SOUTH EAST FOREST RESCUE

PO BOX 899 Moruya, NSW, 2537
sefr@fastmail.fm

Native Forest Biomaterials Consultation
Reform and Compliance Branch
Environment Protection Authority
PO Box A290
Sydney South NSW 1232

By email: native.biomass@epa.nsw.gov.au

Draft Renewable Energy (Electricity) Amendment Regulation 2011

South East Forest Rescue ('SEFR') takes a firm stand on environmental protection of the native forest estate and expresses deep alarm at the welfare of forest-dependent threatened species and the cumulative impacts of industrial degradation of native forests that are exacerbating extinction rates and destroying soil, water, and carbon capacity. SEFR reject the proposed amendment.

We welcome the opportunity to provide comment on the Exposure Draft of the Protection of the Environment Operations (General) Amendment (Native Forest Bio-material) 2013 ('POEO Regulation') and the Commentary.

We do not support the amendments to include native forest as a fuel source as feedstock for electricity or heating production. Native forest is neither 'renewable' nor is it 'clean' once logged.[1] Burning native forest for power can release more carbon dioxide into the atmosphere than coal or gas. Replacing one polluting fuel with another, when there are genuine renewable options like solar and wind, is illogical. Excluding native forest from the definition of 'native forest' seems not only illogical but Orwellian.[2]

[1] The words 'native forests' are used here to mean natural non-plantation native ecosystems, biodiversity, habitat, in other words all that is contained within these systems; the term is used in this outline for ease of reference.
[2] Orwell G, *Nineteen Eighty-Four* (Penguin Books, 1949) 171.

Using native forest as a fuel source is not 'clean green energy', it will undercut solar, tidal and wind power generators and will add up to 20% to Australia's $C0_2$ emissions. Approximately 35% of greenhouse gases ('GHGs') in the atmosphere are due to past forest degradation and deforestation, and an estimated 18% of annual global emissions are the result of this continuing degradation and deforestation. A nationally ratified policy on reducing GHGs was set out in the *National Greenhouse Strategy 1998* and yet, since these agreements, New South Wales has not furthered mechanisms to assess or reduce the state-run logging bureaucracy, Forestry Corporation NSW ('FCNSW') forest degradation.

Due to the combined factors of over-logging, plantations coming on-line, the GFC and Tsunamis in Japan, after 40 years woodchipping in NSW has come to the end of its shelf life. However the industry lobby groups are resisting and refusing to accept the inevitable.

Under current state and federal legislation no native forest can be felled for the particular purpose of fuelling a power station. The federal government removed 'wood waste' from native forests from renewable energy technology ('RET') as an eligible renewable energy source in 2011. This amendment was made to ensure that the RECs did not provide an incentive for the burning of native forest for bio-energy, which could lead to unintended outcomes for biodiversity and the destruction of intact carbon stores and to bring Australia into line with the *Kyoto Protocol*. The States native forests are carbon storehouses that actively sequester atmospheric carbon, and thus are an important part of the solution to climate change. Cutting down trees stops them accumulating more carbon and releases decades or centuries of stored carbon.

In our view, if enacted, native forest usage by any power station will be unlawful. To support this proposition we make the following points:

1. Inserting sub-clause (a1) into cl 96 is against the public interest. Forests are being destroyed at an alarming rate.[3] The UN State of World Forests Report provides:[4]

[3] Streck C, 'Protecting Forests to Mitigate Global Climate Change' (2007) Climate Focus, Rotterdam.
[4] *State of the World's Forests*, UN Food and Agricultural Organization, Rome, FAO, 2011, (online) <http://www.fao.org/docrep/013/i2000e/i2000e.pdf>, viewed 19/05/2011.

> The area of primary forests decreased in all Asia and Pacific subregions in the last decade, despite the fact that the area designated for conservation of biodiversity increased in the same period.[5]

In describing the situation in Australia the Report provides that:

> Oceania also experienced a negative trend … since 2000 and caused it to register the largest annual loss of any country in the region between 2000 and 2010.

2. It has emerged through strong scientific evidence that there are clear links between climate change, deforestation and forest degradation.[6] Biomass will double the industry's ecological footprint.[7] Therefore public native forest in any form should not be included as an eligible source of renewable energy because of the significant environmental impacts of logging activities on our forests, biodiversity and climate.

3. The Senate Environment, Communications, Information Technology and the Arts Reference Committee reviewed the *Renewable Energy (Electricity) Bill 2000* and the *Renewable Energy (Electricity) (Charge) Bill 2000* and recommended that:

> Non plantation native forest wood products and wood wastes be specifically excluded from the list of eligible renewable energy sources.

4. The objects of the *Protection of the Environment Operations Act* provide any action undertaken under the Act must be:

> *(a) to protect, restore and enhance the quality of the environment in New South Wales, having regard to the need to maintain ecologically sustainable development*
>
> *(d) to reduce risks to human health and prevent the degradation of the environment by the use of mechanisms that promote the following:*
>
> *(i) pollution prevention and cleaner production,*

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[5] *State of the World's Forests*, above n 4.

[6] Stern N, The Stern Review on the Economics of Climate Change: Emissions from the Land-use Change and Forestry Sector (Cambridge University Press, 2006) (online), <http://webarchive.nationalarchives.gov.uk/+/http:/www.hm-treasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm>; see *The Critical Decade: Climate science, Risks and Responses*, (Climate Commission Secretariat, Department of Climate Change and Energy Efficiency, 2011) (the Garnaut Report) (online) <http://www.garnautreview.org.au/update-2011/update-papers/up4-transforming-rural-land-use.pdf>.

[7] Greenpeace, *Fuelling the Biomess: Why Burning Trees For Will Harm People, the Climate and Forests*, 2011 (online) <www.greanpeace.ca>.

> *(ii) the reduction to harmless levels of the discharge of substances likely to cause harm to the environment,*
> *(iia) the elimination of harmful wastes,*
> *(iii) the reduction in the use of materials and the re-use, recovery or recycling of materials.*[8]

In our view this amendment does not comply with the basic overarching principles of the parent Act. All actions must comply with the objects of the Act. Further the trees will primarily be logged to provide for electricity generation which will also be unlawful.

'Debris From Native Forestry Activities'

This statement is misinformed. The process that is required to turn logs into chips and/or then into pellets necessarily requires that whole logs be used. In public native forest logging the branches, roots and leaves cannot be used, such material is uneconomic to collect or transport, and the technology is unavailable in Australia for non-plantation geography. That is why the words 'heads and off-cuts' seem to apply to private native logging. Yet it would look to a layman as if the government is interested in recycling, in clearing up the debris, which is disingenuous. This same statement has been used by the woodchipping lobby groups and has been clearly refuted.

Carried Out in Accordance with an Integrated Forestry Operations - 'Regulation Will Continue'

The platitude that the current levels of regulation will remain in place is hardly reassuring. This is the same rhetoric that was used in 1998 when enacting legislation that barred citizens from bringing an action for illegal logging activities by the Forestry Corporation NSW ('FCNSW'),[9] under any law or any Act in an *Integrated Forestry Operation Approval* ('IFOA') area. When that legislation was introduced the community was given assurances that:

> The agencies which currently have enforcement and compliance powers will continue to have those powers and continue to use them to ensure that the licences are adhered to.[10]

[8] *Protection of the Environment Operations Act 1997* (NSW) s 3.
[9] Also known as the Forestry Commission, State Forests NSW, Forests NSW.
[10] New South Wales, *Parliamentary Debates: Forestry and National Park Estate Bill Second Reading*, Legislative Assembly, 12 November, 1998, 9924 (Minister Yeadon).

However the department was white-anted and under-funded leading to no prosecutions in the southern region for 13 years, until 2011. In our view the department suffers from the classic 'capture' syndrome,[11] and those who are not captured are bound by the whole of government approach, which has placed FCNSW and their authorised contractors relatively above the law.

The EPA is in charge of regulation of FCNSW activities, and would be in charge of any regulation through the proposed amendment of the POEO Regulation.[12] This regulation has been inappropriate or inadequate in the past.[13] However regulation of NSW state forests has historically been problematic. For example in 1802–03 the government issued orders aimed at controlling the logging of red cedar, and preventing the over-clearing of trees in riparian zones, but logging and clearing 'continued at an accelerating rate.'[14] This lack of respect for regulation was evidenced by a series of official reports in the 1860s which recommended the need for supervision, training, and girth limits.[15]

Further, the regulation is inadequate. For example recent IFOA amendments fail to address the Key Threatening Process of the Loss of Hollow-bearing Trees.[16] No compartment that the authors have witnessed has been logged in accordance with the IFOAs. Due to inappropriate or non-existent penalties FCNSW has taken little notice of legislation or licence conditions throughout history, and it is unlikely that this behaviour will change.

Pulp Wood Logs and Thinning- the Myth of Waste

The logging industry on the south coast has been pulp driven since 1969. The almost unanimous use of mechanical harvesters has ensured that this remains the case:

> The increase in use of mechanized harvesting systems has led to problems of log damage, including butt pull, log splitting during handling and cross cutting and crushing of the log: Hardwood sawlog damage occurs at all processing points in the

[11] Lynda M Collins 'Tort, Democracy and Environmental Governance: The Case of Non-Enforcement' (2007) 15 *Tort Law Review* 107; Doelle M, *From Hot Air to Action? Climate Change, Compliance and the Future of International Environmental Law* (Thomson Canada Ltd, 2005).
[12] *Forestry Act 2012* s 69ZA(3).
[13] N Hammond-Deakin, and S Higginson, *If a Tree Falls: Compliance Failures in the Public Forests of New South Wales*, (Environmental Defender's Office NSW, 2011).
[14] G J Mosley, 'The Australian Conservation Movement' in R L Heathcote (ed) *The Australian Experience: Essays in Australian Land Settlement and Resource Management* (Longman Cheshire, 1988) 178, 179.
[15] Ibid.
[16] *Threatened Species Conservation Act 1995* (NSW) Sch 3 Key Threatening Processes s 8.

> harvesting and processing system prior to presentation at the saw bench. Damage occurs on butt logs and subsequent logs. Damage includes torn wood fibres both internally and externally, and the splitting of stems. Some of this damage occurs because of the application of the extremely high mechanical forces applied by the machine, and, in combination with operator lack of knowledge or inexperience, can create significant but unquantified damage losses from forest to mill.[17]
>
> These stresses can occur during manual falling (particularly if wedging is used to 'force' the direction of fall) and especially during machine falling as most machines have the power and weight (leverage) to force the tree to fall either in a unnatural direction, or before fulcrum points are reached in cutting.[18]

FCNSW and the woodchipping lobby groups allege that to obtain the small percentage of sawlog the process, by necessity, creates all the pulp. This is because clearfelling and logging primarily for pulp is disallowed. FCNSW call these operations Modified Shelter-wood, Australian Group Selection or Thinnings, however it is clear that the primary product in native forest compartments on the south coast is for pulp. Therefore FCNSW will have difficulty arguing they have complied with requirements:[19]

> *(3) For subparagraph (2) (b) (i), the primary purpose of a harvesting operation is taken to be a high-value process only if the total financial value of the products of the high value process is higher than the financial value of other products of the harvesting operation.*

97% of logs in Eden are processed by South East Fibre Exports, wholly owned by the Japanese company Nippon Paper. Currently 85% of all native forest logged goes to the woodchip mill using this rationale, of the 15% that goes to sawmills 50% ends up chipped and sent to SEFE.

[17] Connell M J, *Log Presentation: Log Damage Arising From Mechanical Harvesting or Processing*, Project No PN02.13092003, CSIRO Forestry and Forest Products, Forest and Wood Products Research and Development Corporation, Australian Government, 2003.
[18] Ibid.
[19] 2006/07 Southern figures are HQ: $1 008 806; pulp: $1 225 985 (Southern produced no veneer or girders); Eden HQ +Veneer and girders: $314 555; pulp: $4 413 463.

IFOA Plan of Operations 2011/2012
SOUTH COAST SUB-REGION

Summary of Supply Commitments				
Region	**HQL**	**HQS**	**LV**	**Pulplog**
South Coast	48,500	6,000	40,000	100,000

Therefore the following assumptions can be made;

(a) native forests on the south coast are logged primarily for pulp;

(b) more money is made from pulp.

Therefore any claim that FCNSW will or are using is waste is erroneous. It must be remembered that a 'pulp log' by its very definition must be waste.

I. SUSTAINABLE

> This is about recognising that the amount of greenhouse gas emissions from cutting down trees is very significant. The world puts a lot of carbon into the atmosphere because people cut trees down [rather]than preserve them and we know that deforestation is a significant driver of greenhouse gas emissions. [We] are about looking at ways in which we can preserve these forests. It's in our national interest to find ways to do that because these forests put carbon into the atmosphere when they are cut down.[20]

Renewable energy producers must demonstrate that their operations are ecologically sustainable under the overarching principles of ecologically sustainable development ('ESD'). The FCNSW has increasingly been overcutting to meet wood supply agreements and has not undertaken proper legislated reviews of sustainable yield. FCNSW has hidden real data by amalgamating plantation and native forest volume figures.[21] All documents from FCNSW seem to suggest that all they need comply with is what is known as ecologically sustainable forest management ('ESFM'). However even here FCNSW are non-compliant.

As a requirement FCNSW must undertake a review of Sustainable Yield every five years using Forest Resource and Management Evaluation Systems ("FRAMES") and information bases. Results of which would inform the annual volume which could be logged from the

[20] Penny Wong, Commonwealth Minister for Climate Change, 2010.
[21] NSW Auditor-Generals Report to Parliament, vol 1, 2009, (online) <http://www.audit.nsw.gov.au/publications/reports/financial/2009/vol1/pdfs/31_0173_forestry_commission_of_new_south_wales.pdf >.

Southern region 'being mindful of achieving long-term Sustainable Yield and optimising sustainable use objectives consistent with this Agreement.'[22]

However the five year late review report on RFA 'progress' stated:

> It is somewhat concerning that…the requirement (i.e. it is not optional) to produce annual reports of progress on meeting regional ESFM targets in ESFM Plans has not been delivered. This is surely central to accountability under the RFAs.[23]

It was made known by the NSW Auditor-General that:

> FCNSW does not routinely compare harvesting results to its yield estimates.

These reviews are necessary to test the validity of FCNSW estimates.[24] No tangible efforts have been made to ensure sustainability or to produce any reporting showing that efforts are being made. FCNSW are operating in the gloom of uncertainty. For the Upper and Lower North East region the Auditor-General stated:

> To meet wood supply commitments, the native forest managed by Forests NSW on the north coast is being cut faster than it is growing back.[25]

In our view this may be true for the Southern region, if ever real data becomes available. There has been no independent verification of any data FCNSW have provided, as was called for under the RFA, covered by Milestone 54.

Court documents confirm that FCNSW are unable to meet timber commitments and are having to pay out for logs that never existed. The court documents show timber giant Boral initiated proceedings in the NSW Supreme Court against FCNSW in 2010 claiming FCNSW have been unable to supply them with contracted timber volumes since 2002. The court documents show that FCNSW were forced to pay Boral $500 000 in 2006 for undersupply. Since then supply has been declining and FCNSW now owe Boral almost twice as much again. Bizarrely new wood supply agreements were enacted in 2004 by Ian Macdonald and

[22] *Regional Forest Agreement for the Southern Region of NSW 2001* cl 8.
[23] *Final Report on Progress with Implementation of NSW Regional Forest Agreements: Report of Independent Assessor*, November 2009, (online) <http://www.daffa.gov.au/__data/assets/pdf_file/0007/1546711/assessors-report.pdf>.
[24] Performance Audit In Brief, NSW Auditor-Generals Report to Parliament, April 2009, 2.
[25] Performance Audit 'Sustaining Native Forest Operations,' NSW Auditor-General's Report, 2009.

Eddy Obeid. These contracts provided that State Forests must make logs available to purchasers and conversely purchasers must take and pay for the logs.

There is abundant evidence that FCNSWs estimates were grossly overstated and unreliable from the beginning. Further, the documents provide that FCNSW was to supply the north coast with 5,000m^3 of timber from our south coast native forests every year from 2008. This is robbing Peter to pay Paul. However the court documents show that FCNSW have failed to meet that commitment also.

Boral claim FCNSW has knowingly, intentionally and recklessly breached the Agreement in that since at least February 2005 FCNSW were made aware that they were breaching the Agreement. Further Boral say FCNSW has supplied timber to third-parties in excess of FCNSW contractual obligations to that purchaser and/or where it was not contractually obliged to do so.

To try to meet shortfalls FCNSW have had to buy back timber commitments from other sawmills, they have been over-logging, logging stream buffers, logging trees and areas required to be retained for threatened species and buying timber from private properties. These systemic and ultimately fatal issues will not be solved by continuing or redesigning the outmoded activity.

The rate of native forest logging has exceeded levels which can be permanently sustained. It is not enough to make the bare statement that native forestry is sustainable, it must be backed up with rigorous scientific data, which FCNSW has failed to provide. It is obvious that there is no long-term future for an industry that isn't sustainable or lawful, destroys the ecological integrity of the forests and contributes significantly to the catastrophic effects of climate change.

In our view the State government misled the Australian public and the people of NSW when they said in 2003 that there was no cost to the taxpayer, coming from the native forest logging sector. The native forest logging sector is unsustainable and only propped up by political will and taxpayer subsidies (see attached and marked 'Appendix A'). Choosing to ignore conservationist's analysis has already cost taxpayers millions of dollars, and it is obvious the native forest logging industry is now haemorrhaging money.

FCNSW were running at a $14M loss in 2008/09, $16M in 2009/10 and $232M before tax loss in 2010/11 and a $14M loss in 2012/13.

In *Egan v Chadwick* it was held that expenditure of public money provides a criterion for the boundaries of executive activity subject to the scrutiny of Parliament.[26] Priestley JA stated that the Executive is always bound to act in the 'public interest' and regarded the expenditure of public money as underpinning the exercise of all Executive activity:

> The entire conduct of the administration of the laws by the Executive is only possible by the use of people employed, in one way or another, by the Executive and by the use of assets of one kind or another, which may be publicly or privately owned but which in the latter case must be paid for. Every act of the Executive in carrying out its functions is paid for by public money.[27]

Dixon CJ, Williams, Webb, Fullagar and Kitto JJ in *Australian Woollen Mills Pty Ltd v The Commonwealth* stated that:

> The position is not that of a person proposing to expend moneys of his own. It is public moneys that are involved.[28]

In other words the government has a higher duty to the public than a multinational corporation, and must fulfil that duty.

II. RENEWABLE

The purpose of renewable technologies in Australia and internationally is to produce a renewable source of energy that can be used to offset fossil fuels thereby reducing the potential impacts of global climate change. However the burning of wood, whether domestically or overseas, is not a clean technology, it still releases CO_2 and particulate pollution, the removal of trees is the removal of a carbon sink, and further the logging of native forest provides an economic incentive to produce more wood waste, rather than encouraging energy efficiency.

[26] *Egan v Willis* (1998) 195 CLR 424.
[27] *Egan v Chadwick* (1999) 46 NSWLR 563, [135].
[28] (1954) 92 CLR 424, 461.

Action on climate change is required for the global environment. It is important to achieve mitigation in a manner that is sustainable and does not degrade the local environment such that human health and enjoyment, or environmental/ecological health is negatively impacted or compromised.

On the south coast logging operations in mixed-age, mixed-species forest removes approximately 50% to 90% of existing crown cover. Often residual crown cover is approximately 10% or less; this is unlawful under the Southern Region IFOAs which state contractors must leave 55% of net basal area under Single Tree Selection.[29] In addition to this, road construction and post-logging burning is resulting in extensive accumulated damage to the environment and the atmosphere.[30] There is little evidence of regeneration after FCNSW logging.[31] FCNSW do not replant native forest.

FCNSW burn forests both pre and post-logging. In 2005-06 only seven percent of State forest was burned in wildfire however 38,008 hectares were burned as 'hazard reduction' for a total expenditure of over $8.5 million dollars.[32] In 2006–2007, FCNSW had planned for pre-logging and post-logging burns to be carried out on about 60 100 ha of State forest across the four forest agreement regions. Pre-logging and post-logging burns then took place over approximately 27 220 ha (45% of the planned area). A further 3350 ha of plantation land was subject to 'area-establishment' burns. In addition, 1530 ha of land was subject to pre-logging burns. Much of the area burned was in the UNE and Southern regions.

In 2007–2008, FCNSW had planned for pre-logging and post-logging burns to be carried out on about 42 186 ha of State forest across the four forest agreement regions. Pre-logging and post-logging burns then took place over approximately 31 349 ha (74% of the planned area), while the pre-logging burns represented 57% of this figure. A further 7029 ha of plantation land was subject to 'area establishment' burns. In addition 2525 ha of land was subject to pre-logging burns. In 2008–2009, FCNSW planned for pre-logging and post-logging burns to be

[29] FCNSW Harvest Plan Compartment 186: Mogo, Batemans Bay.
[30] Driscoll D, Lindenmayer D B, Bennett A, Bode M, Bradstock R, Cary G, Clarke M F, Dexter N, Fensham R, Friend G, Gill M, James S, Kay G, Keith D A, MacGregor C, Russell-Smith J, Salt D, Watson J, Williams R J, York A, 'Fire Management for Biodiversity Conservation: Key Research Questions and our Capacity to Answer Them' (2010) 143 *Biological Conservation* 1928.
[31] Gibbons P, Lindenmayer D B, Barry S C, Tanton M T, 'The Effects of Slash Burning on the Mortality and Collapse of Trees Retained on Logged Sites in South-Eastern Australia' (2000) 139 *Forest Ecology and Management* 51.
[32] Forests NSW Seeing Report 2005-06, 28.

carried out on about 49 132 hectares. Pre-logging and post-logging burns then took place over approximately 42 408 ha. Pre-logging burns represented 42% of this figure. A further 3111 ha of plantation land was subject to 'area establishment' burns and in addition 2414 ha was subject to pre-logging burns

The vascular floristics about a decade after logging activities differed significantly from the floristics of similarly aged forest regenerating after wildfire. In clear-felled areas, weed and sedge species occurred more frequently than on wildfire sites and *Acacia dealbata* was much more abundant, whereas re-sprouting shrubs, tree ferns and most ground-fern species were more abundant in wildfire regeneration sites. The low survival rate of re-sprouting species reported in an increasing number of studies suggests that soil disturbance is likely to be a major contributor to differences.[33]

Regeneration has not been successful in the Southern region, where the effective regeneration rate fell from 54% to 43% since 2002/2003.[34] However the data is next to non-existent therefore it is difficult to make an accurate analysis. FCNSW performed 12 regeneration surveys in 2006–2007 over an area of 620 ha of State forest. No regeneration surveys were conducted in the Southern region.[35]

Accounting for CO_2e

The definition of logging as 'carbon neutral' is a false one, because industrial tree plantations and industrial logging as well as transport require fossil fuel use, and also because of significant GHG emissions from direct as well as indirect land conversion, soil depletion and erosion.[36]

Even if those emissions could be ignored, absorbing the carbon released into the atmosphere from burning forest for power could take decades, particularly in temperate and boreal

[33] Ough K, 'Regeneration of Wet Forest Flora a Decade After Clear-Felling or Wildfire – Is There a Difference?' 49(5) *Australian Journal of Botany* 645, (online) <http://www.publish.csiro.au/paper/BT99053.htm>.
[34] NSW Forest Agreements Implementation Report 2003/2004: Upper North East, Lower North East, Eden and Southern regions.
[35] NSW Forest Agreements Implementation Report 2006/2007: Upper North East, Lower North East, Eden and Southern regions.
[36] Global Forest Coalition, *Wood-Based Bioenergy: the Green Lie- The Impact of Wood-Based Bio-Energy on Forests and Forest Dependent People*, May 2011, 11.

regions which the NSW forests are a part of.[37] A study for the Massachusetts State Government concluded that burning forest biomass releases more carbon than burning coal, oil or natural gas. Even accounting for the regrowth of the harvested forest, making up that 'carbon debt' could take up to 90 years. The EPA in the United States has recently disaccredited the theory of carbon neutrality, stating that in fact burning wood is not carbon neutral.[38] In the US a group of 90 scientists have called on both houses of the US government to correctly account for CO_2e in relation to biomass.[39] The letter states:

> Replacement of fossil fuels with bioenergy does not directly stop carbon dioxide emissions from tailpipes or smokestacks. Although fossil fuel emissions are reduced or eliminated, the combustion of biomass replaces fossil emissions with its own emissions (which may even be higher per unit of energy because of the lower energy to carbon ratio of biomass).

Internationally it has been recognised that the current accounting methods for native forest logging severely weaken greenhouse gas reduction goals and are a veritable time-bomb for the effects of climate change.[40] It has been scientifically verified that this logging causes large releases of carbon.[41] This is despite international protocols against logging of native forests:

> For every hectare of natural forest that is logged or degraded, there is a net loss of carbon from the terrestrial carbon reservoir and a net increase of carbon in the atmospheric carbon reservoir, the resulting increase in atmospheric carbon dioxide exacerbates climate change.[42]

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[37] Ibid.
[38] US EPA (online) <http://www.epa.gov/air/caa/ >; Greene N, 'Magically Carbon Neutral Biomass, Evil EPA Rules and Other Myths' (online) <http://switchboard.nrdc.org/blogs/ngreene/news_flash_pollution_from_biom.html >; US EPA Office of Air and Radiation, Letter to Weyerhaeuser Corporation, 6 June 2010 (online) <http://switchboard.nrdc.org/blogs/dlashof/Weyerhaeuser%20letter%20060210.pdf >.
[39] William H Schlesinger et al, Letter to the Honourable Nancy Pelosi, Speaker, US House of Representatives and the Honourable Harry Reid, United States Senate, 17 May 2010, (online) <http://216.250.243.12/90scientistsletter.pdf >.
[40] Bird N, Pena N, and Zanchi J, 'The Upfront Carbon Debt of Bioenergy' Graz, Joanneum Research, June 2010, (online) <http://www.birdlife.org/eu /EU_policy/Biofuels/carbon_bomb.html>; Fargione J, Hill J, Tilman D, Polasky S, Hawthorne P, 'Land Clearing and the Biofuel Carbon Debt' (2008) 319 *Science* 1235.
[41] Mackey B, Keith H, Lindenmayer D, and Berry S, 'Green Carbon: The Role of Natural Forests in Carbon Storage, Part 1, A Green Carbon Account of Australia's South-Eastern Eucalypt Forest, and Policy Implications' (ANU E Press, 2008) (online) <http://epress.anu.edu.au/green_carbon_citation.html>.
[42] Mackey et al, above n 41.

At issue is the FCNSW methodology that CO_2 released during logging equals that taken up during growth and the basing of all GHG calculations on this erroneous theory. Eucalypt forests recovery for removal of CO_2 from the atmosphere can take more than a 100 years.[43] On average the recovery rate is 53 years for 75% carrying capacity and 152 years for 90% carrying capacity.[44] Currently logging rotations are sometimes barely five years.[45] FCNSW themselves state:

> Harvesting cycles vary between native forest types with a typical cycle of 5–30 years for native forest.[46]

As stated FCNSW do not replant after logging native forest and, while they have 1.5 million ha available for logging, have only 23,000 hectares available for sequestration.[47] If the forest regrew and was not logged with such frequency then the carbon neutral theory might hold, and perhaps holds in EU countries where this system was developed, and where the main source of wood is from plantations. In Germany and throughout most of Europe Foresters are employed to count and measure at diameter at breast height ('dboh') every tree in the plantation plot. The data we have received is cursory to say the least, and the little amount of forest that has been surveyed does not, and could not, equal 100% regenerated. From the period 2001 to 2006 the number of surveys for the Southern region was twenty one, covering a total of 2,176 hectares.[48] Therefore the assumption that there are near-equilibrium conditions (synchrony) in native forest logged by FCNSW is erroneous.[49]

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[43] Roxburgh S H, Wood S W, Mackey B G, Woldendorp G, and Gibbons P, 'Assessing the Carbon Sequestration Potential of Managed Forests: a Case Study from Temperate Australia,' (2006) 43 *Journal of Applied Ecology* 1149.

[44] Dean C, Roxburgh S, Mackey B, 'Growth Modelling of *Eucalyptus regnans* for Carbon Accounting at Landscape Scale' in Amaro A, Reed D, and Soares P, (eds) *Modelling Forest Systems*, (CAB International, 2003).

[45] Compartment 62 (South Brooman) logged in 1972, 1973, 1978, 1982, 1990, 2002, 2009.

[46] Forests NSW Consolidated Annual Financial Report, Year ended 30 June 2007, 18-19.

[47] Sustain Greenhouse Gas Consultation Paper Submission, Forests NSW, Nick Cameron, 1/5/2008.

[48] Southern IFOA Clause 52 Assessment of Regeneration Report 20/6/07, FCNSW Batemans Bay, this 'report' is a thin five line by five column table which states there had been four surveys conducted but there was no documentation, pers com to author from Danial Tuan, FCNSW Batemans Bay 2008.

[49] Performance Audit 'Sustaining Native Forest Operations,' Auditor-General's Report, 2009: "reviews of yield estimates for the southern region, due in 2004 for Eden and 2006 for Tumut and the south coast, have not been completed".

> For Forest Land, synchrony is unlikely if significant woody biomass is killed (i.e., losses represent several years of growth and C accumulation), and the net emissions should be reported. Examples include: clearing of native forest.[50]

GHG Emissions

FCNSW erroneously claim that emissions from actual logging operations are separate and the responsibility of the contractors and therefore FCNSW have no liability to count them. This is contrary to accepted scientific principle:

> Carbon accounts for industrialized forests must include the carbon emissions associated with land use and associated management, transportation and processing activities.[51]

FCNSW also claim there is a lack of full scientific data on land use change and this makes it difficult to calculate GHG emissions. Although it seems widely acknowledged that Land Use Change and Forestry accounting is difficult and uncertain, given the great deal of data, including LandSat images and records kept in ArcView, GIS, ESRI and FCNSW own office records on past compartments logged, it would seem this argument is *alio intuitu*. FCNSW has logged over 200 000 hectares of native forests in the south east alone since 1990. Article 3 of the *Kyoto Protocol* states at (3) that:

> Greenhouse gas emissions by sources and removals by sinks associated with those activities shall be reported in a transparent and verifiable manner.

The introduction of the amendments to the *Lacey Act* in America has already had a significant impact on the import of woodchips in that country, importers are now required to declare species, country of origin, value and volume of the plant or plant products.[52]

In NSW forest degradation in 2006 created over seventeen percent of NSWs greenhouse gas emissions.[53] The total CO_2 emissions caused by native forest logging on the South Coast for

[50] 2006 IPCC Guidelines for National Greenhouse Gas Inventories, Vol 4: Agriculture, Forestry and Other Land Use, Chapter 2: Generic Methodologies Applicable to Multiple Land-Use Categories, 2.4; the figures used for boreal forests in the IPCC document are from research published in 1998 which has now been superseded by more current data (online) <www.ipcc-nggip.iges.or.jp>.
[51] Mackey et al, 'Green Carbon', above n 41.
[52] *Amendments to the Lacey Act from H R 2419 2008* (US), s 8204, *The Lacey Act*, Ch 53 Title 16, United States Code, ss3371–3378.

2006/07 have been computed to be over 26 million tonnes.[54] This includes a back of the beer coaster figure for East Gippsland:

> The laws of nature that account for the global carbon cycle operate irrespective of political boundaries. Therefore, a unit of carbon emitted due to deforestation and forest degradation in Australia, the United States, Canada or Russia has exactly the same impact on atmospheric greenhouse gas levels as a unit of carbon emitted from deforestation and degradation of forests in Indonesia, Papua New Guinea, the Congo Basin or Brazil.[55]

The Stern Review states in Annex 7f:[56]

> Deforestation is the single largest source of land-use change emissions, responsible for over 8 GtCO2/yr in 2000. Deforestation leads to emissions through the following processes:
>
> > The carbon stored within the trees or vegetation is released into the atmosphere as carbon dioxide, either directly if vegetation is burnt (i.e. slash and burn) or more slowly as the unburned organic matter decays. Between 1850 and 1990, live vegetation is estimated to have seen a net loss of 400 GtCO2 (almost 20% of the total stored in vegetation in 1850).[57] Around 20% of this remains stored in forest products (for example, wood) and slash, but 80% was released into the atmosphere. The removal of vegetation and subsequent change in land-use also disturbs the soil, causing it to release its stored carbon into the atmosphere.[58] Between 1850 and 1990, there was a net release of around 130 $GtCO_2$ from soils.

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[53] *Australia's National Greenhouse Accounts 2006: State and Territory Greenhouse Gas Emissions*, Department of Climate Change (2008), 17; the figure is 17.2%.
[54] FCNSW Implementation Report 2004/05 and 2006/07, 2006/07 FCNSW Harvest Plans; ESRI data; Digwood FOI info 2009; the figure calculated was 26 383 239tCO_2e.
[55] Mackey et al, above n 41.
[56] Stern N, above n 6; see also Stern N, Emissions from the Land-use Change and Forestry Sector.
[57] Baumert, Herzog and Pershing, 'Navigating the Numbers: Greenhouse Gas Data and International Climate Policy' Washington, DC: World Resources Institute, 2005; see also Houghton, 'Revised Estimates of the Annual Flux of Carbon to the Atmosphere from Changes in Land Use and Land Management 1850-2000' (2003) 55 *Tellus B* 378.
[58] Houghton J T, 'Tropical Deforestation as a Source of Greenhouse Gas Emissions', (2005) in *Tropical Deforestation and Climate Change*, Moutinho and Schwartzman (eds); see also Intergovernmental Panel on Climate Change, *Climate change 2001: the Scientific Basis. Contribution of Working Group I to the Third Assessment Report of the Intergovernmental Panel on Climate Change* Houghton JT, Ding Y, Griggs DJ, et al (eds), (Cambridge University Press, 2001); see also Food and Agriculture Organization of the United Nations (2005) *State of the World's Forests*, Washington, DC: United Nations.

Given the evidence on the loss of ecological integrity and the pollutants the pre and post-logging burning has, the principles of intergenerational equity and ESD are seemingly being breached.[59] Further given the urgent need to reduce GHG emissions in the short-term, that is the next 10 years, only energy sources that deliver positive GHG gains should be allowed.

Climate Change and Native Forest Logging

There is much uncertainty on the effects of climate change but one of the certainties is that deforestation is one of the biggest causes. The loss of native forests around the world contributes more to global emissions each year than the transport sector.[60] Approximately 35% of greenhouse gases in the atmosphere are due to past deforestation and land degradation, and an estimated 18% of annual global emissions are the result of continuing deforestation and land degradation.[61] In accordance with the *Rio Declaration,* the *Montreal Process* and the *Intergovernmental Agreement on the Environment 1992,* the *Heads of Agreement on Commonwealth and State Responsibilities for the Environment 1997* stated:[62]

> The Commonwealth has a responsibility and an interest in relation to meeting the obligations under the United Nations Framework Convention on Climate Change, in co-operation with the States, through specific programmes and the development and implementation of national strategies to reduce emissions of greenhouse gases, and to protect and enhance greenhouse sinks.[63]

These industrial logging practices contribute significant and continuing emissions of carbon dioxide into the atmosphere which reduce the stock of carbon stored in the ecosystem.[64]

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[59] *Telstra v Hornsby Shire Council* [2006] 146 LGERA 10; Horn L, 'Climate Change Litigation Actions for Future Generations' (2008) 25 *Environment and Planning Law Journal* 115.
[60] Stern N, above n 6.
[61] Stern N, above n 6; Houghton J T, above n 58; see also Intergovernmental Panel on Climate Change, above n 50.
[62] Rio Declaration, *Convention on Biological Diversity,* 5 June 1992, (entry into force for Australia: 29 December 1993) ATS [1993] 32; *Intergovernmental Working Group in Criteria and Indicators for the Conservation and Sustainable Management of Temperate and Boreal Forests (Montreal Process).*
[63] Council of Australian Governments, November 1997, 'Matters of National Environmental Significance' Attachment 1 Part II (8) (online) <http://www.environment.gov.au/epbc/publications/coag-agreement/index.html>.
[64] Mackey B, et al, above n 41; Stern N, Summary of Conclusions, *The Stern Review on the Economics of Climate Change*, (online) <http://webarchive.nationalarchives.gov.uk/+/http:/www.hmtreasury.gov.uk/independent_reviews/stern_review_economics_climate_change/stern_review_report.cfm>.

Brief Background on Why We Are Were We Are

In NSW for any activity that will have an impact on the environment a proponent must undertake environmental impact assessment ('EIA') as required by either the *Environmental Planning and Assessment Act 1979* (NSW) ('EPA Act'), or the *Environmental Planning and Biodiversity Conservation Act 1999* (Cth) ('EPBC Act'). For a brief period in NSW history the Forestry Commission, now known as the Forestry Corporation ('FCNSW'), was required to undertake EIA. The EPA Act was strengthened and amended in late 1991 by the *Endangered Fauna (Interim Protection) Act 1991* ('EFIP Act').[65] However the *Timber Industry (Interim Protection) Act 1992* (NSW) ('TIIP Act') which came into force in March 1992, while extending a moratorium on many forests until proper EIA had been conducted, also exempted FCNSW from the EFIP Act.[66] The TIIP Act suspended the application of Pt 5 of the EPA Act in respect of logging operations being carried out in specified forests. The TIIP Act exempted FCNSW from ss 111 and 112 of the EPA Act. Nevertheless FCNSW were still required to produce Fauna Impact Statements ('FIS'). The TIIP was amended in May 1994 to extend to the Eden area however FCNSW discontinued much surveying even though they were still required to conducted fauna surveys as preparation for development of a FIS.[67] The *Threatened Species Conservation Act 1995* was enacted in late 1995.[68] The *Forestry and National Park Estate Act* ('FNPE Act') was enacted in 1998. With the enactment of the FNPE Act the TIIP Act was repealed and FCNSW were not required to produce FIS or EIA. The Regional Forest Agreements ('RFAs') were rolled out starting in 1998. Thus FCNSW were already exempt from any assessment in Integrated Forestry Operations Approval ('IFOA') areas by the time the EPBC Act was enacted. The FNPE Act has now been overtaken by the *Forestry Act 2012*. Thus many forests have had no EIA and FCNSW is not required to conduct an assessment of the impact of the logging.[69] However it is important to note that the exemptions were put in place to be equal to or better than the protective legislation. That has not eventuated.

The unlawfulness and unsustainability is systemic across NSW anywhere there is a Regional Forest Agreement in place. This RFA experiment that has been going on for the last 15 years

[65] *Endangered Fauna (Interim Protection) Act 1991* (NSW) Assented to 17 December, 1991.
[66] *Timber Industry (Interim Protection) Act 1992* (NSW) 12 March 1992.
[67] *Timber Industry (Interim Protection) Amendment Act 1994* (NSW) Assented to 16 May 1994.
[68] *Threatened Species Conservation Act 1995* (NSW) assented to 22 December 1995
[69] *Forestry Act 2012* (NSW) s 69W.

has failed dismally and been of benefit to only a select few and certainly is not in the public interest.

Public Interest, Public Benefit

The Tourism industry on the south coast employs 58 463 people which is a higher than average proportion of the workforce.[70] This, when compared to native forest logging financial and employment figures shows the importance of preserving and promoting our native forests, particularly as the effects of logging have a direct impact on tourism draw cards.

South Coast Native Forest Logging Employment Figures[71]

Place of Employment	**Employees**
Blue Ridge	30
Boral Nowra	30
Boral Narooma	20
Nippon South East Fibre Exports	45
Eden logging workers	24
Southern logging workers	24
Truck drivers (Gipp+SE)	20
Total	**193**

State forests are public lands, owned by NSW citizens, but held in trust by the government for the common benefit and use of the public generally and managed in the public interest.[72] This is a simple doctrine which has it basis in ancient equitable principles of the law of trusts. The government cannot alienate public property unless the public benefit from this alienation would more than compensate for the loss of the previous public uses of the area.[73]

[70] Tourism NSW, Travel to South Coast NSW Region, Year ended March 2009, (online) <http://corporate.tourism.nsw.gov.au/Sites/SiteID6/objLib18/South%20Coast%20NSW%20TOTAL%20REGION%20YE%20Mar%2009.pdf >;
O'Neill J, *Review Into Tourism in NSW: Final Report for the Premier of NSW 2008*, (online) <http://www.atec.net.au/review_into_tourism_in_nsw___john_o_neill_ao.pdf >.

[71] SEFR Sawmill Survey: pers com by companies to author.

[72] Bonyhady T, 'A Usable Past: The Public Trust in Australia' (1995) 12 *Environment and Planning Law Journal* 329; see also Sax J L, *Defending the Environment: A Strategy for Citizen Action,* (Vintage Books, 1972), 165; see *Willoughby CC v Minister* (1992) 78 LGERA 19; see also Preston B, 'The Role of the Judiciary in Promoting Sustainable Development; the Experience of Asia and the Pacific' (2005) 9 *Asia Pacific Journal of Environmental Law* 109; see *Davis v The Queen* (1869) 6 WW & a'B 106 (E).

[73] Bonyhady T, above n 72; see also Sax JL, above n 72; see *Willoughby CC v Minister* (1992) 78 LGERA 19.

The *Forestry Act 2012* (NSW) states that the objective of FCNSW is that it must conduct its operations in compliance with the principles of ecologically sustainable development ('ESD').[74] One of the main principles of ESD is intergenerational equity and what is considered to be to the benefit of the public. To maintain the public forests for present and future generations is in the public interest.

In *Re Sydney Harbour Collieries Co* (1895) it was held that:

> It is the duty of the Government not only to take the greatest care to protect both present and contingent public interests, but to also obtain the best consideration for the temporary alienation of frontages which, if the Crown could be in law a trustee, it holds in trust for the health, recreation, and enjoyment of an enormous and ever-increasing population.[75]

In the latest court action in the United States the Court found that the Commission's conclusion, that the public trust doctrine is exclusively limited to the conservation of water, is legally invalid. In the words of the Court 'the public trust doctrine includes all natural resources of the State.'[76] It is now given that the public native forests are worth more as an asset to citizens if left to grow.

[74] *Forestry Act 2012* (NSW) s 10(c); *Protection of the Environment Administration Act 1991* (NSW) s 6(2).
[75] *Re Sydney Harbour Collieries Co* (1895) 5 Land Appeal Court Reports 243, [251].
[76] *Angela Bonser-Lain, et al v Texas Commission on Environmental Quality*, Case No D-1-GN-11-002194 (Triana J) <http://www.texaselc.org>.

RECOMMENDATIONS

• Prohibition of sourcing from native forests – whether commercial, non-commercial, burned or diseased, native forests should not be used for energy;

• Suspend the approval of new bioenergy proposals and conduct a review of existing projects, their wood allocations, and their impacts on communities, climate and forests;

• Prohibit and exclude native forest from what is currently defined as 'biomass';

• Abandon the illusion of carbon-neutrality, perform full and independent life cycle analyses of forest bioenergy projects to avoid underestimating carbon output and track carbon emissions every year to take into account the 'carbon payback time' of bioenergy projects;

• Given the limited potential role for bioenergy, scale up energy alternatives like wind and solar energy;

• Ban any cellulosic biofuel production coming directly from native forest;

• No concessional excise arrangements for native forest usage;

• No direct support for native forest usage under any funding initiative;

• No support from market-based mechanisms for native forest usage;

• Directly disallow use of native forest by current power stations.

In our view only specific sources of biomass can be beneficial for the environment, and only if following strong environmental regulation, which neither the IFOAs nor the RFAs have proved to be.[77]

South East Forest Rescue completely oppose the proposed amendment in its entirety.

Conclusion

This amendment will not only be seen as enabling dirty energy, it will be seen as closely following in the footsteps of the previous NSW government. As justice must be done as seen to be done, so to responsible and transparent government. Climate change and pollution mitigation measures are currently great matters of public interest. Given the evidence on climate change, the adverse impacts of native forest logging's GHG emissions, the effect on water supply, the loss of biological diversity, the loss of ecological integrity it would

[77] Global Forest Coalition, above n 36.

therefore be difficult to argue that this amendment will have positive environmental outcomes and will not fit into the definition of zero emission renewable technologies.

The time has come to follow New Zealand's lead, honour Australia's international obligations and end native forest logging altogether. Burning forests for electricity will assure the regional extinction of endangered forest species. The protection of our native forests is of urgent national and international importance in these times of global climate chaos. It's time to prove that intelligence is not extinct and put an end to native forest logging, for us and the future of unborn generations.[78]

[78] *Re Minors Oposa v Secretary of the Department of Environment and Natural Resources* (1994) 33 ILM 174.

APPENDIX A[79]

Subsidy/ grant	Amount	Source
Forest Industry Structural Adjustment Program (FISAP) over past 10 years	$58.44 Million	Commonwealth Parliamentary Library
Dinner for national industry lobby group, National Association of Forest Industries, 21 March 2011	$10,000	Senate Question on Notice 221
Trip to China for Industry Promotion by National Association of Forest Industries 2010/11	$86,200	Senate Question on Notice 221
Timber Communities Australia, industry lobby group shop front	$94,000	Senate Question on Notice 221
Forest and Wood Products Australia research grants program 2009-11	$18.63 Million	Senate Question on Notice 221
Losses by State Government logging agencies in NSW.	$14-16 Million each year in NSW.	Question on Notice NSW Parliament
Grant for industry promotion to National Association of Forest Industries 2010/11	$16,740	Senate Question on Notice 221
Industry Development grant to National Association of Forest Industries 2010/11	$160,000	Senate Question on Notice 221
Exemption from local government rates for production forests owned by corporatized State Government logging agencies.	$15 Million each year in NSW.	Based on estimate by Bega Valley Shire Council
Damage to federal/ state/ council roads by log trucks. License fees do not cover the cost to the roads of damage done.	A log truck pays only a few times the rego of a car, but does many times the damage to roads	http://www.harryrclarke.com/2009/04/19/road-maintenance-externalities/
Services, such as "education" undertake on behalf of FCNSW as a whole by either State forestry agencies or the portfolio department, such as Primary Industries, and Small Business in NSW	$1.5 Million each year in NSW	Question on Notice NSW Parliament
ForestWorks for National Workforce Development Fund (NWDF) and Enterprise Based Productivity Places Program (EBPPP) 2011/12.	$5.2 Million	Commonwealth Parliamentary Library
Remediation of marine environments due to introduction of exotic marine organisms from ballast water of woodchip carriers in the Port of Eden	?	
Diesel Fuel Rebate claimed by logging contractors 2007+	$60+ Million over the last 5 years	
The Forest Industry Climate Change Research Fund 2008-11	$4.7 Million	Commonwealth Parliamentary Library
Biodiversity Fund grants to State Forest logging agencies 2012/13	$2.5 Million	
Tasmanian Forest Intergovernmental Agreement -funding from Federal and State governments	$338 Million (Commonwealth) $56.4 Million (State)	Commonwealth Parliamentary Library
Tasmania: additional Commonwealth funding May 2013	$7 Million	Commonwealth Parliamentary Library
Tasmanian Forest Contractors Exit Assistance Program	$17 Million	Commonwealth Parliamentary Library
Tasmanian Forest Contractors Financial Support Program	$5.4 million	Commonwealth Parliamentary Library
Climate change mitigation research, 2008 and 2011	$1.4 million	Commonwealth Parliamentary Library
Climate change bioenergy research, 2008 and 2011	$3.6 million	Commonwealth Parliamentary Library

[79] Chipstop, *Subsidies* (19 August 2013) <http.www.chipstop.savetheforests.org.au/subsidies>.