



Govt can't see our wood for the trees

When it comes to renewable energy, New Zealand need not look further than its backyard, writes **Grant Smith**.

AS Government and their advisers work on our climate change legislation and make plans for transformation to a net zero economy by 2050, their focus is on proving that a 100% renewable electricity system can actually work.

Extensive effort and research goes into pump-storage, subsidised solar panels and batteries into every home, and even the conversion of natural gas into hydrogen with carbon capture and storage underground. In essence, it's all getting very complicated yet opportunities using proven technologies are not being fully considered.

Maybe we are not yet seeing the wood for the trees?

We have in New Zealand a wonderful and sustainable renewable resource called wood. It's so good as a resource that we have made many things from wood — pulp, paper, plywood, lumber, laminated beams, fence posts, garden mulch, biogas and liquid transport fuels — it's a wonderful material to work with and has served our economy well for decades with jobs, incomes and even small towns built around these global products.

So why do we send most of this good wood off the wharves as logs?

That's right, we send at least half

of this good renewable resource offshore, most of which is made into low-cost products like construction plywood, low-value building products or consumer packaging. And a good proportion of these exported logs will ultimately end up as a low-carbon fuel in those other countries.

At present, wood fuel supply 11% of energy for only 1% of our GHG emissions.

Wood fuels are the highest performing low emissions renewable fuel in our process heating sectors. The question for government is not "which alternative do we have for thermal electricity generation?" but "how do we get better use out of our wood fuel resources in the process heating sector?"

And the solutions are not that complicated nor expensive.

Government's crown agency Scion has been working on bioenergy and biofuel solutions for decades, and has already provided answers to getting better energy use from our wood supply (and we can grow more), for example:

- We have enough wood residues left after forest harvesting to replace half the coal fuels used for processing and drying export foods. We also have enough municipal waste to produce 2% (5PJ) of local heat for smaller industries co-located at the edges of waste-producing cities.
- 40% of processed logs can be used as biofuel and we could process another 10 million cu m of logs per year onshore. This would provide new jobs, and the surplus wood chips can be used for hot water heating in smaller local businesses, hotels and school boilers in all regions.
- Liquid biofuels can be

blended with transport fuels and can be stored and then used to fuel standby electricity generating turbines to support our renewable electricity grid. There would be no need to produce excess summer electricity to make into higher cost hydrogen for conversion then back to electricity.

- We could invest in four regional biofuel refineries and each would produce enough blended transport fuels to reduce our heavy transport fleet emissions by 30%, including pure biofuels for our long-haul airlines.

The biofuels pathway produces lower cost energy for heavy industry, creates more jobs, and reduces our dependence on renewable electricity — plus it would maintain domestic electricity prices at the same price levels we have enjoyed for the last 100 years.

We then have more options for supporting our economy at much lower costs than storing and exporting hydrogen, at the same time re-booting a forestry and wood-processing industry that we have already let slide into exporting commodity logs for the last two decades.

So, when we plant a billion trees this is a good thing. And when a good proportion of those trees are also natives then this is also a good thing, for the soul. But locking up our plantation forest resources just for carbon sequestration is not a good thing — it's a missed opportunity. Those valuable renewable resources are then economically locked-up forever, with no local producer benefits, no land management, no local jobs and no soul — just carbon trading tickets.

Thinking smarter about the type, place and end use of the 1 billion trees will produce greater value



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than the programme as configured will derive.

So, come on Government, please have a look for the wood in the billion trees and come up with a more innovative plan than high cost electricity and hydrogen?

● *Grant Smith is chairman of the Bioenergy Association*



A load of logs . . . City Forest trees are loaded on a ship in Port Chalmers.
PHOTO: STEPHEN JAQUIERY