



Bioenergy Australia Pty Ltd
PO Box 127, Civic Square, ACT 2608



BIOENERGY AUSTRALIA SUBMISSION

DRAFT BIOENERGY VISION FOR TASMANIA

Bioenergy Australia (BA) is the national industry association committed to accelerating Australia's bio economy. Our mission is to foster the bioenergy sector to generate jobs, secure investment, maximise the value of local resources, minimise waste and environmental impact, and develop and promote national bioenergy expertise into international markets.

BA congratulates the Tasmanian government on the creation of a Draft Bioenergy Vision for Tasmania. We acknowledge the vision statement: *To embed bioenergy as a valued renewable resource for the Tasmanian economy, community, and environment as an aid to energy production, waste management and resource recovery, and reduction of greenhouse gas emissions* and think this summarises well the important role bioenergy can play in a circular economy. We also commend the Tasmanian government on the refreshingly concise and accessible nature of the Vision.

Australia's Bioenergy Roadmap (ARENA, November 2021) outlines how, by the start of the next decade, Australia's bioenergy sector could contribute to around \$10 billion in extra GDP per annum and 26,200 new jobs, reduce emissions by about 9 per cent, divert an extra 6 per cent of waste from landfill, and enhance fuel security. Now is the time to capitalise on these opportunities by prioritising bioenergy as a valuable contributor to Tasmania's renewable energy matrix.

BA feel that the draft Bioenergy Vision does a good job of capturing the issues and opportunities presented for Tasmania by bioenergy. We feel the Vision could benefit by being more specific about the kinds of policy interventions which would support development of a bioenergy industry in Tasmania. This will be our focus as we address each of the questions in the consultation document.

What are the key roles for the Tasmanian government to support bioenergy?

The Tasmanian government has an important role to play in providing the regulatory framework and market confidence required to support a strong bioenergy industry in Tasmania.

Bioenergy Australia suggest the following mechanisms to promote and sustain industry growth in renewable gas, biofuels and renewable heat:

Renewable Gas

Establish a renewable gas certification scheme

A key policy barrier to the growth of renewable gas is the lack of a market mechanism to support and encourage the use of biomethane in the national gas grid (and biogas behind the meter). Some of our largest companies (e.g., Brickworks, Arnotts and Boral), are publicly asking for renewable gas – but there is no mechanism to provide them with this product. Our members also have a range of clients seeking behind the meter solutions for renewable gas. Similarly, Australian gas consumers are increasingly aware of the environment and their purchasing power. The demand is high for gas companies to provide, and governments to support, a green gas alternative.

However, with no mechanism to verify renewable gas usage, these companies cannot clearly support desired investment, leaving a lack of urgency by some of the biggest gas users in the country to replace their natural gas with either biogas or biomethane.

The Malabar biomethane injection project specifically interacts with the New South Wales gas market and is also aiming to explore how best gas consumers can ensure they are paying for renewable gas by exploring renewable gas trading opportunities. It is expected that the learnings from this will be able to be applied across other gas networks and beyond the wastewater sector in the future.

Early findings from GreenPower and the Malabar biomethane injection framework together with renewable gas certification processes commencing imminently elsewhere (eg New Zealand) need to be considered as quickly as possible to rapidly establish a certification and trading scheme. This should be pursued urgently, not over a period of years.

Following the establishment of a renewable gas program, it would also be necessary for there to be a unified community information campaign on the benefits of renewable gas and its availability for purchase.

Implement a Green Gas Target

The development and use of Green Gas Target would act to incentivise supply chain participants to shift from fossil fuel gas to renewable gas – similar to the function of the Renewable Energy Target (RET). This could be expected to rapidly build scale and bring down renewable gas costs.

Provide suitable financial incentives

Biogas has not yet been able to compete with the low costs of natural gas as enjoyed in the current policy and finance environment. There are both capital expenditure barriers (eg cleaning and upgrading infrastructure) and operational expenditure barriers at this time. To promote biogas sector development, support mechanisms could include:

- Funding for projects or project hubs
- Funding for biogas cleaning and upgrading infrastructure for new and existing biogas facilities, and
- A renewable gas injection tariff
- Tasmania's new waste levies are substantially lower than other states. Consider increasing to make feedstocks more readily available.

Pursue supportive policy and education

Digestate is the nutrient rich by-product of anaerobic digestion. It is of the utmost importance to establish supportive, clear and fair policy and regulation for the use of anaerobic digestates. The regulation of digestates and other organic waste recycling outputs (eg compost) should be risk-based and equivalent (ie technology-agnostic). BA has commissioned a report on digestate and its uses; we will be pleased to share this with the Department when it is ready in the coming weeks.

Biogas generators, especially landfill operators capturing landfill gas, could greatly benefit from waste policies that incentivise the maximised capture and use of biogas, in a manner that effectively complements carbon abatement mechanisms.

Gas injection standards and regulatory guidelines for pipelines should be reviewed to enable renewable gas to be injected into the system. Further, carbon benefits from the use of renewable gas need to be passed onto those users who purchase the gas. We understand that changes to the national carbon emission reporting framework may be required to accommodate this.

Target: Net Zero Organic-to-Landfill Without Biogas Collection

In accordance with the waste hierarchy, waste should be recovered for its highest order use wherever it is economically feasible to do so. Therefore, instead of being disposed to landfill sites without integrated biogas collection, this recommendation is for organic waste to be collected and converted

through anaerobic digestion into higher-value products, such as biogas or biomethane. This target would significantly contribute to the national transition to a more circular economy, as discussed in the IEA report “Anaerobic Digestion of Food Waste for a Circular Economy”, by supporting industry’s energy needs, co-producing valuable organic fertilisers for farmlands and capturing precious water through land application of digestate. In addition, the injection of biomethane into the gas network would contribute to decarbonising the gas supply for households and businesses. This recommendation therefore proposes to introduce a target for the complete diversion of organic waste from landfill. The target should be supported by a ban. Reference program: in Finland, a ban on diverting organic waste to landfill came into effect in 2016. Belgium, Denmark, Netherlands and Switzerland have achieved “zero waste to landfill” with only 1% of municipal waste going to landfill with development and integration of organics processing and energy from waste infrastructure. This target could be supported by the creation of bio hubs to collect, collate and utilise organic residues as feedstocks.

Biofuels

Support for Sustainable Aviation Fuel

Overall, aviation accounts for about [2.5% of global carbon emissions](#) but this ratio is expected to climb as other sectors successfully decarbonise. The recently released [Australian Bioenergy Roadmap](#) has identified aviation as a hard to abate sector where bioenergy is uniquely positioned to provide a solution. Sustainable Aviation Fuel (SAF), made from waste such as cooking oil, municipal waste and agricultural residues, is a readily available technology that can decarbonise aviation at a time where renewable hydrogen and electrification is out of reach.

The key issue for SAF is affordability, with current production costs being substantially higher than production costs of traditional jet fuel. Bioenergy Australia will shortly release a report examining the role that can be played by consumers, government, producers, airports and airlines in bridging the price gap between SAF and JET A-1. We will be pleased to share this report with the Department once it becomes available in the coming weeks.

Due to the current cost of SAF, a business-as-usual approach is expected to return limited uptake of biojet fuels, contributing to just 12 per cent of Australia’s jet fuel consumption by 2050. However, the Bioenergy Roadmap outlines that with increased targeted focus, this market share could grow to up to 45 per cent by the 2050s, making a substantial impact on aviation emissions.

The Bioenergy Roadmap outlines the importance of stakeholder collaboration and co-investment to support the development of commercial scale SAF production.

BA encourages the Tasmanian government to consider:

- Including airline representatives in consultation stakeholder groups
- Encouraging research, pilots and trials focusing on the demonstration of advanced biojet fuels from non-food resources at commercial scale
- Securing feedstocks and supply chain integration for SAF creation
- Communicating the role and benefits of biojet fuels to the community
- Stimulating demand through incentives and targets

Commit to a Tasmanian Clean Fuels Target

As outlined in the Bioenergy Vision, Tasmania uses almost 1 billion litres of transport fuel each year. Commit to a Tasmanian Clean Fuels Target with a 10% reduction in transport related GHG emissions relative to 2020 levels by 2030, with individual annual and fuel type targets to be set after appropriate modelling. Reference program: Low Carbon Fuel Standard (LCFS). Since 2011 the LCFS in California has helped drive over US\$1.6 billion in investment in California's clean fuel economy.

Government procurement of renewable diesel and ethanol

Bioenergy Australia encourage the Tasmanian government and local councils to issue fuel supply contracts for, or incorporating, renewable diesel commencing in two years' time.

Government could also encourage business to do the same. This would underwrite project finance for the development of a renewable diesel plant using biomass.

There is also the potential for cellulosic ethanol for blending in petrol as E10 which could be mandated. Please refer to BA's recent [publication](#) on ethanol's role as Australia's octane enhancer.

Renewable Heat

Establish a Tasmanian Renewable Heat Target

The Large-Scale Renewable Energy Target (LRET) has only recognised the renewable energy benefits from electrical energy (such as the replacement of coal with renewable biomass feedstocks used to

produce electricity). A significant renewable energy opportunity is currently being missed and this recommendation is that the use of renewable biomass should similarly extend to the generation of heat energy (eg. process steam for drying in papermaking or sawmills). Creation of a renewable heat target has significant potential and could contribute substantial renewable energy per annum from the wood and paper products industry in Tasmania.

Fund a boiler swap program

BA suggest the Tasmanian government commit funding to support organisations to convert coal boilers to biomass boilers. A [similar program](#) is being successfully rolled out in New Zealand with the aim of cutting 1.8million tonnes of greenhouse gasses being emitted by 2035.

Bioenergy Australia hosts specialist member working groups with focuses on cleaner fuels, sustainable aviation fuel, the circular economy, renewable gas and renewable heat. We would be pleased to provide access to our membership to support the Tasmanian government to develop and progress its Bioenergy Vision. Please get in touch with Shahana McKenzie on shahana@bioenergyaustralia.org.au to arrange.

Sincerely,

A handwritten signature in black ink that reads "Shahana McKenzie". The signature is written in a cursive, flowing style.

Shahana McKenzie, CEO Bioenergy Australia