

Sugarcane Bioenergy Inquiry 2025

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24 October 2025

The Honourable Stephen Bennett
Chair, Primary Industries and Resources
Committee
Parliament House
George Street
Brisbane QLD 4000
Via email: PIRC@parliament.qld.gov.au

Dear Mr Bennett,

RE: Inquiry into Sugarcane Bioenergy Opportunities for Queensland

I welcome the opportunity to contribute to the Inquiry into Sugarcane Bioenergy Opportunities for Queensland. This submission outlines the strategic importance of aviation to Queensland's economy and connectivity, and highlights the opportunity to leverage sugarcane-derived bioenergy - particularly Sustainable Aviation Fuel (SAF) - to support decarbonisation in a hard to abate sector.

Brisbane Airport has been a champion of decarbonisation for the aviation sector in Australia. As the first major airport to reach Net Zero (Scope 1 and 2), we have further invested in our decarbonisation journey through 100% renewable energy (via Queensland based wind and solar farms), expanded our solar electricity generation to 12MW (one of the largest in Australia) and boast Australia's first fully electric bus fleet. BAC has also committed to the Clean Skies for Tomorrow Initiative, supporting the global goal of 10% SAF use by 2030. These tangible actions have been supported by role as the founding Airport representative for the Federal Government's Jet Zero Council, seeking to bring industry, government and academia together to address the decarbonisation of the aviation industry, including the development of a SAF industry in Australia.

We believe Queensland, as Australia's agriculture powerhouse, is in the prime position to build and successfully scale a regional SAF industry; one that can ensure aviation continues to support our vital economic sectors and continue to connect our state and nation.

Aviation's Essential Role in Queensland

Aviation is essential to Queensland's regional connectivity, enabling access to health, education, and economic opportunities across our vast state. It is also a major economic driver, supporting tourism, exports, and international trade. Brisbane Airport alone facilitates millions of passenger movements annually, with growth expected to continue in line with Queensland's population and economic expansion. For example, by 2050, Brisbane Airport expects to support over 50 million passengers annually, similar to that of Hong Kong International, Singapore Changi and Incheon International (South Korea).

In FY24, BNE facilitated the travel of over 5.2m passengers to and from regional Queensland (equating to 177 flights a day), supporting communities from Cairns to Biloela. From an interstate flight perspective, BNE facilitated 11.8m passengers during the period, with the

'Golden Triangle' of Sydney, Melbourne and Brisbane continuing to represent some of the busiest airspace in the world. Internationally, our network continues to grow, with direct flights to over 32 destinations supporting nearly 6m passenger annually. Key international markets include New Zealand, Japan, North America (USA and Canada), and Europe (UK, Italy, France and Germany). Further, India, China and South Korea continue to represent key growth markets.

As Queensland's major aviation gateway, Brisbane Airport is conscious of aviation's need to decarbonise, both to meet the Federal Government's Net Zero targets, but also as a distinct commercial driver in an industry that works across international borders. With global carbon reduction schemes for aviation—most notably, the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA)—becoming mandatory by the end of the decade, airlines (and therefore airports) must consider innovative approaches to emissions reduction. SAF not only provides an immediate solution for reducing emissions, but also provides a once in a generation opportunity to develop a new green industry for Queensland; one that provides unprecedented opportunities for our agricultural sector. Importantly, other jurisdictions, such as Japan, Singapore, Indonesia and Malaysia, are seeking to become net exporters of SAF by the late 2030s, addressing both regional and global demand.

Aviation and decarbonisation

Aviation is a hard to abate sector due to its reliance on high energy density fuels and long asset lifecycles. The Federal Government's decarbonisation agenda, including the Cleaner Fuels Program and the Future Made in Australia Innovation Fund, represents specific policy interventions and investments to accelerate the transition to low-emission fuels.

On the international front, Australia has opted into the voluntary phases of CORSIA. CORSIA is a global market-based mechanism developed by the International Civil Aviation Organization (ICAO) to limit net CO₂ emissions from international flights. Its primary goal is to achieve carbon-neutral growth in international flights from 2020 onwards by requiring airlines to offset emissions that exceed baseline levels, originally set as the average of 2019 and 2020 emissions and since adjusted to 85% of 2019 levels due to effects of the COVID-19 pandemic. Airlines meet their CORSIA obligations by purchasing carbon credits from approved environmental projects that reduce or remove emissions elsewhere. Eligible SAF can be used in place of carbon credits to meet this obligation.

SAF is the most viable pathway for aviation decarbonisation, as it is a drop in fuel compatible with existing aircraft and infrastructure. It has also proven to be safe, scalable and reliable. Lifecycle emissions reductions of up to 80% are achievable. However, significant increases in fuel volumes will be required to meet 2050 net zero targets, and key impediments remain—particularly cost and supply constraints. The Australian domestic aviation sector (particularly airlines with only a domestic footprint) cannot decarbonise without a local SAF market. Without a near term pathway for SAF refining in Australia, there is a high risk that inaction will challenge an airport's social licence to operate and grow. Over time, this will negatively impact travellers through greater commercial challenges in attracting new international airlines that favour destinations with an established source of SAF. This risk, in turn, will have negative effects on Queensland's wider economy, particularly for our tourism and export industries.

Queensland's SAF opportunity

Queensland is uniquely positioned to lead SAF production, particularly through Alcohol to Jet (ATJ) pathways using sugarcane. Investment in SAF supply chains can also benefit other agricultural sectors, including sorghum, corn, wheat, and tallow. Coproduct value capture - such as biochar, animal feed, and renewable power can further support regional agriculture economics and enhance the project viability of SAF. In fact, recent developments in SAF infrastructure underscore this potential:

- Virgin Australia and Qatar Airways have partnered with Renewable Developments Australia to develop a 96 million litre per annum SAF facility in Charters Towers
- Jet Zero Australia received \$14 million in joint Federal and Queensland Government funding for Project Ulysses in Townsville
- Licella's Project Swift in Bundaberg, supported by \$8 million from ARENA, will convert sugar mill residues into SAF
- Wagner Sustainable Fuels, in partnership with Boeing, delivered Australia's first dedicated SAF blending terminal at Wellcamp. Wagner Sustainable Fuels and Boeing are also developing Australia's first fully integrated SAF refinery in Brisbane; and
- Viva Energy, with support from ARENA, is upgrading infrastructure at Brisbane's Pinkenba Terminal to enable SAF supply to Brisbane Airport.

Access to sufficient quantities of high quality, low emissions feedstocks is essential to unlocking further private investment and scaling refining and production capacity. Sugarcane presents a large, scalable and consistent supply of feedstock, being a well-established industry with mature, established facilities for collection and processing. However, under current policy and investment settings, airports in Queensland will not have access to sufficient SAF to meet projected demand. Jet fuel demand in Australia is projected to grow by approximately 50% over the next 25 years, driven primarily by our population growth and increased global tourism. Modelling undertaken on behalf of Brisbane Airport suggests with no further policy interventions, Australia's SAF demand could be limited to around 70 mega litres by 2030 (noting Queensland accounts for 25% of Australia's total jet fuel demand). This represents less than 1% of overall jet fuel consumption.

Key considerations for the Committee

To realise the full potential of sugarcane bioenergy for aviation, we believe the following considerations are critical to both establish, and successfully scale, a SAF industry in Queensland:

- **Ensuring consistent, long-term supply of feedstocks to align with aviation's planning horizons:** this includes developing long term feedstock security frameworks that give SAF producers confidence in supply over infrastructure planning cycles. Aviation agreements are typically long term, particularly regarding fuel supply, which represents a large portion of an airline's operational costs.
- **Coordinating incentives and policy frameworks with the Federal Government:** including the alignment of Queensland's biosecurity strategy with federal Net Zero Targets, ARENA and Future Made in Australia Funding, and CORSIA/European Union ETS compliance pathways. Ensuring support mechanisms both complement and reinforce Federal frameworks avoids duplication and maximises the viability of SAF

projects in the state. The Queensland Government could also advocate for the sugarcane industry to be recognised in SAF Roadmaps at a Federal level.

- **Addressing risks associated with feedstock uptake agreements and export:** particularly balancing domestic and international demand, and ensuring Queensland's aviation sector has priority access to SAF feedstock. Without these controls in place, we risk Queensland feedstock being exported to other SAF refineries, located overseas. Government could also assist in facilitating off-take agreements between growers, refiners and airlines to de-risk priority projects, with the view to earning a commercial return on any support provided.
- **Supporting research into feedstock optimisation and conversion technologies:** including the development of pilot plants and demonstration projects to test new conversion pathways (such as Alcohol to Jet – best suited to sugarcane). Focus should also be given to agricultural research to improve sugar cane yields and maximise the use of sugar by-products, which further enhances the viability of a local SAF industry.
- **Investing in transportation and logistics infrastructure:** consideration needs to be given to regional transport corridors, including Queensland's regional freight network to move feedstock efficiently, at a competitive cost, with the lowest carbon emissions intensity. At present, unlike New South Wales, Queensland does not have a dedicated freight investment plan that clearly articulates how the freight network will be developed for Queensland's regions and emerging industries.
- **Better alignment and co-ordination across the value chain** (from feedstock supplier to fuel producer to end user): we recommend the establishment of a Queensland SAF Industry Council to co-ordinate policy, planning and investment across the SAF supply chain, including growers, refiners, airlines, airports and investors. This approach will ensure policy, regulation, planning and investment are calibrated and optimised across government and industry, thus giving Queensland a competitive advantage in attracting new industry.

Role of airports

While airports are not direct users of SAF, as a key component of the aviation eco-system, they are able to assist in SAF development and delivery both at a strategic and operational level. Areas where airports can play an active role include:

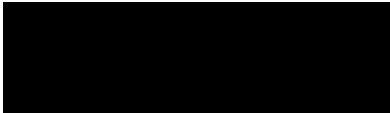
- **Upgrading fuel storage, blending, and handling systems:** to ensure SAF can be seamlessly integrated into existing jet fuel supply systems (and therefore, contain the costs of transition). For example, Brisbane Airport has partnered with Viva Energy to recondition existing fuel tanks and distribution infrastructure at Viva's Pinkenba terminal to supply SAF.
- **Supporting pilot programs to demonstrate readiness:** partner with industry to sponsor SAF demonstrations and undertake pilots to signal market readiness for SAF. Tokyo's Haneda and Narita airports, in partnership with the Tokyo Metropolitan Government, are undertaking SAF trial flights with ANA and Japan Airlines to test the technical and logistical readiness of the SAF supply chain.
- **Offering landing fee incentives, procurement policies, and commercial partnerships to address the cost gap:** including the development of commercial partnerships with airlines and corporate users to co-fund SAF on identified routes. Heathrow Airport, for example, recently launched a SAF incentive scheme built into its aeronautical charges (offering rebates on landing fees proportional to SAF uplift). This

scheme essentially halves the gap between SAF and traditional fuels, making SAF more accessible and economically viable to airlines operating from Heathrow.

- **Advocating to government and industry for supportive policy and investment:** this could include the provision of operational data and insights to validate SAF performance under real world conditions and highlight the economic benefits of SAF through ongoing economic impact research.

Thank-you for your consideration of our submission. We stand ready to work with the Queensland government and industry to maximise the opportunities for sugarcane bioenergy in Queensland. We believe by working together, we can ensure Queensland's agriculture sector capitalises on a once in a generation opportunity, whilst securing our connectivity into the future.

Kind regards



Raechel Paris
Executive General Manager