Submission
No 225

INQUIRY INTO PROPOSED ENERGY FROM WASTE FACILITIES

Organisation: Bioenergy Australia

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Bioenergy Australia (Forum) Pty Ltd

Bioenergy Australia Submission: NSW Inquiry into Proposed Energy from Waste Facilities

Bioenergy Australia (BA) is the national industry association committed to accelerating Australia's bio economy. Through targeted advocacy, campaigns, education, industry building and allied sector engagement, we're:

- Enabling decarbonisation of Australia's hard to abate sectors
- Enhancing energy security, supply and supporting the transition of Australia's energy system
- Growing Australia's economy and providing jobs and economic development including for regional Australia
- Enabling the development of Australia's circular economy

This submission from Bioenergy Australia is on behalf of the Renewable Gas Alliance (RGA) and The Low Carbon Fuels Alliance of Australia and New Zealand (LCFAANZ). These alliances were founded to accelerate the development and deployment of Low Carbon Liquid Fuels (LCLF) and Renewable Gas in Australia. Individual members of the alliances will be providing more detailed submissions specific to their business and expertise. This submission is a collective response and does not represent the views of any specific member

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 (predominately regional), 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 supporting the development of low carbon liquid fuels and renewable natural gas through NSW's energy from waste strategies and frameworks.

Bioenergy Australia thanks the Select Committee on Proposed Energy from Waste Facilities for the opportunity to provide a submission to this inquiry. NSW has a significant opportunity to improve its waste management and energy outcomes by supporting the production of low carbon liquid fuels (LCLF) and renewable gas. We stress that this submission focuses on technologies that convert waste into low carbon fuels and renewable gas and not traditional EfW approaches, such as incineration or combustion.

Advanced technologies that convert waste into low carbon fuels and renewable gas are fundamentally different from traditional EfW approaches and misclassifying them as such risks regulatory confusion and could impede their development.

NSW generates over 20 million tonnes of core waste each year. Of this, 35% goes to landfill, costing households and businesses over $750 million in waste levies alone a year. [1] This all adds to Australia being one of the highest per capita waste generators in the world. [2] Under the waste hierarchy, waste should be recovered for its highest value use wherever it is economically feasible. Once no further recoverable value can be extracted from residual waste in an economically or environmentally sustainable way, recovering energy from waste becomes a preferable alternative to landfill. This waste can serve as a key feedstock to produce LCLF and renewable gas, displacing fossil fuels and delivering even greater environmental benefits.

LCLF and renewable gas are critical solutions that turn Australian waste, agricultural residues, and feedstocks into valuable, sustainable energy. By transforming waste that would otherwise be landfilled, left to decay, or burned off into high-value sustainable energy, LCLF and renewable gas can play a critical role in decarbonising Australia's hard-to-electrify sectors. This process creates new revenue streams and reduces waste disposal costs, enhancing resource efficiency across multiple industries.

However, the current NSW Energy from Waste (EfW) framework is not fully effective in supporting the development of LCLF and renewable gas projects. We submit that there is an opportunity to update this framework and related waste management strategies to better maximise the use of waste as a feedstock for LCLF and renewable gas projects, while also ensuring these frameworks do not misclassify these technologies under traditional EfW methods, such as incineration or combustion.

LCLF are replacement fuels with significantly lower greenhouse gas emissions than fossil fuels. They can be blended or used as a 100% substitute in existing assets, machinery, vehicles and infrastructure—allowing fuel-reliant industrial processes to reduce emissions without the cost, delay or disruption of overhauling their equipment and operations. This compatibility enables current liquid fuel-reliant assets to fulfill their operational lifespans, thereby reducing the need for premature replacements.

LCLFs include:

- Sustainable Aviation Fuel (SAF) (aviation)
- Renewable Diesel (heavy haulage, rail, construction, mining, agriculture)
- Biodiesel (heavy transport, marine, construction, agriculture)
- Biomethanol (Marine and heavy transport)
- Ethanol (Road and pathway for aviation)
- BioLPG (industrial heating, CHP, off-grid energy, transport)
- BioLNG

With liquid fuels accounting for 45% of Australia's total energy use, and many of these sectors expected to remain dependent on them well into the future, decarbonising the economy will not be possible without low-carbon fuels.[3]

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[1] https://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0007/334564/the-circular-economy-opportunity-in-NSW.pdf

[2] https://cdn.revolutionise.com.au/cups/bioenergy/files/jsgqguyb1zftkx6c.pdf

[3] Transitioning Australia's Liquid Fuel Sector: The Role of Renewable Fuels

Renewable Gas is a low-carbon, renewable alternative to natural gas. It recovers and utilises low-value waste and feedstock to create high-value renewable energy. The potential of these resources is significant, with approximately 400 petajoules of biomethane able to be recovered from existing sources today—more than twice the annual gas consumption of Australian households—demonstrating the immediate scale of impact renewable gas could have on Australia's energy system and industrial decarbonisation.[4] Renewable gas offers a sustainable alternative to finite conventional natural gas, which is increasingly under pressure, with AEMO's 2025 Gas Statement of Opportunities projecting potential east coast shortfalls from 2028.[5]

- **Renewable Natural Gas (also known as biomethane)** is a near-pure source of methane that is a direct replacement for natural gas. It is produced either by "upgrading" biogas (a process that removes any CO_2 and other contaminants present in the biogas) or through the gasification of solid biomass followed by methanation. It is carbon neutral as it harnesses the energy potential from organic materials such as agricultural residues, waste, as well as landfill gas, wastewater sludge, livestock manure, and curb-side food organics and garden organics (FOGO), supporting the circular economy.
- **Renewable hydrogen** is produced by electrolysis of water using renewable electricity, resulting in lower carbon emissions than conventional production from natural gas
- **BioCNG** is a renewable replacement for compressed natural gas for vehicles. It is 95% pure methane gas, achieved through the upgrading of biogas.

As a drop-in replacement for natural gas, renewable gas enables industrial facilities to decarbonise by reducing emissions in hard-to-abate sectors where alternative pathways are limited. It can be used directly in existing pipelines, equipment, and industrial processes without requiring costly upgrades, downtime, or the premature retirement of infrastructure. This compatibility minimises time, capital, and operational disruptions typically associated with fuel switching, allowing industrial facilities to continue to operate while reducing emissions.

LCLF and renewable gas offer the material benefits beyond decarbonisation: improving local air quality and public health[6], fostering energy security, harnessing defence interoperability, future proofing our tourism industry, and creating regional jobs and economic development.

For example, a domestic LCLF industry can support the existing workforce across Australia with an estimating that the 1,500 workers employed in traditional petroleum refining could easily transition into renewable liquid fuels roles, including at the same worksites.[7] Australia-wide, a domestic SAF industry alone could generate nearly 13,000 jobs in feedstock supply and 5,000 high-value jobs in facility construction and operation.[8]In NSW alone, By 2050, the market value of biogenic SAF in NSW could amount to A$11.9 billion in Australia and A$4.8 billion in NSW based on projected demand volumes.[9]

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4 Energy Networks Australia, Biomethane Opportunities to Decarbonise Australian Industry: Converting Waste into Grid-Injectable Biomethane (2025)
5 Unlocking Renewable Natural Gas to Enhance Energy Security and Maintain Australia's Manufacturing Sector (July 2025)
6 Rhodium Group, 'Sustainable Aviation Fuels: The Key to Decarbonizing Aviation' (2023)
7 Jobs and Skills Australia's, 'The Clean Energy Generation: workforce needs for a net zero economy'
8 https://www.qantas.com/content/dam/qantas/pdfs/qantas-group/icf-report-australia-saf-policy-analysis-nov23.pdf
9 NSW Sustainable Aviation Fuel Prospectus (2024)

In terms of renewable gas, adoption of biogas technology has the potential to generate over 18,000 full-time jobs, primarily across Australia's regional areas, and contribute $50 billion to Australia's GDP.[10] The renewable gas sector can also leverage existing skills in the gas sector, allowing traditional energy workers to transition to cleaner energy roles while retaining their jobs. With approximately 2,100 people currently employed in pipeline transport, this workforce can be repurposed for future renewable gas projects.[11] Renewable gas production also produces valuable by-products, including digestate, fertiliser, CO_2, heat, and electricity, which can enhance the overall economic viability of these projects as well as their environmental benefits.

We provided a response to the NSW EPA consultation on the **NSW Energy from Waste (EfW) Framework review** earlier this year. This response is attached to support this submission.

Overall, we support the extension of EfW precincts to support LCLF and renewable gas projects, provided these areas comply with strict environmental and planning requirements.

Under the current NSW framework, EfW projects are limited to a small number of locations in NSW, which can impact LCLF and renewable gas project development. This restriction on LCLF and renewable gas projects can create transport and logistical challenges that increase the costs of projects and reduce their viability. Expanding the range of eligible locations for these types of projects would allow them to be established closer to waste and feedstock sources, infrastructure, and key markets. This would improve logistical efficiency, reduce costs, and deliver broader environmental benefits.

Furthermore, we stress that applying a broad "waste-to-energy" lens risks misclassifying technologies that thermally or chemically convert municipal solid waste (MSW) into drop-in low carbon fuels and renewable gas — for example, hydrothermal liquefaction (HTL), gasification with Fischer-Tropsch synthesis (Gasification+FT), gasification with gas fermentation, pyrolysis, anaerobic digestion and similar processes.

Unlike traditional EfW approaches that generate heat or electricity through combustion or incineration, these technologies produce high-value, drop-in fuels that directly displace fossil imports and deliver significant emissions reductions.

Too often, EfW (incineration) is conflated with technologies that convert MSW into drop-in low carbon fuels. These processes involve controlled chemical or thermal conversion rather than combustion and therefore should not be grouped under the general umbrella of thermal processing.

Broad EfW strategies risk creating uncertainty around the use of recovered resources for higher-value applications beyond energy, such as the advanced recycling of waste plastics. This can introduce unnecessary regulatory barriers and potential feedstock limitations, undermining project viability and growth in this emerging sector.

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[10] RACE for 2030 report into the opportunity of anaerobic digestion for electricity, transport and gas.
[11] Jobs and Skills Australia, The Clean Energy Generation: workforce needs for a net zero economy (2023)

Thank you for taking the time to consider our submission. Any questions or request for further assistance are welcome and can be directed to

Sincerely,

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Bioenergy Australia Submission: NSW energy from waste framework review

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.

This submission from Bioenergy Australia is on behalf of the Renewable Gas Alliance (RGA) and The Low Carbon Fuels Alliance of Australia and New Zealand (LCFAANZ). These alliances were founded to accelerate the development and deployment of Low Carbon Liquid Fuels (LCLF) and Biomethane in Australia. Individual members of the alliances will be providing more detailed submissions specific to their business and expertise. This submission is a collective response and does not represent the views of any specific member

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 (predominately regional), 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 the development of low carbon liquid fuels and renewable gas within the NSW energy from waste framework.

Bioenergy Australia thanks the NSW EPA for the opportunity to provide feedback on the '*NSW Energy from Waste Framework Review*'. NSW has a significant opportunity to improve its waste management and energy outcomes by supporting the production of low carbon liquid fuels (LCLF) and biomethane.

Under the waste hierarchy, waste should be recovered for its highest value use wherever it is economically feasible. Once no further recoverable value can be extracted from residual waste in an economically or environmentally sustainable way, recovering energy from waste becomes a preferable alternative to landfill. This waste can serve as a key feedstock to produce renewable energy, displacing fossil fuels and delivering even greater environmental benefits.

LCLF and biomethane will play an essential role in NSW's clean energy transition. NSW generates over 20 million tonnes of core waste each year. Of this, 35% goes to landfill, costing households and businesses over $750 million in waste levies alone a year.[1] This all adds to Australia being one of the highest per capita waste generators in the world.[2] Diverting this waste as feedstock for clean fuel production can reduce reliance on fossil fuels and lower landfill volumes.

[1] https://www.chiefscientist.nsw.gov.au/__data/assets/pdf_file/0007/334564/the-circular-economy-opportunity-in-NSW.pdf
[2] https://cdn.revolutionise.com.au/cups/bioenergy/files/jsgqguyb1zftkx6c.pdf

Low Carbon Liquid Fuels and Biomethane emit significantly lower — or near-zero — lifecycle CO_2 emissions compared to the fossil fuels they replace. These fuels can be used as drop-in or blended substitutes within existing infrastructure, equipment, engines, and vehicles. This compatibility allows emissions reductions without the need for new infrastructure or early retirement of existing assets, enabling current fuel and gas reliant systems to complete their intended operational lifespans.

Low Carbon Liquid Fuels (LCLF) include

- Sustainable Aviation Fuel (SAF) (aviation)
- Renewable Diesel (heavy haulage, rail, construction, mining, agriculture)
- Biodiesel (heavy transport, marine, construction, agriculture)
- Ethanol (Road and pathway for aviation)
- Biomethanol (Marine and heavy transport)
- BioLPG including propane, butane and dimethyl ether (DME) (standalone high intensity heat, industrial manufacturing and food processing)

Even with ongoing electrification trends, Australia will still require 30 billion litres of liquid fuel in 2050. With targeted investment in refining and infrastructure, Australia's domestic LCLF production — leveraging abundant waste and feedstock resources — has the potential to displace up to 19% of imported fuels by 2040, and as much as 47% by 2050. NSW is perfectly positioned to lead in this sector, with significant waste sources availability to support the development of a robust LCLF industry.

Biomethane is a near-pure source of methane that is a direct replacement for natural gas. It is produced either by "upgrading" biogas (a process that removes any CO_2 and other contaminants present in the biogas) or through the gasification of solid biomass followed by methanation. Biomethane is a renewable, carbon-neutral gas that can be used in the same way as natural gas but does not contribute additional carbon emissions to the atmosphere. It can be injected directly into existing gas grids and transmission infrastructure, used by current gas appliances without requiring costly upgrades that could affect the asset's lifespan or operation.

Biomethane will play a critical and ongoing role in Australia's manufacturing and industrial sectors, particularly for their heating, refining, and reforming processes that cannot be electrified, providing a decarbonisation solution for gas-reliant industries.[3]

Australia's biomethane industry has significant growth potential, with a capacity to replace up to 22.5% of the nation's current fossil gas usage. According to the Race for 2030 report, Australia's biogas potential is estimated at 371 PJ per year by 2050, with agricultural waste contributing 319 PJ per year, and landfills, sewage sludge, livestock manure, and food organics and garden organics (FOGO) accounting for the remaining 52 PJ per year.

[3] Victoria's Gas Substitution Roadmap (2023)

Waste and feedstock potential

LCLF and biomethane can be produced from a wide range of local feedstocks, including:

- Landfill
- MSW
- Commercial & industrial waste
- Agriculture residues (e.g. sugarcane tops and trash, bagasse and mill mud, cotton trash, straws from cereal, wheat and sorghum, forestry, wood processing and algae).
- Fats and oils (e.g., oilseed, oil tree plantation crops, tallow, rendered animal fats, and used cooking
- Wastewater treatment plants
- Specialised fallow or rotational crops

Environmental & waste management opportunities

Low carbon liquid fuels and renewable gas are critical solutions that turn Australian waste, agricultural residues, and feedstocks into valuable, sustainable energy.

These renewable products can utilise waste that would otherwise end up in landfills, decay in fields, or be burned off, transforming these materials into high-value, sustainable energy that can be utilised to decarbonise Australia's hard-to-electrify sectors. In addition to being a waste management and maximisation pathways, these products offer significant emission reduction potential:

- Biomethane operates within a closed-loop system by converting waste into renewable energy, capturing methane and greenhouse gas emissions, and producing digestate that enriches soil health, allowing nutrients to cycle back into the ecosystem. Replacing natural gas with biomethane can reduce emissions by 8–31%, depending on policy support.[4]

- SAF can reduce emissions across the lifecycle by 80%, compared to fossil jet fuel, depending on the feedstock.[5] Replacing just 10 per cent of jet fuel with Sustainable Aviation Fuel, based on airline targets, could be the equivalent of around 220 million less kms flown annually by a Boeing 747.

- Renewable diesel offers an excellent, tested and readily available alternative to mineral diesel for heavy trucks, with as much as a 75-95% reduction in life cycle emissions compared with mineral diesel. [6] Replacing just 2 per cent of diesel with biodiesel or renewable diesel, based on current targets, would be the equivalent of taking 29,000 rigid trucks off the road.

- Biodiesel (which differs from renewable diesel[7]) is also a pathway which produces less carbon dioxide emissions than oil-based fuels over the full lifecycle of production and use with reduced tailpipe emissions.[8]

- Ethanol burns cleanly, lowers emissions, and improves the efficiency of engine combustion by providing additional oxygen (it is known as both an octane enhancer and oxygenate).

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[4] Energy Networks Australia, '2030 Emission Reduction Opportunities for Gas Networks'
[5] IATA, 'Developing Sustainable Aviation Fuel (SAF)'
[6] Industry Letter, 'Open Letter to The Hon Chris Bowen MP - Minister for Climate Change & Energy' (2023).
[7] US Department of Energy, Biodiesel and Renewable Diesel
[8] Lifecycles, 'Greenhouse gas and sustainability footprints of current and future biofuels for Queensland' (2016)

Replacing just 6 per cent of petrol with bioethanol, based on targets, would be the equivalent of taking 730,000 vehicles off the road.

- Biomethanol is chemically identical to fossil fuel-based methanol but results in significantly lower GHG emissions during the entire life cycle.[9]

Noting that fossil fuels (coal, oil, and gas) provide around 90% (1230 PJ) of the primary energy consumed in NSW, developing a waste-to-energy framework that supports the development and adoption of low-carbon liquid fuels and biomethane offers a critical opportunity for emissions reduction while diversifying energy sources.[10]

Economic opportunities

- **Support local economies and jobs:** By utilising locally produced feedstock and waste, the both the LCLF and biomethane industry can drive local job creation and regional economic growth, and offering new income sources, particularly for growers.
- **Attracting international investment:** A local LCLF and renewable gas industries can attract significant international investments for project development, leading to increased economic growth, job creation, enhanced local production, and innovation in the region.
- A LCLF industry can support the existing workforce across Australia with the Clean Energy Generation: Workforce Needs for a Net Zero Economy estimating that the **1,500 workers** employed in traditional petroleum refining could easily transition into renewable liquid fuels roles, including at the same worksites.[11]
- Australia-wide, a domestic SAF industry alone could generate nearly **13,000 jobs** in feedstock supply and **5,000 high-value jobs** in facility construction and operation.[12]
- By 2050, the market value of biogenic SAF in NSW could amount to **A$11.9 billion** in Australia and **A$4.8 billion** in NSW based on projected demand volumes.[13]
- Adoption of biogas technology has the potential to generate over **18,000 full-time jobs,** primarily in regional areas, and contribute **$50 billion to Australia's GDP**.[14]
- Biomethane production produces **valuable by-products** of biomethane, including digestate, fertiliser, CO_2, heat, and electricity, which can enhance the overall economic viability of these projects.
- The biomethane sector can leverage existing skills in the gas sector, allowing traditional energy workers to transition to cleaner energy roles while retaining their jobs. With approximately **2,100 people** currently employed in pipeline transport, this workforce can be repurposed for future biomethane projects.[15]

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[9] https://www.sciencedirect.com/science/article/abs/pii/.
[10] Opportunities for a renewable fuel industry in NSW Discussion Paper (2024)
[11] Jobs and Skills Australia's, 'The Clean Energy Generation: workforce needs for a net zero economy'
[12] https://www.qantas.com/content/dam/qantas/pdfs/qantas-group/icf-report-australia-saf-policy-analysis-nov23.pdf
[13] NSW Sustainable Aviation Fuel Prospectus (2024)
[14] RACE for 2030 report into the opportunity of anaerobic digestion for electricity, transport and gas.
[15] Jobs and Skills Australia, The Clean Energy Generation: workforce needs for a net zero economy (2023)

Proposed changes to Energy to Waste precincts

We support the extension of Energy from Waste (EfW) precincts, as it presents a valuable opportunity for the development of biomethane and LCLF projects. However, we believe these revisions could go further by enabling EfW development in additional areas across NSW, provided these areas comply with strict environmental and planning regulations.

Under the current framework, EfW projects are limited to a small number of locations in NSW, most of which are distant from Sydney—a significant source of feedstock. This creates substantial transport and logistical challenges, increasing LCLF and biomethane project costs and reducing viability. Expanding the range of eligible locations would allow projects to be established closer to waste/feedstock sources, infrastructure, and key markets. This would improve logistical efficiency, reduce costs, and deliver broader environmental benefits.

NSW has significant amounts of waste resources spread across the state, which could be optimised for LCLF and biomethane production, further supporting these energy transition goals. The *NSW Sustainable Aviation Fuel Prospectus* outlines the state's potential, as shown in figure below.

NSW's most abundant regions for SAF feedstocks

Region	Most abundant feedstock types	Total tonnage (ton/yr)
Riverina-Murray	Cropping 3,247,688 MSW 128,625 C&I waste 154,195 Forestry 218,447 Livestock 94,218 Wood processing 254,730	7,000,000
Sydney region[16]	C&I waste 1,663,750 MSW 1,466,783 C&D waste 692,625	3,823,158
Central West	Cropping 2,162,740 MSW 332,844 C&I waste 58,368 Forestry 104,939 Wood processing 110,759	2,769,650
New England-North West	Cropping 2,077,259 MSW 58,932 Forestry 121,544 Livestock 114,813	2,372,548
Richmond-Tweed	Cropping 368,399 Forestry 70,444 Livestock 74,018	580,000
Coffs Harbour-Grafton	Cropping 179,785 Forestry 246,391 Wood processing 91,901	545,000
Mid North Coast	MSW 217,977 C&I waste 137,756 Forestry 221,595 Livestock 95,663	804,000
Hunter Valley excluding Newcastle	Livestock 117,314 MSW 420,757 C&I waste 207,843	850,000
Illawarra	MSW 164,212	270,000
Capital Region	Cropping 436,784 MSW 309,894 C&I waste 175,997 Forestry 495,924 Livestock 93,537 Wood processing 53,528	1,500,000
Total		**22,000,000**

We support a rigorous approval process for proposed EfW projects in NSW that carefully considers both local and broader community interests. However, the existing Environment Planning and Assessment Act 1979 already imposes strict checks and balances, and therefore the precinct limitations further constrain project delivery, making projects commercially impractical — highlighting why no EfW projects have yet progressed.

Proposed changes to the definition of 'thermal treatment'

Expanding the exclusions to allow processes that treat waste to produce "like for like" products or inputs for those products — not just plastic — will significantly broaden the types of waste that can be thermally treated. This change could unlock new opportunities for the production of low-carbon liquid fuels and biomethane from a wider range of waste materials, thus enhancing the capacity to meet both energy and emissions reduction targets.

Furthermore, by enabling processes that produce clear environmental benefits, this proposal can support the growth of LCLF and biomethane projects. As highlighted above, these products offer significant environmental benefits by reducing emissions, promoting waste-to-energy solutions, and helping to decarbonise the energy sector. Expanding these exclusions can create more opportunities for LCLF and biomethane production by strengthening the business case for these projects, increasing investor confidence, and attracting waste-to-energy investment to the state.

However, we note concerns that applying a broad "waste-to-energy" lens risks misclassifying hydrothermal liquefaction (HTL) and similar technologies. HTL is a non-combustion, thermal liquefaction process that converts bio-based feedstocks (e.g. agricultural and forestry residues, sewage sludge, and organics from MSW) into a renewable bio-intermediate to produce LCLF, including SAF, marine biofuel and renewable diesel. Unlike traditional EfW approaches that recover heat or electricity via combustion or incineration, HTL delivers high-value, drop-in fuels that displace fossil imports and reduce emissions at scale.

As EfW is classified as a "thermal process" that produces "energy" – we submit that HTL is not EfW, as it is neither a thermal process, nor does it produce energy as its primary output. HTL is more accurately a "thermo-chemical" process - it operates at moderate temperatures (comparable to manufacturing processes such as mechanical recycling) to produce low carbon products from renewable and waste feedstocks. There is no combustion activity during this process and so the umbrella of thermal processing should not be applied to HTL.

Broad EfW strategies risk creating uncertainty around the use of recovered resources for high-value applications beyond energy, such as advanced recycling of waste plastics. This can lead to unnecessary regulatory barriers and potential feedstock limitations, which may undermine project viability and scale in an emerging sector.

Proposed change to exception for powering onsite industrial or manufacturing processes

We support adjusting the exception under clause 144(4) to enable case-by-case approval of on-site energy recovery from waste where it demonstrates a clear environmental benefit.

However, it is important this framework also recognises the value of directing suitable waste streams towards biomethane production and grid injection, where it can displace fossil gas at scale.

A flexible approach that allows the market to determine the most efficient and sustainable use of feedstock — whether for on-site energy use or grid injection — will best support NSW's decarbonisation and waste reduction objectives.

Thank you for taking the time to consider our submission. Any questions or request for further assistance are welcome and can be directed to shahana@bioenergyaustralia.org.au.

Sincerely,

Shahana McKenzie
CEO Bioenergy Australia