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Media Statement

Forestry and wood transformation plan critical to energy future

The Bioenergy Association welcomed consultation on the government's draft Forestry and Wood Processing Industry Transformation Plan, and the better utilisation of New Zealand's vast forestry resource.

Rob Mallinson, convenor of the Bioenergy Association's Solid Biofuels Group, says bioenergy from forestry residues, will support New Zealand's energy system as pressure on the electricity sector is further exacerbated by increasing demand.

"New Zealand's renewable electricity resources are already coming under increasing strain as we phase out our off-shore natural gas fields, and ramp up use of electricity for transport."

"Greater use of bioenergy and biofuels can ensure that electricity is available for applications where it is best used, and can help to spread the load and reduce reliance on coal for electricity generation."

"Better support for the energy system overall will also help ease demand for the use of coal for process heat and electricity generation," he says.

"Pressure on our electricity sector will be further exacerbated by increasing future demand for electricity. More heat pumps are being used for residential use and for heating swimming pools, schools and other commercial buildings.

"Aotearoa has also started its journey of de-carbonising the transport fleet – meaning ever-increasing demand for electricity to charge the EV fleet. On top of that, some industrial sites are choosing to use electric boilers.

"Energy demand is up and growing and will not abate. The good news is that bioenergy can help with the heavy lifting as our country adapts to the phase-out of fossil fuels and keeps the lights on.

"Renewable diesel can help decarbonise utes and SUVs; biogas can feed industrial gas boilers as well as be used in home heating and cooking; firewood and wood pellets can heat homes efficiently and economically; and forestry, sawmilling residues and low-grade export logs can be used to fuel industrial boilers.

"New Zealand sustainable forestry practice offers an ongoing source of low carbon, locally-sourced energy for industrial use. And through the magic of photosynthesis, biomass is actually stored solar energy, so it can be released 24/7, whenever and wherever there is demand. Biomass is nature's very own energy battery."

Mallinson says the Forestry and Wood Processing Industry Transformation Plan would be a valuable input into New Zealand's National Energy Strategy due in 2024.

"The right policy settings will ensure the bioenergy industry can alleviate the burden on our electricity grid, and support New Zealand through the looming decarbonisation energy crunch.

"A shared energy future is imperative to meeting our carbon reduction goals," Mallinson says.

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A copy of the ITP will be made available by 5pm, 19 August on the Te Uru Rākau website.

Additional information: Bioenergy and biofuels sector

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. NZ exports approximately 80PJ (9 million green tonnes pa) of low grade export logs annually, at a cost equivalent to significantly less than the cost of running electric boilers.
3. Biomass boiler fuel from low-grade export logs would typically cost 4-5 cents per kWH.
4. All of NZ's industrial boilers consume approx 20 PJ of natural gas and approx 20 PJ of coal. So, especially including the existing residues already available, there is ample biomass fuel economically available for this boiler transition, with plenty left over to supply liquid and gaseous biofuels to enable a balanced and independent energy future.
5. 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.
6. 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.
7. 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.
8. 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.

9. Bioenergy could achieve greenhouse gas reductions of:

    - 1.8 Mt CO_2 -e pa from reduced use of coal and gas for process heat
    - 1.8 Mt CO_2 -e pa from reduction of methane from waste
    - 5.0 Mt CO_2 -e pa from use of biofuels in transport

    These levels of greenhouse gas reduction are comparable but less cost than many of the other initiatives currently being pursued by Government. https://www.bioenergy.org.nz/greenhouse-gas-reduction

10. 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 1 billion trees programme will produce additional biomass fuel plus be a new carbon sink every 30 years by planting commercial forests. Biomass processing could be intergrated at least cost (or vica-versa) with waste to energy bio-processing.