AUSTRALIAN SUGAR MANUFACTURERS

2026 – 2027 AUSTRALIAN GOVERNMENT PRE-BUDGET SUBMISSION AUSTRALIAN SUGAR MANUFACTURERS (ASM) - 30 JANUARY 2026

TABLE OF CONTENTS

EXECUTIVE SUMMARY page 2

THE CHALLENGE: SECURING THE LONG-TERM VIABILITY OF SUGAR MANUFACTURING NATIONALLY page 3

SUMMARY OF RECOMMENDATIONS page 6

ESTABLISHING A BIOFUELS & BIOENERGY INDUSTRY IN AUSTRALIA page 7

GOVERNMENT POLICY AND INVESTMENT NEEDED TO SUPPORT MANUFACTURING page 8

SECURING THE INDUSTRY'S FUTURE & ESTABLISHING BIOFUELS CAPABILITY page 11

BIOENERGY THROUGH COGENERATION OF ELECTRICITY page 16

BIOMANUFACTURING page 20

SUGARCANE SUPPLY page 22

CONCLUSION page 24

APPENDIX 1 & 2 page 25 / 26

AUSTRALIAN SUGAR MANUFACTURERS

EXECUTIVE SUMMARY

ABOUT AUSTRALIAN SUGAR MANUFACTURERS

Australian Sugar Manufacturers (ASM) is the peak industry body representing the nation's sugar manufacturing sector, contributing $4.4 billion annually to the Australian economy and supporting more than 20,000 jobs in regional communities. ASM works closely with its members, industry stakeholders, and government to develop and advocate for policies that enhance the sustainability, competitiveness, and long-term economic contribution of the sugar manufacturing sector. From the production of raw sugar, bio-based manufacturing and generation of renewable energy, the sugar manufacturing sector continues to support communities, create jobs, and foster a sustainable future for the industry, and the broader economy.

SUGAR INDUSTRY'S IMPORTANCE TO AUSTRALIA'S ECONOMY

The Australian sugar industry is a foundational economic asset which underpins and contributes to Australia's sovereign capability in food, fuel and energy sectors. As Queensland's second largest agricultural export, the sugar industry supports more than 20,000 jobs across regional Queensland and represents an integrated manufacturing, transport and logistics system with a replacement value exceeding $20 billion. In an increasingly volatile global trade and geopolitical environment, the strategic value of this capability to Australia's economic resilience and national security cannot be overstated. Noting global geopolitical and economic shifts towards supporting and growing domestic industrial bases, further investment is needed from governments to fully leverage the sugar industry's full economic and industrial opportunities.

Whilst the industry produces up to four million tonnes of sugar annually, placing Australia among the world's largest sugar exporters, the sectors broader industrial potential is lagging. The Australian sugar industry is one of the few regionally located manufacturing sectors which can provide a variety of products across food, fuel, energy and biomanufacturing. Each year, around 30 million tonnes of sugarcane yield approximately nine million tonnes of bagasse, comparable volumes of tops and trash, significant quantities of molasses, and cane juice. Collectively, these agricultural feedstocks provide a compelling and immediate platform for the development of a domestic biofuels, bioenergy and biomanufacturing capability, as well as the production of sugar.

DIVERSIFICATION INTO BIOENERGY, BIOFUELS & BIOMANUFACTURING

The bioeconomy represents a national opportunity for the sugar industry. This agenda is a diversification opportunity first and foremost that can sit alongside and underpin the viability of sugar production in Australia. Through diversification, the sugar industry can deliver:

- Low carbon liquid fuels, and as an example, has the potential to supply more than 30% of Australia's domestic aviation fuel supply[1].
- Up to 835 MW of firm, baseload renewable electricity[2] through cogeneration, equivalent to the capacity provided by the Callide B power plant in Queensland – one of the major power generators in the state[3].
- Expanded biogas and renewable energy production to support national energy security.
- Pelletised bagasse, capable of supporting multiple energy and fuel pathways, including the greening of metal smelting processes.
- The establishment of regional bioenergy precincts which leverage existing sugar infrastructure to aggregate additional agricultural and forestry residues.
- The establishment of a biomanufacturing capability underpinned by the sugar industry, including the production of alternative proteins and nutraceuticals.

Sugar-derived feedstocks can also underpin the liquid fuel security of the Australian Defence Force (ADF), with the geographic proximity of the sugar industry and ADF assets providing for a cost effective and reliable low carbon liquid fuel supply chain.

THE CHALLENGE: SECURING THE LONG-TERM VIABILITY OF SUGAR MANUFACTURING NATIONALLY

Despite this potential, Australia's sugar manufacturing sector faces mounting structural and global challenges. Domestic production costs have increased significantly faster than CPI, while global sugar prices remain artificially supressed by extensive subsidies provided by competitor nations including Brazil and India. At the same time, the Australian sugar industry faces significant market access barriers in jurisdictions such as the European Union and the United States of America. Unlike other strategically important manufacturing sectors, like smelting and forestry, sugar has not benefited from a coherent, long term policy response by governments nationally.

Under a business-as-usual trajectory, more mill closures cannot be ruled out, with further severe and irreversible consequences for regional communities, workers, canegrowers and Australia's sovereign manufacturing capabilities. Diversification into biofuels, bioenergy and biomanufacturing is therefore not optional, it is essential to the long-term viability of the Australian sugar industry and to the economic future of the regions in which it functionally operates within.

The diversification of the sugar industry nationally also coincides with the Australian Government's priorities on energy security, emissions reductions, regional development and

[1] CSIRO (2023), Sustainable Aviation Fuel Roadmap, at URL: https://www.csiro.au/-/media/Energy/Sustainable-Aviation-Fuel/Sustainable-Aviation-Fuel-Roadmap.pdf

[2] ASM (2025), Bioenergy Fund Project – Electricity Cogeneration in the Sugar Industry

[3] A typical Queensland home uses between 5000-5500 KWh of electricity per annum (see AEMO at URL: https://www.aemc.gov.au/sites/default/files/2021-11/se_qld_fact_pack.pdf) . According to the ASM (2025) Bioenergy Fund Project, the sugar manufacturing sector has the potential to create 2.6TWh of electricity per annum in total. This quantum of electricity is equivalent to approximately powering 500,000 Queensland homes annually.

the transition to net-zero. However, these opportunities cannot be realised through market forces alone.

The scale of capital investment required, combined with policy uncertainty and immature markets, creates risk profiles that are untenable for investors without constructive government partnership with industry. Large feasibility and project development costs have further limited the pipeline of investment ready projects, whilst infrastructure gaps in feedstock aggregation and logistics constrain the ability to scale.

With respect to cogeneration of electricity, energy market settings continue to undervalue the baseload nature of sugar-based cogeneration, essentially disincentivising a source of electricity generation that is both renewable and baseload. Noting the Federal Government's net zero priorities, it would be a perverse outcome if the sugar industry's electricity needs is met by switching to more carbon intensive sources, yet market payments and incentives are pushing us in that direction.

The Australian Government must recognise that there has been a paradigm shift from governments around the world with respect to securing sovereign industrial capabilities. International experience must also be further recognised and studied as to how other nations treat sugar and biofuels as strategic sovereign capabilities, deploying targeted subsidies and market protections, with long-term stability and policy certainty within the market. A purely market led approach will fail in the face of cheaper incumbent fuels and heavily subsidised global competitors.

An area where Australian governments can align our adherence to free market principles and sovereign capability development, is investment in industry R&D. The sugar industry's research and developmental framework is not sufficiently resourced or structured to support both core sugar production opportunities and to support the development of an emerging bioeconomy. There is a significant role for government investment into this R&D agenda.

BARRIERS TO THE IMPLEMENTATION OF A DIVERSIFICATION AGENDA

Key barriers include the following:

- **Significant capital costs & market uncertainty:** To capture the biofuels, biogas and bioenergy opportunities at scale will likely need billions in private investment, but many of these markets and supply chains are still developing and maturing face stiff competition by subsidised international competition and are dependent on yet to be developed government policy. Without government co-investment, particularly during the market forming phase, the risks are simply too high for such large-scale investments to proceed.
- **Project readiness:** The same uncertainty means that there are few shovel-ready projects due to high cost of feasibility and final investment decision analysis (2 to 4% of total capital cost) and the lack of any foreseeable market revenue. This may create a perverse situation where Australian demand side incentives create a subsidy for imported biofuels feedstock, such as Brazilian and Indian bioethanol, creating little economic value for Australia.

- **Infrastructure challenges:** Little work has been done around the transport and logistics required for aggregating feedstocks for biofuels, biogas and bioenergy production, creating uncertainty and risk around the commerciality and scalability of these opportunities.
- **Energy market distortions:** The baseload synchronous nature of cogeneration is undervalued and not rewarded by the National Energy Market, stifling investment in utilisation and expansion of cogeneration, and potentially undermining the viability of existing cogeneration capacity.
- **An R&D agenda that is not fit for purpose:** The sugar industry requires government co-funding to ensure the industry R&D agenda can undertake the suite of work. The current sugar industry R&D agenda is not properly resourced or skilled to maintain programs for traditional sugar production as well as addressing the R&D opportunities and challenges that a biofuels and bioenergy supply chain creates. Without addressing these particular barriers, Australia risks missing the opportunity to build a sovereign bioeconomy.
- **Decreasing sugarcane supply:** Reduced supply will decrease availability of biofuels and bioenergy feedstocks, or the sufficient economies of scale to make investment viable. It also puts into question the viability of existing sugar industry infrastructure and facilities that require scale and throughput to viable produce sugar.

THE ROLE OF GOVERNMENT

What is required now is clear, long-term government policy and commitment for further investment in the sector nationally. With the right policies, targeted co-investment and market frameworks, the sugar industry can transition from a highly trade exposed sector, into the cornerstone of Australia's sovereign bioeconomy.

Other governments such as India and Brazil heavily subsidise their sugar industries, treating them as sovereign capabilities to underpin food and liquid fuel security. Conversely, the United States of America and European Union governments erect significant barriers to their sugar markets, while providing market protections and subsidies for biofuels. This leaves the Australian sugar industry highly exposed.

The Australian Government cannot let a regional industrial capability worth over $20 billion go to waste. A free market approach to the development of Australian biofuels and bioenergy industries will not succeed, noting:

- That traditional incumbent fossil fuels are more cost competitive, requiring government intervention to create demand for biofuels; and
- Our inability to compete with highly subsidised global producers, noting the significant investments by overseas governments into developing sovereign capabilities in biofuels and bioenergy

To capture the biofuels and bioenergy opportunities, and to secure the future of the sugar industry, the Australian Government needs to make long-term commitments to the development of biofuels and bioenergy markets in Australia. The sugar industry sees biofuels, biogas and bioenergy as the clear path to sustained viability.

Australian Sugar Manufacturers makes the following recommendations to the Federal Government as part of its 2026-2027 pre-budget submission.

SUMMARY OF RECOMMENDATIONS

Indicative costs for recommendations have been provided over the forward estimates:

1. **Capital grant funding for innovation, energy efficiency & transition ($90m):** A grant program for capital projects should be established to encourage technology adoption within sugar manufacturing, promote energy transition imperatives through facilitating energy efficiency and feedstock liberation, and energy production programs.
2. To ensure that there is a shovel ready pipeline of sugar biofuels and bioenergy projects, the ASM seeks **federal and state government funding towards feasibility and final investment decision studies**. (**$9 million** in total funding by the Federal Government).
3. To create demand for biofuels, the ASM recommends the establishment of **a national biofuels mandate,** with requirements for a portion of the mandate to be filled with local feedstocks, and a strong weighting in preference of low carbon intensity.
4. Noting the significant benefits of cogeneration, explore opportunities for **offtake agreements with sugar manufacturers,** for both existing and new facilities with either fixed or floor pricing**,** in recognition of the benefits of the baseload and renewable nature of the generation.
5. Noting the centrality of the cane rail network for the aggregation of biofuels and bioenergy feedstock, the ASM recommends that:
   -The inclusion of **cane rail in national disaster recovery support** (**$9 million**).
   - Establishment of a **$60 million Cane Rail Fund** to provide co-funding for cane rail upgrades, particularly for bridges and level crossings.
6. Government-industry co-investment towards a **$24 million R&D capability for advanced sugar manufacturing** (**$12 million** funding from Federal Government).
7. **Incentives for increasing cane supply ($10 million):** Cane supply will be a key determinant for a scalable biofuels future. The ASM proposes several initiatives, including:
   - Incentives to convert land back to cane land.
   - Initiatives to secure the future of the harvesting sector.
8. Assist with **access to finance** for sugar manufacturers with a cooperative organisational structure (cooperatives have difficulty in securing access to finance).
9. **Funding for a pre-feasibility for a sugar biofuel supply chain with the Australian Defence Force ($1 million),** noting the colocation of potential production and demand.
10. This agenda could be delivered as a part of an holistic **sugar industry diversification strategy**, similar to the National and Queensland timber industry strategies.

TOTAL COST OF PACKAGE: APPROXIMATELY $182 MILLION

INTRODUCTION: ESTABLISHING A BIOFUELS & BIOENERGY INDUSTRY & SECURING QUEENSLAND'S SECOND LARGEST AGRICULTURAL EXPORT

The sugar industry, Queensland's second largest agricultural export by value, sits at the crossroads of transformation, with significant potential to continue the production of sugar while underpinning Australia's bioenergy and biofuels future. Through leveraging abundant sugarcane feedstock including molasses, bagasse, sugar-derived ethanol and methanol, and other residues for advanced biofuels, biogas and bioenergy, it will provide a pathway to diversify the industry's revenue streams while strengthening rural regional economies across Queensland and NSW.

With appropriate investment and government policies and incentives for biofuels and bioenergy, sugar manufacturers (as an example) could contribute approximately 30% of Australia's domestic aviation fuel demand through sugar derived feedstocks, provide renewable baseload electricity to hundreds of thousands of homes through expanded electricity cogeneration capacity, and provide biogas facilities. This paradigm shift from traditional sugar markets to renewable energy production not only aligns with the Federal Government's net-zero agenda but also enhances national energy security amidst evolving geopolitical risks to liquid fuel supply chains[4].

The integration of bioenergy and biofuel production into the sugar value chain promises tangible economic and environmental benefits for regional communities. By establishing bioenergy precincts around existing sugar processing facilities and utilising Queensland's extensive cane rail network to aggregate feedstocks, stakeholders in the sugar industry could unlock further economic opportunities of scale which improve viability and create new commercial opportunities for growers and processors alike, including the potential to harness grower's tops and trash as a bioenergy feedstock. With nearly 4000km of cane rail infrastructure across Queensland, with the right government support, the sugar industry provides a ready-made and cost-effective solution to the transport and logistics challenges that will face the biofuels and bioenergy industries.

Capturing the following opportunities will require coordinated policy action to address market, regulatory, and infrastructure barriers, as recently identified in the Queensland Parliamentary Inquiry into sugarcane bioenergy. Federal Government investment in biofuels and bioenergy is likely to be supported and amplified by the Queensland Government, noting the Queensland Government's focus on biofuels and bioenergy production via the sugar industry, including funding allocated via the establishment of the $180 million Sovereign Industry Development Fund.

[4] Australian Sugar Manufacturers (ASM) 2025 – Queensland Parliament Inquiry into Bioenergy Media Release: 20251008-_-MR-_-Sugars-Bioenergy-Vision-to-Secure-Industrys-Future.pdf

THE CHALLENGE: GOVERNMENT POLICY AND INVESTMENT NEEDED TO SUPPORT THE MANUFACTURING CAPABILITIES THE SUGAR INDUSTRY PROVIDES

The sugar industry supply chain in Australia provides a viable and efficient pathway for the creation of biofuels, biogas and bioenergy at scale. However, the long-term viability of some sugar manufacturing facilities remains uncertain. Like other trade exposed heavy industries, the cost of doing business in Australia has grown exponentially, while heavy subsidies and government support for our main global competitors, particularly the likes of India and Brazil, remains unchecked as adherence to global trade rules continues to break down.

Nations like India and Brazil do not see the sugar industry as a private commercial endeavour but rather as a centralised sovereign capability that will secure the greater future of their food and fuel security. This means significant boom bust cycles in sugar markets, with prices often going below the cost production. While Brazilian, Indian, US and EU producers are provided government supports and protections, the Australian sugar industry is left exposed.

As of 9 January 2026, the price per pound of sugar has fallen below 15 cents USD[5], below the cost of production for Australian manufacturers and manufacturers around the world. The key difference is that our international competitors around the world are provided supports and market protections to shield them from these challenging conditions.

To put these low prices into context, in 2023 prices peaked at above 25 cents per pound. The highly distorted sugar markets combined with a lack of government support is putting the viability of an Australian industrial capability worth $20 billion at risk, one that has been earmarked as foundational to Australia's low carbon liquid fuel ambitions.

Governments throughout Australia need to acknowledge that countries around the world are investing and protecting their sugar industry as a sovereign capability for food and fuel. The Australian approach to the sugar industry is grounded in a hands-off free market approach, despite free market fundamental being eroded, particularly within sugar markets. This approach will not secure an industrial capability at scale for the production of food and fuel in Australia, jeopardising Australia's ambition towards reindustrialisation through renewable energy.

Similarly, global experience demonstrates the need for long-term government commitment and investment to establish a domestic capability in low-carbon-liquid fuels and bioenergy. Any country currently with a low carbon liquid fuel capability has benefited from significant government investment in supply (whether through production credits or grant funding) and robust biofuels mandates to spur demand.

Sugar manufacturers believe there is a role for government to work with the sugar industry to overcome the following challenges.

[5] QSL Sugar Prices 2025: www.qsl.com.au/sugar-prices

Significant capital costs & market uncertainty
To capture the biofuels, biogas and bioenergy opportunities at scale will likely need billions in private investment, but many of these markets and supply chains are still developing and maturing, face stiff competition by subsidised international competition and are dependent on yet to be developed government policy. As an example, while the Federal Government has put forward some supply side incentives for low carbon liquid fuels, via the Cleaner Fuels Program, there is still no clarity on demand-side incentives or mandates.

Without greater policy and market clarity and government co-investment in production, particularly during the market forming phase, the risks are simply too high for such large-scale investments to proceed.

Project readiness
The same uncertainty means that there are few shovel-ready projects due to high cost of feasibility and final investment decision analysis (2 to 4% of total capital cost) and the lack of any foreseeable market revenue. Without a viable market for biofuels and bioenergy, the risk and uncertainty is simply too high to justify investment to develop shovel-ready projects.

Infrastructure challenges
Little work has been done around the transport and logistics for aggregating feedstocks for biofuels, biogas and bioenergy production, creating uncertainty and risk around the commerciality and scalability of these opportunities.

Sugar and sugarcane are already Queensland's second largest freight task by weight, with the industry moving 30 million tonnes of sugarcane annually. With respect to biofuels and bioenergy, the sugar industry has 9 million tonnes of aggregated feedstock in the form of bagasse, 9 million tonnes of disaggregated feedstock on farm, having access to similar quantities of feedstock from geographically proximate industries such as forestry, and the need to transport biofuels and intermediary processed product to market.

This will be an immense transport and logistical undertaking for all involved in the biofuels and bioenergy supply chain, including sugar manufacturers. Currently, sugar manufacturers maintain nearly 4,000km of cane rail infrastructure that could be utilised for this new freight task. The cost of maintaining this network is becoming prohibitively expensive, yet there has been no support from the Queensland or Federal Government to support the maintenance or extension of this vital network – one that can be leveraged to underpin the biofuels and bioenergy supply chain.

Energy market distortions
There are significant commercial, market regulation and operational challenges to securing investments to maintain an expand cogeneration capacity. The commercial challenge is first and foremost, with sector-wide investment potentially running into the billions, an amount difficult to justify noting that baseload power generators are not rewarded for their reliability in the Australian electricity market[6].

[6] Australian Sugar Manufacturers – Bioenergy Fund Project Reports on Electricity Cogeneration & Pelletisation of Bagasse: Bioenergy Fund Project Reports on Electricity Cogeneration & Pelletisation of Bagasse – Aust Sugar Manufacturers

Despite providing baseload power, with the ability to displace the need for very expensive long duration batteries and gas peaking generators, the electricity market does not recognise this benefit. Based on our prefeasibility analysis, this benefit would reduce electricity generation prices by over a billion dollars per annum in the 2030's, yet there is no market payment to incentivise the capturing of this benefit.

The National Energy Market is not focused on making the market work for all generation types, with a bias towards large scale wind and solar. These generation forms have received significant subsidies for many decades, and their non-synchronous intermittent nature has created significant operational issues for the national grid. To solve this problem, governments have provided proponents of solar and wind power further subsidies, via direct grant funding and the Capacity Investment Scheme (a program not available to the sugar industry), to address a problem inherent in their form of intermittent non-synchronous power generation.

An R&D agenda that is not fit for purpose

The sugar industry requires government co-funding to ensure the industry R&D agenda can undertake the suite of work to support the development of biofuels and bioenergy production. The current sugar industry R&D agenda is not properly resourced or skilled to maintain programs for traditional sugar production as well as addressing the R&D opportunities and challenges that a biofuels and bioenergy supply chain creates.

Sugar Research Australia (SRA), the main vehicle for sugar industry R&D, is one of the smallest research and development corporations in Australia, and its current resourcing and expertise means that a focus on core tasks such as varietal development for yield improvements and disease/pest resistance is likely the upper bounds of the R&D task it can provide.

Manufacturing R&D has largely been ignored by the industry's R&D agenda. Despite the sugar manufacturing sector putting nearly $10 million per annum into SRA – the organisation has indicated that it has limited expertise and resources to undertake manufacturing R&D going forward. The SRA has not indicated any comprehensive R&D agenda to facilitate the establishment of a biofuels and bioenergy capability through the sugar industry.

The ASM recommendations, provided in detail in the following section, provides a pathway to establish biofuels, bioenergy and other bioproduct production via the sugar industry, that will position the Australian sugar industry as an internationally competitive producer of food, fuel and energy.

DETAILED RECOMMENDATIONS – SECURING THE INDUSTRY'S FUTURE & ESTABLISHING A BIOFUELS AND BIOENERGY CAPABILITY IN AUSTRALIA

The following section provides an overview of each opportunity available to the sugar industry, the potential challenges in capturing these opportunities, and recommendations for government involvement that can overcome these challenges.

BIOFUELS AND BIOGAS

The opportunity

The sugar industry's has significant biofuels production potential. As an example, feedstocks (bagasse, molasses and cane juice) can potentially provide more than 30% of the domestic aviation fuel market[7], which consumes between 7-9 billion litres of jet fuel annually[8]. This opportunity is underpinned by mature technologies that are already being utilised for commercial production globally, and emerging technologies that positions sugar industry feedstocks as a cost-effective biofuels producer at scale.

These feedstocks, as well as additional feedstocks such as mill mud and dunder, could alternatively be utilised for the production of biogas. Biogas could also be a viable diversification opportunity, particularly where gas pipeline infrastructure is co-located with sugar manufacturing operations.

As the most abundant feedstock in Queensland, sugar provides a huge opportunity for the Federal Government to leverage available funding to further establish a nascent industry in regional Queensland and underpin the future of a foundational industry for the state in the form of the sugar industry.

According to the recently released Clean Energy Finance Corporation and Deloitte (2025)[9] research report into low carbon liquid fuels, sugar is the next opportunity which provides a cost-effective pathway for the production of biofuels and carbon abatement at scale. This is particularly important noting that tallow and used cooking oils have limited scale opportunity and have largely been accounted for in the project pipeline.

While agricultural residues provide a lower cost approach to abatement for biofuels production at scale, practically it is very hard to aggregate and consolidate this dispersed feedstock. This is in stark contrast to sugar and sugar byproducts, which are all aggregated and consolidated feedstock.

Building on these fundamentals, sugar derived biofuels and biogas represent a rare convergence of scale, infrastructure readiness and regional economic benefit. The sugar

[7] CSIRO (2023)

[8] Queensland Government & Deloitte (2023), Catalysing sustainable aviation fuel (SAF) in Australia, at URL: https://www.statedevelopment.qld.gov.au/__data/assets/pdf_file/0025/85480/SAF-sust-aviation-fuel-report-summary.pdf

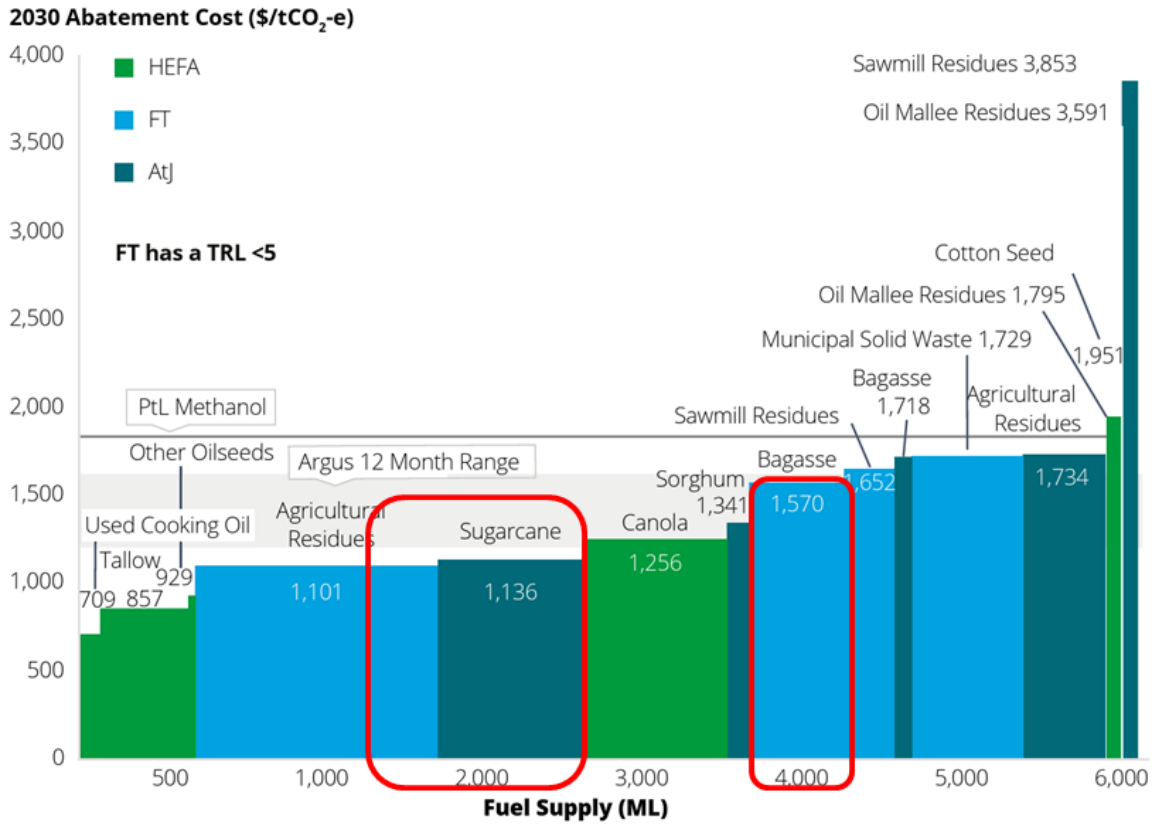
[9] CEFC & Deloitte (2025), Refined Ambitions: Exploring Australia's Low Carbon Liquid fuel Potential, at URL: https://www.cefc.com.au/document?file=/media/jh3gvm14/refined-ambitions-exploring-australia-s-low-carbon-liquid-fuel-potential.pdf

industry already operates highly integrated supply chains, centralised sugar milling assets and established logistics networks, which materially reduce both feedstock risk and capital intensity compared to many other bioenergy pathways.

This positions sugar uniquely to move beyond pilot projects and into commercially meaningful deployment of biofuels and renewable gas. Importantly, the co-production of biofuels and biogas within existing sugar milling precincts offers opportunities to optimise value across energy, carbon abatement and waste management, while also improving mill energy self-sufficiency and resilience to volatile electricity and gas markets.

As global demand for low-carbon fuels accelerates and policy frameworks increasingly reward verified emissions reductions, sugar-based pathways can deliver both emissions and cost advantages relative to more fragmented feedstock sources. In doing so, the industry can therefore transition from a traditional commodity producer to a diversified producer of food, low-carbon liquid fuels, biogas and bioenergy.

Biofuels feedstock supply and abatement cost



Source: Clean energy Finance Corporation and Deloitte 2025[10]

The sugar industry also has a unique opportunity to assist in securing the fuel security of the Australian Defence Force (ADF). Significant fuel intensive ADF assets are located across Queensland, including naval and air force capabilities, and these are collocated in areas within the capabilities of sugar manufacturing. The potential to create a short, secure cost-effective

[10] Clean Energy Finance Corporation and Deloitte 2025: Refined Ambitions – how Australia can become a low carbon liquid fuel powerhouse - Clean Energy Finance Corporation

biofuels supply chain linking the sugar industry to the ADF is worthy of further investigations and support from the Australian Federal Government to further investment in this opportunity.

The challenges

There are also a number of challenges with respect to the establishment of a biofuels capability through sugar including:

- Developing a pipeline of shovel-ready projects, if and when government policies induce demand for biofuels at prices that provide commercial returns for producers.
- The multi-billion-dollar capital costs establishing a biofuels capability.
- Access to finance barriers for cooperative organisations within the sugar industry.
- The risks and uncertainty involved with a market that does not as yet exist and that is reliant on ongoing government commitment.

Way forward and recommendations

Policies to ensure a pipeline of shovel-ready projects - Australian Sugar Manufacturers is seeking a combination of both Federal Government and Queensland Government grant funding on a 50-50 basis to sugar manufacturers to progress biofuels, bigas, and bioenergy related projects through the project pipeline, nothing the cost escalation as the project moves through pre-feasibility, following a Final Investment Decision (FID) analysis. This will ensure the availability of shovel ready projects if and when demand side government incentives do what they set out to do -creating a greater demand for biofuels nationally.

Recommendation: Provide funding on a 50-50 basis for feasibility and FID analysis in developing a pipeline of shovel ready biofuels and bioenergy projects.

Attracting the private investment needed in the diversification agenda- To capture opportunities in biofuels, biogas and bioenergy at scale within the sugar industry requires billions of dollars in investments. Noting the significant risks within a developing market, developing a new biofuels/bioenergy supply chain, and competition from highly subsidised imported biofuels and biofuels feedstocks, the risk associated with such investments are very high.

There is a role for governments to derisk these investments through government grant funding and other forms of local producer supports. The focus of government funding should be broader than supporting technology and innovation of the biorefining process, this is only a small section of the diversification challenge. Governments should facilitate technology adoption and process innovation across the physical biofuels supply chain. This includes process innovation and technologies that will liberate and use feedstocks more efficiently. For the sugar industry this is primarily bagasse and intermediary processed feedstocks like ethanol and methanol.

Access to finance can also be an issue, particularly for cooperative organisations, acting as a barrier to investment in viable opportunities in biofuels and energy. Government assistance with respect to access to finance would be welcome in overcoming this barrier.

The ASM notes that the Federal Government has announced a $1.1 billion 'Cleaner Fuels Program' to promote supply side investments, via competitive tender processes. This announcement from the Federal Government is a welcome announcement, and the ASM has provided direct feedback into the development of the Cleaner Fuels Program framework.

Recommendation: Capital grant funding for innovation, energy efficiency & energy transition.

Recommendation: Assistance with access to finance for cooperative organisations.

ESTABLISHMENT OF BIOFUEL PRECINCTS AROUND SUGAR MANUFACTURING FACILITIES

The opportunity

Beyond the feedstocks currently available to sugar manufacturers, our industry has the capability to develop bio-precincts located in and around sugar milling facilities to enable the large-scale production of biofuels and bioenergy using feedstocks available from other geographically proximate industries. A key enabler is the existing 4,000km cane rail network which is currently utilised for cane transport for only five to six months of the year. This underutilised infrastructure could be repurposed to collect and aggregate additional feedstocks, such as cane tops and trash from canegrowers, forestry residues, and other agricultural byproducts for bio-production.

This approach would allow Australia to significantly expand biofuel, biogas, and bioenergy output by leveraging existing transport assets and increasing bioprocessing capacity. For example, cane rail networks could aggregate hardwood plantation residues in Queensland for processing alongside sugar by-products such as bagasse, dunder, and mill mud to produce biogas. Access to these additional feedstocks would justify investment in larger bio-processing facilities, reducing unit costs and improving commercial viability.

Developing bio-precincts around sugar manufacturing facilities would also create new revenue streams for multiple stakeholders, including cane growers supplying tops and trash and the forestry sector contributing residues. This integrated approach positions Australia to build a resilient, scalable, and cost-effective bioenergy industry that supports emissions reduction and regional economic growth.

Challenges

The cost of maintaining cane rail infrastructure, with a replacement value exceeding $2.5 billion[11], has become a significant burden on sugar manufacturers. This challenge is further compounded by the increasing frequency and severity of natural disasters and adverse weather events driven by the changing climate. Despite the substantial public benefits provided by the cane rail network, including its role in keeping Queensland's second-largest freight task off regional roads, the entire cost of maintenance has been left entirely to sugar manufacturers,

[11] Department of Infrastructure and Regional Development Analysis (2015): https://www.bitre.gov.au/sites/default/files/Freightline_03.pdf

with no federal or state government investment. This growing financial pressure is forcing manufacturers to consider reducing the network's footprint and shifting more freight onto roads.

Such an outcome would have negative consequences for regional road congestion, road maintenance costs for local and state governments, and would further undermine opportunities to aggregate feedstocks across Queensland using the existing cane rail network, limiting future bioenergy potential.

Way forward and recommendations

In recognition of the public benefits of the cane rail network, and its significant potential to exponentially scale the biofuels industry in Queensland, Australian Sugar Manufacturers is seeking the following:

- The establishment of a $60 million Federal Government Cane Rail Fund, that would provide some level of funding for cane rail infrastructure upgrades, particularly those related to safety improvements and flood resilience.
- The inclusion of the cane rail network by the Queensland and Federal Governments in disaster recovery funding.

The $60million Cane Rail Grant Program would further ensure the long-term viability of the cane rail infrastructure network. This would provide up to 25% of funding for the total project cost for cane rail infrastructure for projects greater than $10 million (and up to 50% for project costs less than $10 million) with a focus on maintaining the cane rail infrastructure footprint, safety-related improvements (e.g. level crossing infrastructure, structural works on bridges) and flood resilient improvements.

Furthermore, access to disaster recovery funding on a 50-50 basis for the cost of repairs (capped at total cost of $10 million) would ensure this vital economic network is maintained for future decades. Funding could focus on 'building back better' for flood resilience, for example rebuilding level crossing signalling equipment on platforms to avoid future flood events.

These programs combined would provide some level of relief to sugar manufacturers for the increasing cost of maintenance of this infrastructure. It would also avoid the significant cost of road maintenance if this freight task was shifted onto regional roads throughout Australia.

Recommendation: The inclusion of cane rail in national disaster recovery support.

Recommendation: Establishment of a $60 million Cane Rail Fund to provide co-funding for cane rail upgrades nationally.

AUSTRALIAN SUGAR MANUFACTURERS

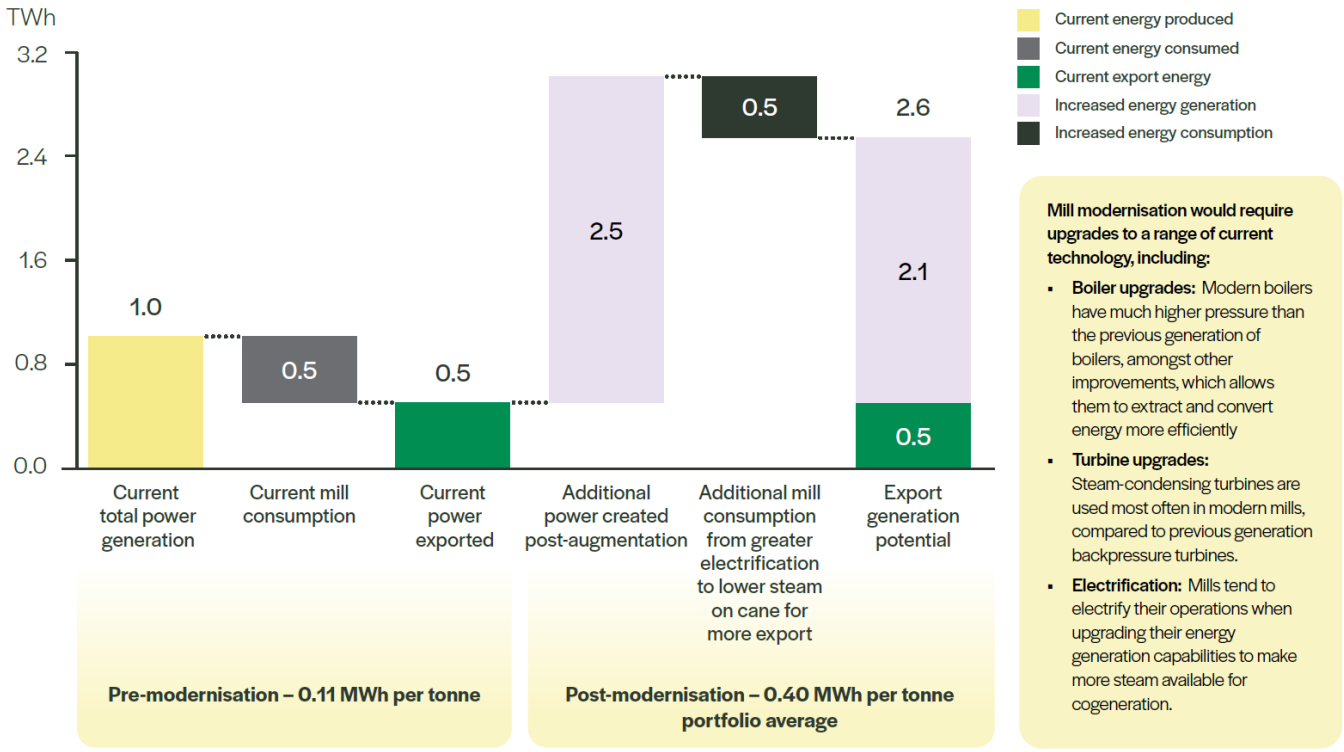
BIOENERGY THROUGH THE COGENERATION OF ELECTRICITY

The opportunity

In 2025, the ASM undertook a prefeasibility (co-funded by the Queensland Bioenergy Fund) into the opportunities of expanding cogeneration outputs from sugar manufacturing[12]. These opportunities include:

- Expanding cogeneration capacity from approximately 400MW to 835MW of installed capacity – if properly utilised.
- Provide up to an additional 2.1-terawatt hours of electricity to the National Electricity Market (NEM) through the above-mentioned expansion and better utilisation of existing capacity, quadrupling the electricity available for export to the grid.
- Leveraging existing know-how within the sugar industry, with expertise in technology, and a good understanding of operating in a mature market.

Pathway to increasing capacity and utilisation of cogeneration



Source: ASM (2025)

[12] ASM (2025), Bioenergy Fund Project – Electricity Cogeneration in the Sugar Industry, yet to be published.

Cogeneration provides one of the few sources of baseload renewable electricity, and expansion would create between $9 billion and $15 billion of benefits to the NEM to 2050 (using AEMO Integrated Systems Plan forecasting of electricity supply and demand from early 2025) and reduce GHG emissions by 1.3 million tonnes in 2030. Cogeneration also has a very small physical footprint, creating less community concern from a social licence perspective as compared to solar or wind generation projects.

The challenges

There are significant commercial, market regulation and operational challenges to securing investments to expand cogeneration capacity. The commercial challenge is first and foremost, with sector-wide investment potentially running into the billions, an amount difficult to justify noting that baseload power generators are not rewarded for their reliability in the Australian electricity market.

Despite providing baseload power, with the ability to displace the need for very expensive long duration batteries and gas peaking generators, the electricity market does not recognise this benefit. Based on our prefeasibility analysis, this benefit would reduce electricity generation prices by over a billion dollars per annum in the 2030s, yet there is no market payment to incentivise the capturing of this benefit.

The NEM is not focused on making the market work for all generation types, with a bias towards large scale wind and solar. These generation forms have received significant subsidies for many decades and their non-synchronous intermittent nature has created significant operational issues for the national grid. To solve this problem, governments have provided proponents of solar and wind power further subsidies, via direct grant funding and the Capacity Investment Scheme (a program not available to the sugar industry), to address a problem inherent in their form of intermittent non-synchronous power generation.

The large-scale adoption of wind and solar has created further problems for generators, such as sugar cogeneration, who provide continuous baseload power. The intermittent nature of these generation sources create periods in the NEM with negative prices, forcing baseload power generators to run at significant losses to export power into the grid. The nature of sugar factory cogeneration is that electricity is primarily produced in conjunction with process steam required for factory operations. As a result, we cannot significantly ramp down our generation to mitigate exposure to these losses, nor ramp up generation to utilise the significant revenues stemming from the supply shocks created by intermittency. This will hinder investment in cogeneration expansion and challenge the viability of existing cogeneration capacity.

These challenges are growing more acute over time, not only challenging the business case for investment in new cogeneration capacity, but the utilisation of existing capacity. The quantum

of benefits that cogeneration provides to the NEM outweighs the costs, yet the market does not facilitate or incentivise the participation of cogeneration.

The way forward and recommendations

Governments can ensure the continued benefits of cogeneration, by directing organisations like CleanCo to examine offtake agreements for sugar cogeneration that recognise the additional benefits of cogeneration beyond its renewable status (baseload power, mitigant against peak demand events etc.).

It should be noted that nearly all generation sources, whether legacy fossil fuel generation or more recent renewable generation, have had government investment support to establish that generation.

An offtake agreement with a fixed price or a floor price will help maintain and expand the amount of electricity generated by the sugar manufacturing sector through cogeneration, by reducing exposure to the highly volatile national electricity market, particularly negative pricing, and can fill the significant financial gap created by the collapse of prices for Largescale Generation Certificates.

In Japan, 3-4% of electricity is generated from biomass thanks to incentives and offtake agreements for biomass to energy proponents. Current agreements provide a price equivalent $200 per MWh in Australian dollars which would be sufficient to encourage the maintenance and potential expansion of existing sugar factory cogeneration if it could be provided under a long-term offtake agreement.

Recommendation: Capital grant funding for innovation, energy efficiency and energy transition projects.

Recommendation: Exploration of offtake agreements for sugar cogeneration (with a floor price) in recognition of its baseload synchronous benefits, and to limit exposure to negative market pricing caused by intermittent generators.

AUSTRALIAN SUGAR MANUFACTURERS

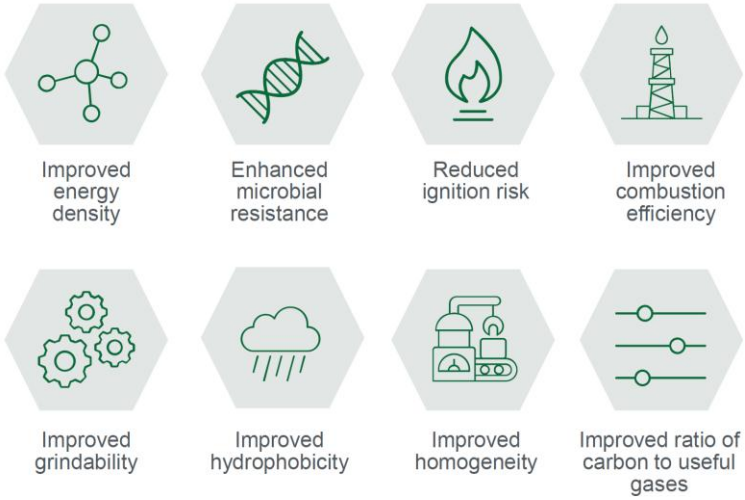
PELLETISATION OF BAGASSE

The opportunity

The pelletisation of bagasse could be a no-regret solution for industry and government to invest in the diversification towards biofuels and bioenergy. Pelletisation refers to using biomass from the sugar industry, including bagasse and tops and trash, and densifying them into pellets that can be easily transported and used in a variety of ways including:

- Green power generation through the use of the pellets to displace coal.
- Can be used as a feedstock for various energy sources, including biogas.
- Could potentially be sold for export to markets like Japan.

Benefits of bagasse pelletisation



Source: ASM (2025)

Pelletisation technology can be extended to the use of other feedstock, including tops and trash and forestry residues, if logistical and commercial challenges can be overcome. This provides an opportunity to scale. As an example, there is approximately the same amount of tops and trash on farms as there is bagasse within sugar manufacturing facilities.

Developments in the pelletisation process and its potential commercial viability are advancing quickly. This bodes well for its potential commercial applications going forward.

The challenges

The market for pelletised biomass is in its infancy and the commercial risks are hard to assess. The ASM believes that with the net zero agenda, biomass pelletisation could be a solution to the energy transition journey of hard to abate sectors including metal smelting and coal fired power generators, providing a renewable source of fuel for furnaces and boilers.

The way forward and recommendations

The pelletisation pathway can link into multiple biofuels, biogas and bioenergy supply chains. This includes government support and collaboration for activities, such as pilot testing, to progress the pelletisation agenda as part of the broader diversification agenda.

Recommendation: Capital grant funding for innovation, energy efficiency and energy transition projects.

BIOMANUFACTURING

Above and beyond biofuels and bioenergy, the sugar industry is well placed to underpin a biomanufacturing capability in Queensland. This includes utilising precision fermentation technologies to create valuable alternative proteins from sugar, and the creation of biochemicals and biomaterials using sugar and sugar byproducts. The QUT Renewable Bio-commodities Pilot Plant is leading work on the opportunities in biomanufacturing utilising sugar and sugar byproducts.

The way forward

The ASM supports this ambitious agenda, providing high value product opportunities for the sugar industry.

ENABLERS - RESEARCH AND DEVELOPMENT

The sugar industry R&D capability is not fit-for-purpose nor is it adequately resourced to ensure core capabilities for existing sugar production (variety development and disease/pest management), and to tackle the R&D challenges and opportunities associated with advanced sugar manufacturing and diversification.

Sugar Research Australia, the main vehicle for sugar industry R&D, is one of the smallest research and development corporations in Australia, and its current resourcing and expertise means that a focus on core tasks such as varietal development for yield improvements and disease/pest resistance is likely the upper bounds of the R&D task it can provide.

Manufacturing R&D has largely been ignored by the industry's R&D agenda. Despite the sugar manufacturing sector putting nearly $10 million per annum into SRA - SRA has indicated it has limited expertise and resources to undertake manufacturing R&D going forward.

The ASM also welcomes state and federal government support for projects, such as the Mackay Renewables Bio Commodities Pilot Project, that is looking at long-term opportunities in biomanufacturing including technology development for processes such as precision

fermentation. Yet this still misses the main R&D task needed to support the establishment of a biofuel and bioenergy capability.

The main R&D challenge with respect to biofuels and bioenergy opportunities are process innovations to better tailor, adopt and utilise new and existing technologies that will liberate feedstock for the production of bio-products, and projects focusing on technology transfer into the sugar manufacturing sector to move the sector up the innovation curve and support the sector's diversification aims. This agenda has largely been ignored by governments and Sugar Research Australia alike.

Australian sugar manufacturing cannot afford to simply reinvest in equipment and industrial processes like for like, this is simply unviable. The sector needs to adopt technologies and innovative processes that will provide a step change in productivity for the capital that can be invested and also support diversification of revenue streams. This is the core R&D activity needed.

The way forward and recommendations

There is an opportunity for co-investment between industry, Queensland Government and Federal Government to establish a $24 million advanced sugar manufacturing R&D capability focused on technology adoption and transfer.

Industry may be able to put forward $6 million seed funding that is available as a reserve within Sugar Research Limited (an industry funded organisation focused on research), to be matched by Queensland Government, and the Federal Government match the industry and Queensland Government contribution. This would provide $24 million for a robust advanced sugar manufacturing R&D program.

Sugar Research Australia could provide funding for operational expenses, in lieu of not undertaking any manufacturing R&D itself on behalf of the sugar manufacturing sector.

Recommendation: Co-investing with industry and Queensland Government towards an R&D capability for advanced sugar manufacturing, with a focus on technology adoption.

ENABLERS – SUGARCANE SUPPLY

The supply of sugarcane will be integral to ensure Australia can benefit from a scalable opportunity in biofuels and bioenergy through the sugar industry. Without it, there will not be sufficient availability of biofuels and bioenergy feedstocks, or the sufficient economies of scale to make investment viable. It also puts into question the viability of existing sugar industry infrastructure and facilities that require scale and throughput to viable produce sugar.

The Australian sugar industry currently produces 30 million tonnes of cane on average. This has steadily declined over the past decade, due to a variety of factors including loss of cane land to competing land uses. Since 2015, the industry has lost approximately 60,000 hectares of land under cane, with 323,567 hectares of land remaining under cane in 2025. In 2016, the industry harvested 36.5 million tonnes of cane[13]. If we can achieve similar levels of cane supply, this would increase the biofuels and bioenergy production potential of the industry by up to 20%.

Similar to the Federal Government's Support Plantation Establishment program for the timber industry[14], the ASM seeks incentives for growers to convert land back into cane, providing the critical supply to maintain the viability of sugar production and investments into biofuels and bioenergy.

Closely related to cane supply, is the long-term viability of the harvesting sector. With ageing fleet and workforce, and lower volumes of cane that are more geographically dispersed, the viability of this critical service is now a live question. This would be a significant chokepoint for production within the sugar industry. The ASM seeks to work with government to identify factors that could maintain and expand the availability of harvesting services including potential instant asset write off provisions, and grant funding for new machinery with superior emissions profiles.

Recommendation: Incentives for increasing cane supply and secure the future of the harvesting sector

[13] ASM Industry Statistics, see URL: https://sugarmanufacturers.org/wp-content/uploads/2025/04/Annual-Industry-Stats-and-Snapshot_2024-formatted-for-pdf.pdf

[14] See URL: https://www.agriculture.gov.au/agriculture-land/forestry/industries/support-plantation-establishment-program

Australian Sugar Manufacturers Recommendations

1. **Capital grant funding for innovation, energy efficiency & transition ($90m):** A grant program for capital projects should be established to encourage technology adoption within sugar manufacturing, promote energy transition imperatives through facilitating energy efficiency and feedstock liberation, and energy production programs.
2. To ensure that there is a shovel ready pipeline of sugar biofuels and bioenergy projects, the ASM seeks **federal and state government funding towards feasibility and final investment decision studies**. (**$9 million** in total funding by the Federal Government).
3. To create demand for biofuels, the ASM recommends the establishment of **a national biofuels mandate,** with requirements for a portion of the mandate to be filled with local feedstocks, and a strong weighting in preference of low carbon intensity.
4. Noting the significant benefits of cogeneration, explore opportunities for **offtake agreements with sugar manufacturers,** for both existing and new facilities with either fixed or floor pricing**,** in recognition of the benefits of the baseload and renewable nature of the generation.
5.Noting the centrality of the cane rail network for the aggregation of biofuels and bioenergy feedstock, the ASM recommends that:

-The inclusion of **cane rail in national disaster recovery support** (**$9 million**).
- Establishment of a **$60 million Cane Rail Fund** to provide co-funding for cane rail upgrades, particularly for bridges and level crossings.

6. Government-industry co-investment towards a **$24 million R&D capability for advanced sugar manufacturing** (**$12 million** funding from Federal Government).
7. **Incentives for increasing cane supply ($10 million):** Cane supply will be a key determinant for a scalable biofuels future. The ASM proposes several initiatives, including:
- Incentives to convert land back to cane land.
- Initiatives to secure the future of the harvesting sector.

8. Assist with **access to finance** for sugar manufacturers with a cooperative organisational structure (cooperatives have difficulty in securing access to finance).

9.**Funding for a pre-feasibility for a sugar biofuel supply chain with the Australian Defence Force ($1 million),** noting the colocation of potential production and demand.
10. This agenda could be delivered as a part of an holistic **sugar industry diversification strategy**, similar to the National and Queensland timber industry strategies.

Total cost of package: Approximately $182 million

CONCLUSION

Australian Sugar Manufacturers 2026 – 2027 Australian Government Pre-Budget Submission presents a practical, cost-effective and nationally strategic package of measurers to unlock the sugar industry's full potential as a cornerstone of Australia's bioenergy, biofuels and low-emissions manufacturing future. Through targeted government co-investment, demand-side certainty and infrastructure support, the following package will catalyse private investment, strengthen regional economies, create jobs, enhance fuel and energy security, and deliverable emissions reductions.

Australian Sugar Manufacturers stands ready to work in partnership with both the Federal Government and Queensland Government to progress the following initiatives and ensure the sugar manufacturing sector continues to deliver ensuring economic, environmental and strategic propositions for the nation.

To discuss this submission further, please contact Mr Josip Vidakovic, Government, Industry & External Engagement Manager via email at: j.vidakovic@sugarmanufacturers.org or on 0423 359 827.

Yours sincerely

Ash Salardini
Chief Executive Officer
Australian Sugar Manufacturers

APPENDIX 1 – PORTFOLIO RESPONSIBILITY FOR RECOMMENDATIONS

This section provides an overview of portfolio responsibility for policy and co-funding arrangements to support Australian Sugar Manufacturers recommendations for the 2026 – 2027 Pre-Budget Submission:

Funding for feasibility and final investment decision (FID) studies for biofuels and bioenergy projects
Portfolio responsibility:
Climate Change, Energy, the Environment and Water
Industry, Science and Resources
Infrastructure, Transport, Regional Development

Capital grant funding for innovation, energy efficiency and the energy transition
Portfolio responsibility:
Climate Change, Energy, the Environment and Water
Industry, Science and Resources

Pre-feasibility of a sugar biofuel supply chain with the Australian Defence Force
Portfolio responsibility:
Defence

Government industry co-investment in advanced sugar manufacturing R&D capability
Portfolio responsibility:
Industry, Science and Resources
Agriculture, Fisheries & Forestry

Cane rail infrastructure support and disaster recovery funding
Portfolio responsibility:
Infrastructure, Transport, Regional Development
National Emergency Management Agency

National biofuels mandate with preference for low-carbon local feedstocks
Portfolio responsibility:
Climate Change, Energy, the Environment and Water
Infrastructure, Transport, Regional Development

Incentives to increase cane supply and support the harvesting sector
Portfolio responsibility:
Department of Agriculture Fisheries and Forestry (DAFF)

Improving access to finance for cooperatives
Portfolio responsibility:
Treasury

APPENDIX 2 - PAST ASM SUBMISSIONS & REPORTS ON DIVERSIFICATION OPPORTUNITIES

Please note that Australian Sugar Manufacturers has also made the following submissions to the Federal Government and Queensland Government in relation to topics such as biofuels and bioenergy, emerging industries, and national feedstock strategies. Links to Australian Sugar Manufacturers submissions are available here for reference:

Department of Infrastructure, Transport & Regional Development on the Cleaner Fuels Program: 06012026-Submission-to-the-Department-of-Infrastructure-Transport-Regional-Development-on-the-Cleaner-Fuels-Program-Policy-D.pdf

Joint Standing Committee on Northern Australia on Preparing for Emerging Industries Across Northern Australia: 251208_ASM-submission-to-the-Joint-Committee-on-Northern-Australia-on-Preparing-for-Emerging-Inudstries-Across-Northern-Australi.pdf

Department of Agriculture, Fisheries and Forestry's National Bioenergy Feedstock Strategy: 251106_ASM-submission-to-National-Bioenergy-Feedstock-Strategy_FINAL.pdf

Parliamentary Inquiry into Sugar Industry Bioenergy Opportunities in Queensland: 251008_ASM-submission-to-PIRC-Inquiry-into-sugar-and-bioenergy-_-FINAL.pdf

Bioenergy Fund Project Reports on Electricity Cogeneration & Pelletisation of Bagasse: Bioenergy Fund Project Reports on Electricity Cogeneration & Pelletisation of Bagasse – Aust Sugar Manufacturers