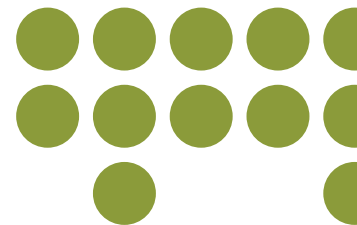


Investing in Biofutures projects in the Mackay Isaac Whitsunday Region



Queensland Government's biofutures vision

The Queensland Government is increasing its support to accelerate the biofutures industry as part of its vision for the diversification of the Queensland economy.

Queensland has strong competitive advantages such as a subtropical and tropical climate, and world-class agricultural and research sectors. The vision is supported by the strategies and actions we are implementing as Queensland becomes renowned both nationally and internationally as a place to invest, research and commercialise biofutures projects.

What is driving investment in biofutures?

Biofutures is seen internationally as the next wave of economic development, providing major opportunities for innovation, jobs and growth.

The Queensland Government's **sustainable biofuels mandates** set minimum requirements for the sale of biobased petrol and biobased diesel. Biofuels production is expected to increase due to mandates and a growth in the global demand for biofuels specifically for the aviation and marine sector.

The Queensland Government has developed a comprehensive new **Waste Management and Resource Recovery Strategy**, underpinned by a waste disposal levy, to attract investment, develop new jobs and industries and reduce waste. There are opportunities for co-located waste to energy plants.

The Mackay Isaac Whitsunday region

Located just north of the Tropic of Capricorn, the Mackay, Isaac and Whitsunday (MIW) region is positioned in the heart of the magnificent Whitsunday Islands and the Great Barrier Reef



Mackay Isaac Whitsunday's economic drivers

- a strong **manufacturing base** focused in the Mackay area
- the strong agricultural sector with 28% of Australia's sugar cane, one of the largest **winter produce** growing regions in Australia and 5% of Australia's **beef**
- the Bowen and Galilee basins containing the largest **coal mining** deposits in Australia and the majority of Queensland's prime coking coal with 26 operating mines in the region
- **tourism** based around the Whitsundays and the Great Barrier Reef

The Mackay Isaac Whitsunday region's feedstock profile

The Mackay Isaac Whitsunday region has the capability to competitively produce some of the **world's most energy dense and productive feedstocks** such as sugar cane, eucalypts and algae.

The available feedstocks of the region include:



Cropping	Sugar cane trash • Sugar cane bagasse • Sugar cane fermentation • Sorghum straw • Grain and pulses from local regions • Yeast and vinasse from ethanol processing
Food processing	Meat processing - tallow
Timber	Wood waste • State forest • Construction waste
Horticulture	Bananas • Tomatoes • Capsicums • Mangoes
Intensive livestock	Cattle, poultry & pig manure • Aquaculture waste – prawns, barramundi
Urban waste	Municipal solid waste • Biosolids

The companion market approach

The Mackay Isaac Whitsunday region has existing companion markets that can provide alternate revenue streams and cost sharing opportunities to biofutures initiatives.

These include the following markets:

- sharing of infrastructure, marketing and industry facilitation
- logistics, packaging and distribution
- electricity retail
- renewable energy supply
- waste management and reduction
- liquid fuels
- animal feeds
- processing of perishable foods to packagables

Several precinct options in the Mackay Isaac Whitsunday region have been identified:

- co-location with an existing sugar mill allowing direct access to feedstock, steam and power
- co-location with a meat processing facility
- locating at a port with direct access to port facilities

Why invest in the Mackay Isaac Whitsunday (MIW) region?

Existing **established sites** - five advanced raw sugar mills, ethanol, cogeneration and white sugar refinery facilities providing access to:

- Bagasse as **green, clean and low-cost fuel**
- Sugar and sugar streams as **low-cost fermentation feedstock**
- Access to local **skills and technical services**

Infrastructure and services - three regional **airports** at Mackay, Proserpine and Moranbah, modern and efficient **road** networks, reliable **freight** service rail networks and **seaports** at Mackay and Bowen and three bulk shipping terminals at Abbot Point, Dalrymple Bay and Hay Point.

Ideal positioning at the **gateway to the Asia-Pacific** and close economic ties with expanding Asia-Pacific markets—a clear advantage as an investment destination and export point.

An **emerging industrial biotechnology** sector and world-class expertise in research and development.

Higher **education and research**—CQ University and James Cook University campuses, QUT research facility.

Potential opportunities

HERITAGE MANUFACTURING	Sugar There are five working sugar mills within MIW with available fermentation feedstock, sugar cane and green waste and sugar cane biomass for use in second generation biofuels or hydrocarbon replacement.	Biomass co-generation and renewable energy Opportunities exist for bioenergy to contribute to balancing the electricity grid and contributing to dispatchable power to supplement other renewable energy types.	Oil seed & grains A potential for oil seed processing technology using MIW region's local supply of soy bean, sunflower and cotton seed.
WASTES	Horticultural waste Conversion of horticultural wastes into animal feedstocks is possible through blending with other nutritional elements and to utilise these organic wastes in biogas or biomass energy production.	Municipal solid waste MIW councils and mines are investigating options for reducing their waste to landfill volumes, to address the introduction of a Landfill Levy in Queensland.	
BIO-FEEDSTOCKS	Meat processing There are a variety of by-products that can be used as potential feedstocks into downstream bio-processes including tallow and wastewater for biodigestors.	Aquaculture Aquaculture requires feeds for growing the marine organisms and there may be synergies in bio-processing co-products.	Algae There is a developing production of algae in the MIW region and opportunities may present to co-locate.

Investor opportunities

The Mackay Isaac Whitsunday region has proven commitment and expertise in biofuture activities as demonstrated by the establishment of sugar mills, biofuel production, cogeneration and well-established supporting infrastructure.

These facilities can offer investors the opportunity to partner and further expand upon existing bioprocessing organisations and establish bioproduct precincts.

In addition, there are green field investment opportunities in:

- a diverse range of feedstocks and fertile land to grow new crops
- developing investor owned bioprocessing infrastructure
- research and development pilot projects

All levels of business, government and the community have a proactive approach to investment and further developing the growth of the biofutures industry in the Mackay Isaac Whitsunday region.

We look forward to an opportunity to answer any questions from investors and invite you to visit our region.

More detailed investor information is available in the Mackay Isaac Whitsunday Biofutures Prospectus. The Prospectus is accessible by lodging an Expression of Interest via the Greater Whitsunday Alliance website:

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www.gw3.com.au

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Biofutures Investor Support

Case facilitation

The Queensland Government and local MIW Councils offer a range of levels of case facilitation services depending on the complexity of a development project, the project value, the employment creation potential and the project's alignment with government policies and initiatives.

Trade and Investment Queensland (TIQ)

TIQ is the Queensland Government's dedicated global business agency, with a charter to help potential investors find and take advantage of the endless opportunities this great state offers. More information can be found here:

www.tiq.qld.gov.au/

Grant funding

The Queensland Government offers a range of funding for proponents looking to establish bio commodities production facilities in Queensland.

Find Queensland Government grants and assistance programs that may help your project here:

www.grants.services.qld.gov.au



Resources

Biofutures Queensland

Biofutures Queensland is the Queensland Government's focal point for biofutures industry support. The Department of State Development's dedicated Biofutures Queensland unit, works across the government, industry and research sectors to drive development, investment and R&D in industrial biotech and bioproducts. More information can be found here:

www.statedevelopment.qld.gov.au/industry-development/biofutures-queensland.html

Contacts

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www.tiq.qld.gov.au/

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Department of State Development, Manufacturing, Infrastructure and Planning

www.statedevelopment.qld.gov.au/regional-development/mackay-isaac-whitsunday.html

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