

## The plan for bioenergy security: A homegrown energy solution for New Zealand

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The New Zealand Integrated Bioenergy Programme is a coordinated plan to turn forestry residues, wood waste and organic material into renewable energy. Instead of being left to rot or wash downstream in the next storm, that material could be used to produce renewable electricity, heat and gas, or to free up electricity and natural gas for its highest value applications.

*New conflict overseas comes with a price tag at home. Rising fuel costs, disrupted supply chains, and growing uncertainty are already being felt across New Zealand. It raises a simple question: why are we looking to expand our reliance on global energy markets, when we have the resources to build our own?*

The country is right now grappling with vulnerability in its energy insecurity. Gas shortages, dry hydro years and reliance on imported fuels have exposed weaknesses in the system. Which will be heightened with the Government's commitment to importing liquefied natural gas (LNG) to provide backup supply.

But what if part of the answer is already here?

The Bioenergy Association of New Zealand (BANZ) has put forward to Government a co-investment proposal

called the [New Zealand Integrated Bioenergy Programme](#), a coordinated plan to turn forestry residues, wood waste and organic material into renewable energy. Instead of being left to rot or wash downstream in the next storm, that woody material could be used to produce renewable electricity, heat and gas, or to free up electricity and natural gas for its highest value applications.

### From Slash to Energy

Forestry slash, seen in branches, tree tops and low-grade logs left after harvesting, has become a lightning rod in public debate. During heavy rainfall, wood from commercial or non-commercial plantings can be swept into waterways, damaging farms, bridges and coastal communities. Yet with the right commercial incentives much of this material can be recovered prior to becoming a problem and has real energy value.

Wood is essentially stored energy. When used properly, it can provide reliable industrial heat or fuel electricity generation during dry years.

Bioenergy Association's proposal aims to coordinate the collection of forestry residues and organic waste, link them to energy users, and build regional supply chains so biomass becomes a dependable part of the national energy mix.

It's not experimental technology. Biomass boilers already operate across New Zealand. More than 400 megawatts of biomass heat capacity are already installed. That is around 8% of total energy demand.

The challenge, industry leaders say, isn't technical, it's coordination. Projects often stall because fuel supply and energy demand are developed separately.

Investors hesitate without long-term supply certainty. Suppliers hesitate without guaranteed demand. The programme aims to solve that "chicken and egg" problem by integrating planning at a regional level.

### Introducing Renewable Gas: Biomethane

Wood isn't the only resource in play. Organic waste, from food processing, farms, wastewater and landfills, can be converted into biogas, and then upgraded into biomethane.

Biomethane is chemically identical to natural gas. That means it can be injected directly into existing gas pipelines and used in homes, and businesses without changing appliances.

New Zealand could produce renewable gas domestically from organic waste streams that already exist. Already around 4 PJ of biogas is being produced at waste-water treatment facilities and landfills. This has the potential to be expanded to around 20 PJ, representing a significant contribution to domestic natural gas use annually.

Under the Integrated Bioenergy Programme, regional facilities would capture food waste, agricultural residues and other organic material to produce biomethane. That renewable gas could help replace fossil gas, strengthen supply, and reduce emissions, all while solving waste management challenges at the same time.

In simple terms, yesterday's waste could become tomorrow's gas supply.

### More Than Just Energy

The proposal is not just about energy supply. It's also about resilience.

On many farms, small areas of land deliver little economic return but are prone to erosion. Integrating trees into those areas, and into managed shelterbelts, can stabilise soil while creating income through bioenergy feedstock.

Better management and recovery of forestry residues by creating value from what is currently wasted, could reduce the volume of slash left on hillsides and reduce the scale of debris entering rivers.

Other countries, including parts of Europe and Canada, treat bioenergy and biomethane as core infrastructure, combining forest management, waste strategy and energy planning. New Zealand has the same opportunity.

### What Would It Cost?

Estimates suggest the programme would cost less than a quarter of the cost the government has put

forward for the LNG commitment. Additionally, the project proposes combining government support with private investment. That funding would help convert industrial boilers, develop renewable gas facilities, and establish regional biomass supply systems.

In the context of national infrastructure spending, supporters say, it is modest, especially compared to repeated storm recovery costs, or the expense of building LNG import capacity. Less taxpayer's money and better outcomes for New Zealand inc.

### The Bigger Question?

Bioenergy may not capture headlines like wind turbines or solar farms. But it has one advantage, it can be stored, transported and delivered on demand.

Wood can be stockpiled. Biomethane can flow through existing pipelines. Heat and power can be generated when needed not just when the wind blows or the sun shines. Bioenergy is complimentary to these energy sources, not instead of.

The Integrated Bioenergy Programme presents itself as a practical step, linking land use, waste management, renewable heat and renewable gas in one coordinated plan.

It won't stop storms. It won't solve every energy challenge overnight.

But it could turn what is currently seen as debris and waste into something far more valuable: secure, homegrown energy and a more resilient future.

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