22 July 2025

Position statement

Bioenergy: A ready, cheaper alternative to LNG

The release of the LNG import investigation confirms what's already clear. LNG is an expensive energy option.

"The Bioenergy Association welcomes the investigation," says Executive Officer Brian Cox.

"But we urge the need for a broader energy strategy that includes all technologies, and especially bioenergy. Growing New Zealand's manufacturing and employment base depends on a stable, secure, and sovereign energy supply. Without it, industry struggles, as energy can make up a third of production costs."

Cox highlights that the report indicates that LNG's landed cost is around $18/Giga Joule (GJ), with retail prices likely exceeding $36/GJ.

"In contrast, bioenergy heat from wood residues starts at about $13/GJ, almost 40% cheaper than landed LNG.

"Electricity-based heat can cost as much as $50-$60/GJ for most users, and upwards of $35/GJ even for very large users. This only reinforces the need to use the right fuel for the right application.

"There's no shortage of biomass for energy use," Cox said.

"In addition to forest and processing residues, New Zealand exports 20 million tonnes of low-grade logs annually, mainly to China.

"In energy terms this is a lot - it represents 160m GJ of gas.

"For context the whole North Island only uses about 25m GJ of gas. You would need less than 20% of those logs to meet that demand, and could use the rest to make biodiesel, increasing New Zealand's energy resilience and sovereignty."

Instead of pursuing costly LNG imports or building more power stations under the 'electrify everything' model, Cox says policy should support fuel-use efficiency and value creation.

"Bioenergy from wood residues doesn't require growing energy crops. It's a by-product of forestry and wood processing, creating jobs and new business. Integrating forestry into farms improves land management and farm viability.

"Importing LNG does none of this—and only adds cost."

Ends

Additional information

Contact

Brian Cox

Executive Officer

+64 (0)274 771048

brian.cox@bioenergy.org.nz

Bioenergy and biofuels sector

www.bioenergy.org.nz

1. Bioenergy has a unique point of difference from other forms of renewable energy as it is the most flexible and versitile form of renewable energy and contributes widely to the New Zealand economy. The use of biomass for energy (bioenergy) provides a fundamentatlly different least cost approach to achieving a low carbon economy compared to all other renewable energy forms. Biomass use and bioenergy can:
    - substitute for all fossil fuel uses for any energy application and is carbon neutral,
    - contribute to carbon storage (remove GHG from the atmosphere)
    - provides significant opportunities to address environmental issues arising from optimisation of land use (eg pastoral intensification and landfilling)
    - Provide many opportunities for regional economic growth and employment based on our under-utilsed land resource.
2. Focusing on use of biomass as a valuable resource leads to new business opportunities, improved business resilience of landowners, and extraction of value from waste. Energy is often the co-product of higher value products such as regional employment, bio-based materials and more resilient land use.
3. Bioenergy is from a fully renewable resource, using proven technologies and has extreme flexibility. The processing of biomass can produce a wide range of revenue streams from application of heat; generation of electricty; use as transport fuel; extraction of chemicals and manufacture of bio-based materials; use as bio-fertiliser; and purification of water.
4. Communities and business adopting a circular economy approach by matching local wood and waste residues as feedstock as an input to creation of products, optimises the financial viability of the business, offsets costs of waste disposaland being used to generate employment and new business that supports the local economy.
5. Bioenergy initiatives are generally highly integrated with other sectors and other activities so cross sector and all-of-government approaches are necessary.For example integrated agriculture land use for animal health management with shelter can produce revenue creating wood fuel.

6. Bioenergy could achieve greenhouse gas reductions of:
    - 1.8 Mt CO_2 -e pa from reduced use of coal and gas for process heat

   This level of greenhouse gas reduction are comparable but less cost than many of the other initiatives currently being pursued by Government. (Bioenergy projects funded by the GIDI funding programme delivered a tonne of CO2 abatement at an average cost of around $9/T of taxpayer money granted, whilst the electrification projects (electrode boilers and High temp heat pumps) cost nearly $30/T) www.bioenergy.org.nz/greenhouse-gas-reduction
7. The vision for bioenergy - Economic growth and employment built on New Zealand's capability and expertise in forestry, wood processing and bioenergy production from waste - leading to new business opportunities which by 2050 could more than double biomass energy supply up to 27% of the country's energy needs, with a consequential 15% reduction in greenhouse gas emissions*.[* compared to 2017]

Combustion of biomass for process heat

www.usewoodfuel.org.nz

1. The use of biomass fuels for process heat are proven and widely used by those with immediate access to biomass which can be used as a fuel.
2. The market for buying and selling biomass fuel by those without immediate access to their own sources of biomass builds on strong foundations.
3. The biomass fuel supply chain has a number of players but like any evolving market the New Zealand biomass fuel supply market now has cornerstone players who are expanding their supply capabilities at a fast but orderly rate so that boom/bust scenarios will be avoided.
4. Unlike fossil fuels whose quantity is finate there is potentially no reason why biomass fuel supply will be a future problem. There are many avenues for sourcing biomass such as plantation and farm forestry. The forestry programme will produce additional biomass fuel plus be a new carbon sink every 30 years by planting commercial forests.
5. Process Heat accounts for about 35% of NZ's energy consumption *
6. Around 55% of process heat demand is supplied by burning fossil fuels *
7. Around 68% of process heat is made using boiler systems *
8. The industrial sector (79%) is the largest user of process heat *
9. N.I. industry uses about 25PJ of natural gas (25,000,000)
10. NZ currently exports around 20 million tonnes of logs per year (160,000,000GJ)
11. Bioenergy currently provides 9% of NZ's energy. This can be increased to 27% by 2050.