Submission No 176

SUSTAINABILITY OF ENERGY SUPPLY AND RESOURCES IN NSW

Organisation: North Coast Environment Council

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North Coast Environment Council Inc.

Submission to the *Environment and Planning Committee Inquiry into the Sustainability of energy supply and resources.*

Susie Russell, Vice President

North Coast Environment Council

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Inquiry Terms of Reference

1. *The capacity and economic opportunities of renewable energy.*
2. *Emerging trends in energy supply and exports, including investment and other financial arrangements.*
3. *The status of and forecasts for energy and resource markets.*
4. *Effects on regional communities, water security, the environment and public health.*
5. *Opportunities to support sustainable economic development in regional and other communities likely to be affected by changing energy and resource markets, including the role of government policies.*
6. *Any other related matters.*

The North Coast Environment Council (NCEC) was formed in 1976. It is an umbrella group for local conservation groups and individuals in the North East NSW bioregion. We are a volunteer organisation with no paid staff, and receive no government funding. We are funded by member contributions and supporter donations.

Since our inception we have had a keen interest in forestry matters. The forests of North East NSW are one of only 36 global biodiversity hotspots. The region has World Heritage Rainforests, and, if the government was interested, our eucalypt forest diversity would also qualify for World Heritage listing.

In November 2017 we became very alarmed when the NSW Department of Primary Industry issued a media release stating "*New research suggests there are enough residues in the North Coast's sustainably managed forests and sawmills to power more than 200,000 local homes per year.*

"*The news forms part of a recent report by the NSW Department of Primary Industries (DPI), which found more than one million tonnes of forestry residues from harvesting operations could be used for bioenergy, with no adverse environmental impacts."*

https://www.dpi.nsw.gov.au/about-us/media-centre/releases/2017/north-coast-forests-offer-untapped-bioenergy-opportunity

Upon further investigation it became clear that almost half of these so-called residues would come from an intensified logging regime in the public forests of north-east NSW. Traditionally tree-falling was carried out by a chainsaw operator and individual trees were selected to be logged. In contrast, the modern method is an operator enclosed in the cabin of a harvesting machine that grabs, cuts, de-barks and moves the logs. In order to have the clear wide arcs necessary for safe operation, all the smaller trees (up to 20 years old) that were previously left, are now removed, thus creating the 'residues'. The only tree retained are those few selected *not to be cut*.

The impacts of this intensive logging have not been assessed for their impacts on the forests, the flora and fauna, the hydrological regime or carbon storage. The intensification agenda is a subject of bitter dispute between conservationists, forest ecologists on one side, and the Government logging agency- Forestry Corporation. https://theconversation.com/native-forest-protections-are-deeply-flawed-yet-may-be-in-place-for-another-20-years-93004

The production of these massive amounts of 'residue' means a market must be found, and once again the commodity production of woodchipping subsidises the destruction of the biggest remaining trees in our public native forests, the logging of which would be uneconomical without it.

The market for native forest woodchips for pulp and paper is not as buoyant as it once was due to massive plantation estates overseass now producing a cheaper and consistent quality and colour of woodchip. So a new market has been created for this ‘waste’ and it is burning woodchips or pellets for electricity.

A trade delegation to Japan in December 2018 told the Japanese that Australia had the wood to meet 'Japan's bioenergy needs'.

http://www.timberbiz.com.au/australia-japan-forest-products-trade-strengthened/

Japan is building dedicated wood-fired power stations and if Australian forests are going to meet that demand, there will be no forests left. “*More than 800 projects have already won government approval, offering 12.4 gigawatts (GW) of capacity — equal to 12 nuclear power stations and nearly double Japan’s 2030 target for biomass in its basic energy policy.*

The sheer number of projects has raised questions about how they will all find sufficient fuel, mostly shipped in from countries like Canada and Vietnam, while some experts question the environmental credentials of such large-scale plants.

The projects approved to date that use general wood fuel would need the equivalent of up to 60 million tonnes of wood pellets, compared with global output of 24 million tonnes in 2014, said

Takanobu Aikawa, a senior researcher at Japan's Renewable Energy Institute."

https://www.reuters.com/article/us-japan-biomass/japan-fires-up-biomass-energy-but-fuel-shortage-looms-idUSKCN1BX0IT

This is relevant to this Inquiry because burning wood for electricity is happening both in Australia and overseas at huge costs to the natural environment. The economics of it depend on the fiction that is is 'carbon neutral'. That is, that the carbon released from the wood will be taken up by new trees. This is only true if new trees are grown to replace those burnt, and this process can take decades to centuries according to the scientists who signed the letter to the European Union, referenced below. While the wood is being burnt, and during the decades taken to regrow the trees, the emissions are adding to the greenhouse gases. Further, burning wood produces approximately 50% more carbon than burning coal to produce the same amount of electricity.

https://www.chathamhouse.org/publication/impacts-demand-woody-biomass-power-and-heat-climate-and-forests

The scale of the disaster that is wood-fired power stations is best seen in the UK, where in 2018, the massive DRAX power station burned 7.2 million tonnes of pellets made from at least 14.4 million tonnes of green wood. By comparison, the UK's total annual wood production was just 11.2 million tonnes. https://www.biofuelwatch.org.uk/axedrax-campaign/

The emissions aren't counted, nor is the destruction of the forests in the southern USA where many of the trees were playing important roles in wetland conservation. It is well worth watching at least the half hour version of the documentary BURNED- Are Trees the New Coal. It can be streamed at their website. https://burnedthemovie.com/

Scientists around the world are putting their names to documents calling for the burning of woody biomass to not be counted as carbon 'neutral' or renewable and not to be subsidised. They are warning about the dangers to the world's forests and climate if this practice continues.

https://www.euractiv.com/section/energy/opinion/need-for-a-scientific-basis-of-eu-climate-policy-on-forests/

https://tinyurl.com/y5xqbdxe

https://www.nature.com/articles/s41467-018-06175-4

In Australia, burning wood is eligible for Renewable Energy Credits.

In north-east NSW there are two electricity generators that burn wood. These were originally designed to run on Bagasse, they were converted to burn other sugar cane trash and Camphor Laurel, but that was unsuccessful, and now they are consuming 140,000 tonnes of wood a year

and selling the electricity produced as ‘GreenPower’.

At present, most of this wood is coming from sawmills, clearing for road and housing developments and Managed Investment Scheme (MIS) plantations. Many of the plantations belonged to Forest Enterprises Australia, that claimed they were planting for timber production not woodchips. All the MIS plantation schemes went bust. Most of these cleared plantations are being converted back to pasture. So the carbon will never be re-captured by replacement trees.

The Carbon Dioxide emissions from these facilities are not counted toward any national targets or limits, because ‘biomass’ is considered to be carbon neutral. These facilities get Renewable Energy Credits for the wood that they burn and yet land is being cleared for their feedstock and it is not being replanted. Even if it were, it would be decades before the emitted carbon would be re-absorbed.

Additionally, there are significant impacts on communities from these relatively small biomass projects (30MW each). 140,000 tonnes of wood in large trucks equals thousands of truck movements along small rural roads. There have been accidents. In fact it was a truck rolling and spilling its load of woodchips that alerted locals to the problem. The roads themselves have deteriorated and are now dangerously potholed. Locals who called a meeting to discuss the issue were sent legally intimidating letters by the trucking company.

Once the failed plantations have all been burned there will be pressure from the company to get access to trees from State Forests. Recently when the company concerned was questioned about it's future wood supply they said 'we're working on it'.

The problem with these facilities and others like them around the world, is that they generate demand. They need to be fed. Otherwise jobs may be lost! And so the cycle of destruction continues, just like the woodchipping which has done so much damage to the forests around and within trucking distance of the Eden woodchip mill.

Industries like this drive deforestation and clear-felling. The woodchipping industry in Eden has converted multi-age diverse forests into largely single age regrowth with greatly diminished complexity and habitat value. Many animal species, such as the koala, have almost disappeared as a result.

When the report was written extolling the virtues of using forest 'waste' for biomass burning, the DPI was the agency auspicing Forestry Corporation of NSW. They were working hand in glove with the drive for logging intensification while touting massive wood 'residue' volumes to any potential buyers.

Intensification of logging in State Forests now enshrined in the new Coastal Integrated Forestry

Operations Approvals. It will lead to declines in water yield, increased fire risk and declines in biodiversity. https://theconversation.com/proposed-nsw-logging-laws-value-timber-over-environmental-protection-97863

It also leads to declines in stored carbon.

With the double whammy of climate and extinction crises, we should be protecting our forests, which in turn protect our catchments, shelter our unique plants and animals and store carbon.

https://www.smh.com.au/business/the-economy/how-to-lose-water-waste-money-and-wreck-the-environment-20190305-p511ti.html

We ask this Inquiry to reject expansion of the biomass burning industry as an energy solution.

We ask this Inquiry to condemn the proposed wood export market that will see our forests commodified with a new export woodchipping market, with massive and as yet unquantified impacts on our catchments, water security, road safety.

Burning anything, be it coal, gas, trash, or wood only perpetuates the problem of greenhouse gas emissions, as well as creating other massive environmental disasters such as the resultant land-clearing, fugitive emissions, particulate pollution, transport nightmares and biodiversity loss. We need to move Beyond Burning!

We also ask that you reject 'solutions' like converting wood to Bio-diesel etc. All such projects will cause long-term damage to the most efficient carbon sequestration tool we have- forests, especially mature forests.

We urge the Inquiry to look at solutions such as decentralised energy networks (like microgrids) and decentralised energy storage that can see regional areas relatively energy independent and able to contribute the electricity that many are producing towards stabilising the grid. This can reduce the extraordinary proportion of electricity generated that is simply wasted on out-dated stabilisation techniques(1). The Hornsdale Reserve (aka Sth. Aust. Battery) has amply proved the economics of these new techniques.

The regulation of power generation was designed in the coal era and needs to be brought into the 21st Century(2). Communities should be able to develop networks that see them independent of the national grid.

1 https://www.vox.com/energy-and-environment/2017/4/13/15268604/american-energy-one-diagram

2 https://www.energy-storage.news/blogs/digital-inertia-energy-storage-can-stabilise-grid-with-1-10-the-capacity-of