australian Sugar Sustainability Framework. Once complete, the Australian Government and industry must work together to promote the benefits and acceptance of this framework in international markets and jurisdictions with large buyers, and in international standards that go beyond sugar, including those for low carbon liquid fuel.

   The proposed funding for promotion will provide the resources to ensure the wholesale acceptance of the Framework that will allow us to grow our $2.4 billion of annual exports.

7. Establishing the Sugar Skills and Career Start Program ($1.25 million over four years): A strong sugar industry starts with skilled workers – The Sugar Skills and Career Start Program will create pathways for those who may be under-represented in our industry, such as young people and women, as well as identifying and creating skills pathways to fill critical shortages, including the utilisation of skilled visa pathways. This approach will provide regional communities with access to jobs that support their prosperity, while also enabling the sugar industry to address critical workforce shortages that threaten the effectiveness of the entire supply chain.

   The ASMC is seeking $1.25 million over four years for this program.

8. Funding for the Centre of Excellence for Advanced Sugar Manufacturing ($1.75 million over four years): Sugar manufacturing is evolving into a high-tech, 21st-century industry that must optimise limited feedstock to produce not only sugar but also a diverse range of products, including fertilisers, molasses, bioplastics, biofuels, biomethane, and electricity. Our sector needs an R&D agenda to match this ambition.

   The ASMC is seeking $1.75 million over four years to establish the $12 million Centre of Excellence for Advanced Sugar Manufacturing.

3. Recommendations

Recommendation One: Establishment of a National Bioenergy Feedstock Strategy.

By establishing a National Feedstock Strategy, the Government can advance Australia's sustainable energy goals and ensure long-term energy security while also creating opportunities for growth among our agricultural and manufacturing sectors.

Australia has great opportunities in the production and use of renewable feedstocks, with agricultural resources and a growing focus on reducing carbon emissions. A strategic approach to feedstock management is essential to maximising these resources, optimising supply chains, and driving innovation.

A key problem exists in the current approach to feedstock use for low carbon fuels in particular – Australian feedstocks are not being used, which makes the promise of a 'Future Made in Australia' misleading, when in fact it is a 'Future Made Abroad'.

The state of play in Australia

The biofuel industry for SAF is taking off in Australia[5], but we've seen this all before. Several biodiesel plants built in the early 2000s are no longer operating. Their closure was the result of lower-cost imports monopolising the Cleaner Fuels Grant Scheme, increasing feedstock prices and inconsistent product quality.[6] Without a strategy for using domestic feedstocks, we will see biofuel projects relying on imports.

In terms of capacity, Australian biorefineries have the potential to produce 440 million litres per year, but most crops are allocated for food consumption.[7] With restrictive land use changes in Australia, particularly away from agriculture and towards residential and industrial zoning, food insecurity is expected to worsen.[8] Key questions remain around affordability and sustainability, as well as competition for feedstocks and economically efficient scales of production.[9]

Australia *could* play a key role, both as a source of feedstocks and as a SAF producer, with Australia already producing significant quantities of feedstocks exported for biofuel production. The country is well-positioned to expand this into a diversified portfolio of feedstock sources.[10]

High competition for other uses restricts allocation of feedstocks to SAF production. High international activity leads to feedstocks being exported, leaving little available

[5] Australian Trade and Investment Commission – Ampol, GrainCorp and IMF explore Australia's renewable fuels industry <https://international.austrade.gov.au/en/news-and-analysis/news/ampol-graincorp-and-ifm-explore-australias-renewable-fuels-industry>.
[6] ARENA & CEFC, 'Biofuels and Transport: An Australian opportunity' (2019) 17.
[7] Taheri *et al*, 'Modeling sustainable bioethanol supply chain in Australia: A system dynamics approach' (2024) 227 *Renewable Energy* 120481.
[8] Nonhotel *et al*, 'Renewable energy and food supply: will there be enough land?' (2005) 9 *Renewable and Sustainable Energy Review* 191.
[9] https://www.csiro.au/safroadmap
[10] https://www.csiro.au/safroadmap

for domestic use. This means that the government must use economic incentives to encourage feedstock producers to sell their product to local SAF producers in large numbers.[11]

Australia's current production and export volumes in oilseeds and sugars means that local feedstocks are being overlooked as companies secure feedstocks from international sources. According to Volza's Australia Import data, Australia imported 150 shipments of Ethanol during Feb 2023 to Jan 2024. These imports were supplied by 49 foreign exporters to 6 Australian buyers, marking a growth rate of 22% compared to the preceding twelve months. Within this period, in Jan 2024 alone, Australia imported 19 Ethanol shipments. This marks a year-on-year growth of 58% compared to Jan 2023, and a 19% sequential increase from Dec 2024.[12] As the graphics on page 5 demonstrate, the Australian sugar industry has become less diverse, missing renewable energy production opportunities. We do not want to see these numbers increase for the import of ethanol for the purpose of producing low carbon liquid fuels.

Australia imports most of its Ethanol from United States, India, and United Kingdom. This looks like a Future Made Abroad, rather than a Future Made in Australia.

Feedstock production and collection depend heavily on regional areas to construct and manage both supporting infrastructure, and supply chains, for biogenic SAF and synthetic fuels.[13] Without this, Australian feedstocks will be overlooked, making any promises of economic benefits in Australia inaccurate.

Low local ethanol production could limit early deployment of plants or force reliance on imported ethanol in the shorter term. New ethanol production comes with challenges such as high capital investment requirements and higher labour and energy costs than competing countries. To mitigate investment risk, strong local demand signals would be needed.[14]

The Australian sugar industry is an attractive option for SAF production in the immediate to medium term if sugar and bagasse can be liberated from current uses.[15] The EU intends to increase the use of biofuels and phase out the use of palm oil as a biofuel feedstock. This will increase the overall demand for biofuel feedstock, particularly feedstocks such as canola.[16] More than half of Australia's canola crop is exported to the European Union. At least 60% of that amount is used in biodiesel production. This ownership of the raw feedstocks means Australia is already well positioned to sell domestically if a domestic renewable fuel industry can be created.

All this sounds very positive, but SAF is being created NOW and Australian feedstocks are not being used, despite their potential.

[11] CSIRO, 'Sustainable Aviation Fuel Roadmap' (2023) 33.
[12] https://www.volza.com/p/ethanol/import/import-in-australia/.
[13] CSIRO, 'Sustainable Aviation Fuel Roadmap' (2023) 13.
[14] CSIRO, 'Sustainable Aviation Fuel Roadmap' (2023) 79.
[15] CSIRO, 'Sustainable Aviation Fuel Roadmap' (2023) 81.
[16] Department of Agriculture, Fisheries and Forestry – Snapshot – World biofuels trade (Dec 2022) <https://www.agriculture.gov.au/about/news/snapshot-world-biofuels-dec-22>.

The Australian transport sector's dependence on crude oil and fuel imports has grown from around 60 per cent in 2000 to more than 90 per cent today.[17] Without intervention this will not change.

Reliance on international feedstocks circumvent Australian jobs, economic benefits, and sovereign fuel production. Even proposed Australian biofuels plants are constructed modularly off-shore and assembled in Australia, raising the question of exactly how much Australians are benefiting from new economic activity and jobs creation.

A National Bioenergy Feedstock Strategy is critical to ensure that the future is actually made in Australia.

The proposed Strategy should aim to:

- Identify and secure sustainable feedstock sources across key sectors.
- Make recommendations for robust supply chains to facilitate the efficient and cost-effective production of renewable fuels.
- Identify opportunities to enhance R&D in feedstock processing technologies to improve yield and reduce waste.
- Support regulatory frameworks that encourage investment and market development in the feedstock sector.

Funding for the strategy will be directed towards:

- Feasibility studies and market analysis to assess the potential of various feedstock sources and identify key opportunities for investment.
- Supply chain infrastructure analysis to identify opportunities to enhance logistics, storage, and transportation capabilities.
- Engagement and advocacy to collaborate with all stakeholders.

Budget request

The ASMC seeks $500,000 over four years to ensure we have a truly indigenous low carbon liquid fuel capability in Australia. Investment in scoping the availability and accessibility of feedstocks for bioenergy, identifying the highest economic value for the feedstock, mapping out enabling freight and supply chain infrastructure, and identifying any policy and regulatory enablers or challenges is essential for us to achieve this.

[17] ARENA & CEFC, 'Biofuels and Transport: An Australian opportunity' (2019) 5.

Recommendation Two: The Government to work with sugar manufacturing sector to capture the energy market savings cogeneration creates and recognise the benefits in government schemes.

The ASMC and the Queensland Department of State Development, Infrastructure and Planning have funded a study to explore the potential for increased production of bioenergy within the sugar manufacturing sector through better utilisation of bagasse (a fibrous byproduct from the crushing of cane). The study will be finalised and released in April 2025.

Preliminary findings of the study suggest that investments in sugar manufacturing electricity cogeneration capacity can reduce wholesale electricity generation prices by more than 10% between 2029-2035 from the base case (i.e. no increased cogeneration capacity increase).

While there is significant public benefit to this investment, the viability of these investments for the sector is marginal at best (payback significantly above ten-years), particularly noting that cogeneration does not qualify for various capacity investment schemes, and the Large-Scale Renewable Energy Target (LRET) incentives will cease as of 2030.

There is an opportunity to put downward pressure on Queensland and Australian electricity prices with modest investments and incentives that encourage manufacturing sector investment in cogeneration capacity.

Overview of the study

Preliminary findings of the study (to be finalised and released by April 2025) include:

- Electricity cogeneration capacity can be increased from around 340 megawatt of capacity (equivalent of powering 135,000 homes) to approximately one gigawatt of synchronous baseload renewable electricity (around 300,000 homes).
- The study's modelling suggests that under certain scenarios, such investments would create $13.7 billion in benefits to 2050. While long-term cost-benefit analysis can be inaccurate, most of these benefits will be realised by 2035 ($9.5 billion), increasing the certainty of the modelling.
- The emissions reduction from the investments would be 700,000 tonnes of CO^2 per year (1.5% of Queensland total expected emissions in 2035).

These benefits will be created as cogeneration is a renewable baseload synchronous source of electricity, and it will displace significant amounts of gas peaking and grid scale battery storage capacity, that exponentially increase the cost of generation when supply falls short of demand.

Base-load renewable energy contribution

Bagasse-generated electricity plays a critical role in Australia's renewable energy landscape as a source of **base-load renewable energy**. Unlike intermittent sources such as solar and wind, bagasse-based power can provide consistent and reliable electricity during operational periods, aligning with sugar mill production cycles. This reliability addresses key challenges associated with renewable energy integration, including grid stability and demand-supply balance.

Impending phase-out of Large-Scale Generation Certificates (LGCs)

Noting the impending phasing out of the LRET and the associated Large-scale Generation Certificates (LGCs), the Government should allocate funding to develop and implement a replacement scheme that can capture the benefits of synchronous baseload renewable electricity generation. This could include mechanisms such as:

- A tailored subsidy or credit system for base-load renewables.
- A contract for difference with sugar milling cogeneration.
- Investment grants for operational efficiency and technology upgrades.
- A transitional framework to minimise disruption during the phase-out period.

The ASMC urges the Australian Government to recognise the significant opportunities that cogeneration presents for the sugar industry, regional communities, and power prices.

Recommendation Three: Realising the synergies between Australian Defence capabilities and the sugar industry in Northern Australia.

The ASMC wants to develop a systems approach to evaluate the economic, environmental, and strategic impacts of using sugar-derived fuels (such as ethanol or biofuels) in enhancing national security and supporting energy independence for Defence operations in Northern Australia.

Energy and fuel security in Northern Australia is crucial for a variety of national security, defence, and economic reasons. The region holds significant strategic importance due to its proximity to key international shipping routes and its role in Australia's defence posture, particularly in relation to the Indo-Pacific region.

In this context, energy and fuel security are not just issues of supply and demand but are deeply interlinked with Australia's defence capabilities, military readiness, and broader geopolitical positioning. The Australian Government and the Department of Defence have developed policies and strategies to ensure that energy and fuel resources are reliable and resilient in the face of regional and global uncertainties.

Defence hopes to collaborate with industry, government and coalition allies to activate and scale up Australia's sovereign energy production capability.[18] Partnerships across all domains are needed to drive coordinated action, and we believe that alignment with the sugar industry can help ensure strategic and operational needs are sustainably met. The 2024 ADF Fuel Symposium made specific mention of north and north-west Australia, requiring enough inventory of fuel and sufficient distribution capacity. Defence's work to accelerate the adoption of renewable energy types, starting with lower-carbon liquid fuels, was also mentioned.[19]

The sugar industry has the capacity to be a provider of the Australian Defence Force's biofuels needs in Northern Australia. We have the required feedstock to meet ADF biofuels needs, and due to our geographical colocation and the use of shared infrastructure, developing a common supply chain would be relatively low-cost.

Infrastructure synergies

Northern Australia's unique geographic position and economic activities present a compelling opportunity for strategic collaboration between the ADF and the sugar manufacturing sector. Both sectors are key users of critical maritime infrastructure, particularly around Cairns.

ADF is expanding its northern Australia footprint, including a logistics network of roads, railways, ports and telecommunication networks, predominantly across the north of

[18] Australian Government, Defiance Future Energy Strategy, 2023, 16.

[19] Highlighting the importance of energy resilience (Accessed 5 December 2024) <https://www.defence.gov.au/news-events/news/2024-09-20/highlighting-importance-energy-resilience>.

Australia.[20] The ADF will be better equipped to defend Australia's north thanks to $14-$18 billion in funding for resilient bases under the 2024 Integrated Investment Program.[21]

The sugar manufacturing sector relies heavily on maritime facilities for the export of raw sugar. Similarly, Defence uses these facilities to support naval operations, strategic deployments, and logistics. Similarly, landside infrastructure, including freight routes, can be optimised for the benefit of both sectors, improving the viability of government investment into such projects.

This shared reliance creates a unique synergy, where investments in maritime and landside infrastructure can deliver mutual benefits.

Opportunities for collaboration

1. Infrastructure upgrades: Funding for upgrades to ports, docking facilities, and associated transport networks that can enhance the efficiency and capacity of maritime operations for both Defence and the sugar industry.
2. Supply chain resilience: Enhancing shared infrastructure can improve supply chain reliability for sugar exports, including landside movements, while ensuring Defence has robust logistical support for operations in the region, particularly given the growing strategic importance of Northern Australia.
3. Energy and sustainability: The sugar industry's development of bioenergy solutions, such as cogeneration and biofuels, could provide sustainable energy sources for Defence operations in the region. Establishing a local biofuel supply chain would enhance energy security for Defence while supporting the sugar sector's diversification goals.

Budget request

The ASMC seeks $300,000 over four years for assessment and modelling of a systems approach to the use of sugar-based fuel and energy solutions for security of supply for Defence outfits in North Australia, and opportunities to improve landside and maritime infrastructure for the benefit of the sugar and defence sectors.

[20] Australian Government, National Defence Strategy, 2024, 29.

[21] Resilient bases to shore up the north (Accessed 5 December 2024) <https://www.defence.gov.au/news-events/news/2024-04-24/resilient-bases-shore-north>.

Recommendation Four: Establishment of the Cane Rail Strategy and Fund.

The cane railway system plays a critical role in ensuring the efficient transportation of harvested sugarcane from farms to mills. This system is an integral part of the industry's operations.

The network spans approximately 4,000 kilometres across Queensland and is uniquely designed to connect sugarcane farms to mills. The network allows for the swift and large-scale transport of cane, which is crucial given the perishable nature of the crop. Delays in transportation can reduce the sugar content of the cane, directly impacting the yield and economic return for growers and mills.

The ASMC seeks to reduce 25,000 truck movements annually by improving rail infrastructure, while contributing to Net Zero objectives. We want to enhance road safety and reduce maintenance costs by shifting freight to rail and address increased costs of maintaining infrastructure due to extreme weather events. We are committed to the safety of everyone at the intersection of road and rail and by upgrading level crossings and bypassing high-traffic towns we can further this vision.

Economic impact

The system supports local economies by ensuring the efficient flow of cane during the critical crushing season. This reliability underpins the economic viability of sugar mills, which are major employers and contributors to regional economies in Queensland. Maintaining and upgrading this infrastructure will also ensure the industry can adapt to future needs, including increased diversification into bioenergy.

Despite its critical role, the cane railway system requires continuous investment in maintenance and modernisation to meet evolving demands. Innovations in rail technology, digital tracking systems, and integration with other transport modes could further enhance its efficiency and reliability.

The replacement cost of the network exceeds $2.5 billion, and the cost of maintaining this network has been placed solely on sugar mills. Particularly with the increasing incidence of extreme weather events washing out infrastructure, this burden is becoming a significant challenge for the sector and may necessitate the use of road freight on already congested and strained regional Queensland roads.

The proposed Bruce Highway upgrades and the opportunity for grade separation of level crossings

The recently announced federal funding package to improve safety on Queensland's Bruce Highway presents an opportunity to reduce costs and minimise highway downtime by completing multiple projects at the same time. This approach would take advantage of the existing workforce and lane closures, increasing efficiency.

With over 4,000 kms of rail used to transport sugarcane in Queensland, at-grade crossings pose significant safety risks and operational inefficiencies. Grade separations would not only enhance safety for road users but also improve the reliability of sugarcane logistics,

supporting just-in-time harvesting and processing schedules critical to the industry's economic viability. Upgrading these crossings aligns with broader infrastructure goals to support regional industries and reduce supply chain bottlenecks, along with the national level crossing safety strategy.

Key projects

Key projects could include:

- Relocating cane railway infrastructure from the township of Ingham, eliminating 12 road/rail level crossings through the township by re-routing the delivery of 2.2 million tonnes of cane to the Victoria Sugar mill annually.
- Eliminating a level crossing on the Bruce Highway north of Mackay and replacing it with an underpass at Church Hill, thereby avoiding up to 100 minutes a day of road highway closures during the annual crushing season and increasing safety.
- Upgrade and reinforcement of rail bridges that create vital links on the cane rail network.

Budget request

The ASMC seeks $30 million from the Federal Government to go towards the $60 million Cane Rail Strategy to make much needed upgrades to infrastructure including rail bridges and level crossings.

As a first step we are seeking $1.2 million for prefeasibility studies on infrastructure bottlenecks that would yield the highest efficiency and productivity outcomes for the sugar supply chain.

The funds will go towards projects, via a competitive tendering process, that provide the highest productivity gains for the sugar industry and highest public benefits through things like safety outcomes and reduced road maintenance.

Recommendation Five: Removing supply chain bottleneck caused by the decline of the sugar harvesting sector.

The ASMC requests Federal Government support to address critical challenges in the harvesting sector, which is at risk of being unable to operate effectively.

The harvesting sector is the first critical link in the sugar supply chain. Disruptions in harvesting lead to delays in milling, reduced sugar quality, and diminished export reliability, impacting producers, processors, exporters, and consumers globally.

The harvesting sector has been in decline due to an aging ownership and workforce profile, and the exponential growth in the cost of harvesting equipment since COVID, with equipment for a viable harvesting operation exceeding $2 million.

As owners of these businesses retire, or their equipment comes to the end of their useful life, they are simply exiting the market. It is now one of the sugar industry's most pressing short-term challenge.

Government potential to encourage more efficient and environmentally friendly machinery

Voucher incentive program

The higher upfront price of new machinery is a key barrier to their take up. This aligns with international experience. A US non-profit that accelerates clean transport, CALSTART, has reported that—

> *High incremental cost is cited by fleet purchases as the prime barrier preventing clean vehicle purchases. Incentives for the purchase of medium-and heavy-duty commercial vehicles are needed to help create a robust, sustainable market.*[22]

Globally, a range of purchase price incentives now exist, such as CALSTART's voucher incentive program (VIP) model. Under this model, the Government provides a voucher to reduce the incremental cost between a conventionally fuelled vehicle and a ZLEV. Dealer networks help fleets navigate the voucher incentive program process and take on the financial responsibility of completing voucher redemptions.

Under this model, purchasers see a lower purchase cost. Dealers receive the full price for the vehicles and the program makes up the difference between the original price and the reduced voucher price.

We know that technology will become more cost effective as production scales up. As the cost of the technology falls, the cost of the subsidy will fall also. The ASMC submits that numerous demand-side incentives exist for the government to support the industry.

[22] CALSTART, Voucher incentive programs: a tool for clean commercial vehicle deployment, July 2019.

Instant asset write-off

This approach would allow harvesting businesses and grower owned harvesting groups to invest in capital assets and immediately deduct the cost in the year of purchase, rather than depreciating them over many years. This would allay one of the biggest barriers to investing in harvesting capacity, a lack of cashflow.

The instant asset write-off also incentivises them to invest in more efficient, modern harvesters that enhance productivity and reduce operating costs.

We recommend capping the instant depreciation amount at $500,000. This would provide businesses with an immediate financial benefit of $100,000 to $200,000, enabling them to invest in new machinery while maintaining operations. The cost to the Government would be limited to the difference in value between immediate depreciation and depreciation spread over a 12-year period.

Budget request

The ASMC requests an allocation of <$10 million over four years to solve one of the biggest challenges facing the sugar supply chain. The Government could provide instant asset write-off benefits, or any number of demand-side incentives, to the sector for the purchase of harvesting equipment, to stimulate the growth and retention of harvesting sector businesses in the sugar supply chain.

Recommendation Six: Promoting the Australian Sugar Sustainability Framework to the world.

The Australian sugar industry is developing and committed to delivering a comprehensive sustainability framework to promote and guarantee our sustainable practices in international markets. This framework aligns with the growing global trend toward higher sustainability standards, driven by increasing consumer, regulatory, and industry demands. Federal support is essential to ensure the successful promotion and acceptance of this framework among international customers, safeguarding market access and enhancing Australia's reputation as a leader in sustainable agriculture.

Context and rationale

- Markets worldwide are progressively embedding higher sustainability requirements into trade policies and purchasing decisions.
- The European Union's Corporate Sustainability Due Diligence Directive (CSDDD) mandates stringent sustainability standards across supply chains.[23]
- Key customers in Asia and North America are incorporating sustainability metrics into their procurement criteria.[24]

Opportunities for Australian leadership

Proactively promoting a credible and scientifically backed sustainability framework positions Australian sugar as a global leader. This enhances customer confidence, ensures continued access to markets, and ensures sugar is positively positioned for any future free trade agreements.

Without an internationally recognised sustainability framework, the Australian sugar industry risks being excluded from key markets. Such outcomes could arise from perceived non-compliance or an inability to meet evolving standards that prioritise carbon neutrality, biodiversity conservation, and social equity.

[23] The Corporate Sustainability Due Diligence Directive (the Directive) sets out a corporate due diligence duty for large companies to identify and address adverse human rights impacts (such as child labour) and environmental impacts (such as pollution) in their own operations, those of their subsidiaries and in their "chain(s) of activities". In addition, the Directive sets out an obligation for large companies to adopt and put into effect a transition plan for climate change mitigation which aims to ensure, through best efforts, that the business model and strategy of the company are compatible with the transition to a sustainable economy and with the limiting of global warming to 1,5° C in line with the Paris Agreement and the objective of achieving climate neutrality as established in Regulation (EU) 2021/1119, including its intermediate and 2050 climate neutrality targets.

[24] Bonsucro Strategic Plan 2021-2026, Sustainable Sugarcane Changing for Good <https://bonsucro.com/wp-content/uploads/Bonsucro-2021-26-Strategic-Plan-full.pdf>.

Economic impact

As an industry that exports 85% of its output, trade and market access are critical to our success. Demonstrating strong sustainability outcomes is increasingly becoming a key requirement for maintaining and expanding market access.

Similarly, our sustainability performance and credentials will be crucial for diversifying into low-carbon liquid fuels. To succeed, we must demonstrate the low-carbon footprint of biofuels derived from sugar across their entire lifecycle.

Budget request

The ASMC requests allocation of $450,000 over three years to support the sugar industry in promoting its sustainability framework internationally. This investment will:

- Fund targeted marketing, communications and engagement campaigns, including the development of collateral in key export markets to demonstrate the rigor and benefits of the framework.
- Support industry-wide adoption and ensure consistency between industry, sector and corporate reporting to bolster credibility and alignment with international market expectations and requirements.
- Work with government and diplomatic channels to secure recognition of the framework in trade negotiations, ensuring uninterrupted market access.

Recommendation Seven: Funding to establish the Sugar Skills and Career Start Program.

Addressing labour and skills shortages

The sugar industry is experiencing significant labour and skills shortages, a challenge that will become more acute as our workforce ages. Unlike the resources sector, we depend on local communities for our workforce, with many of our skilled, semi-skilled, and unskilled workers coming from these regions.

The Sugar Skills and Career Start Program will be a structured program aimed at attracting and training potential workers, particularly younger people, who can address these gaps, while creating job opportunities for regional communities up and down the Queensland coast.

Program design

The Sugar Skills and Career Start Program would consist of three key components:

- **Education and Training:** Partnerships with local educational institutions and training providers to offer specialised programs in sugar milling, agricultural engineering, farming practices, and supply chain logistics.
- **Career Pathway and Support:** Ongoing career support and development opportunities to ensure program participants are supported throughout their employment journey, including post-graduation job placement assistance and career coaching.
- **Skilled migration:** A considered approach to skilled migration, identifying gaps that the domestic labour markets cannot fill and creating expedited pathways to fill those gaps.

Budget request

The ASMC is seeking $1.25 million over four years to establish this program and the underlying skills and workforce strategy.

Recommendation Eight: Funding for the establishment of the Centre of Excellence for Advanced Sugar Manufacturing.

Sugar manufacturing is transforming into a high-tech 21st century sector that needs to optimise the use of limited feedstock to not only create sugar, but products as diverse as fertilisers, molasses, bioplastics, biofuels and electricity. Our sector needs an R&D agenda to match this ambition. The ASMC is seeking allocation of $1.75 million over four years from the Government to establish the $12 million Centre of Excellence for Advanced Sugar Manufacturing, with the remaining funds coming from industry levies and co-contributions.

The Centre will play a crucial role in leveraging technologies like automation and AI, and promote world-class efficiency, sustainability, and product quality in sugar manufacturing. It will also develop the researchers and expertise the sugar industry needs to be able to chart a viable pathway well into the future.

Specifically, the sugar manufacturing industry will:

- Bring new technologies to life: We'll support the practical application of new technologies in sugar manufacturing and develop the skills needed to use them. This includes scaling up promising new technologies to generate commercial income.
- Connect researchers and industry: By bringing together industry partners and researchers, we can fast-track the adoption of advanced manufacturing and bioprocessing technologies.
- Unlock the full potential of sugarcane: Our goal is to maximise the value of sugarcane by producing both sugar and a range of other products using world-class manufacturing processes

Ongoing funding for the Centre will come from levies collected by Sugar Research Australia and industry funding, with an existing industry-owned fund of up to $5 million to be leveraged for collaborative R&D.

Budget request

The ASMC is seeking $1.75 million from the Federal Government as seed funding to establish the Centre.