



The **Australia Institute**
Research that matters.

Money doesn't grow on trees

The financial and economic losses of native forestry in NSW

Native forest logging by the Forestry Corporation of NSW generated losses of \$79m over the last seven years - discontinuing the practice could deliver significant benefits to the state of NSW.

Discussion paper

Roderick Campbell and Richard McKeon

March 2016

ABOUT THE AUSTRALIA INSTITUTE

The Australia Institute is an independent public policy think tank based in Canberra. It is funded by donations from philanthropic trusts and individuals and commissioned research. Since its launch in 1994, the Institute has carried out highly influential research on a broad range of economic, social and environmental issues.

OUR PHILOSOPHY

As we begin the 21st century, new dilemmas confront our society and our planet. Unprecedented levels of consumption co-exist with extreme poverty. Through new technology we are more connected than we have ever been, yet civic engagement is declining. Environmental neglect continues despite heightened ecological awareness. A better balance is urgently needed.

The Australia Institute's directors, staff and supporters represent a broad range of views and priorities. What unites us is a belief that through a combination of research and creativity we can promote new solutions and ways of thinking.

OUR PURPOSE – 'RESEARCH THAT MATTERS'

The Institute aims to foster informed debate about our culture, our economy and our environment and bring greater accountability to the democratic process. Our goal is to gather, interpret and communicate evidence in order to both diagnose the problems we face and propose new solutions to tackle them.

The Institute is wholly independent and not affiliated with any other organisation. As an Approved Research Institute, donations to its Research Fund are tax deductible for the donor. Anyone wishing to donate can do so via the website at <https://www.tai.org.au> or by calling the Institute on 02 6130 0530. Our secure and user-friendly website allows donors to make either one-off or regular monthly donations and we encourage everyone who can to donate in this way as it assists our research in the most significant manner.

Level 5, 131 City Walk
Canberra, ACT 2601
Tel: (02) 61300530
Email: mail@tai.org.au
Website: www.tai.org.au

Acknowledgement

Support for this report was provided by the Nature Conservation Council of NSW (NCC) and the National Parks Association of NSW.

The Nature Conservation Council is the peak body for environment groups in the state, representing over 150 community conservation organisations with a combined membership of over 60,000 people.

National Parks Association of NSW (NPA) is a not-for-profit organisation that seeks to protect, connect and restore the integrity and diversity of natural systems in NSW and beyond, through national parks, marine sanctuaries and other means.

Summary

The Forestry Corporation of NSW ('Forestry Corporation' or 'the Corporation') is a state-owned corporation that manages more than two million hectares of commercial native and plantation forests in NSW for the primary purpose of timber production.

Forestry Corporation has two operating segments; the Softwood Plantations Division, and the Hardwood Division (which is primarily engaged in native forest logging). For the six years between FY09 and FY14, the Softwood Plantations Division cross-subsidised loss making native forestry logging to the order of \$78m. Through significant headcount reductions in FY14, the division broke even in FY15, but this was before making any contribution to the Corporations \$8m interest charge. Furthermore, a declining outlook for demand of native forestry products will make this result hard to repeat.

In response to declining volumes, the native forestry industry has increasingly lobbied for forest waste products to be sold to biomass electricity generation plants as a feedstock. In the current economic and regulatory environment, however, the economics of biomass power generation are not likely to provide any meaningful new demand for the Hardwood Division of the Forestry Corporation.

Given that native forest logging currently struggles to generate a profit, that demand is declining, and that supplying biomass power plants will not provide the uplift required, potentially the highest economic use of native forestry would be to leave the trees standing. Although the Emissions Reduction Fund does not currently recognise the protection of native forest from logging as a method for which revenue can be claimed, if the industry were to push for inclusion, Forestry Corporation could finally begin generating decent earnings by simply ceasing native forest logging.

If native forest logging were to be discontinued in NSW, existing grants and avoided losses could provide funding for ongoing management by the NSW National Parks and Wildlife Service. Furthermore, the impact on jobs is likely to be minimal, as approximately only 600 people are directly employed in the native forestry industry in NSW, less than 0.1% of the total workforce.

Table of Contents

Acknowledgement.....	iii
Summary.....	iv
List of acronyms.....	vi
Overview of the Forestry Corporation of NSW	1
Forestry Corporation total financial performance	3
Historic profitability.....	3
Exemption from local rates	4
Financial performance of the native forestry division	5
Historic profitability.....	5
Demand for native forest logging.....	7
Biomass power generation.....	8
Background.....	8
Biomass cost competitiveness against other renewables	8
Impact of inclusion in the RET	9
Benefit of biofuels to Forestry Corporation	10
Forests and the Emissions Reduction Fund.....	12
Funding forest protection.....	14
Employment from the forestry and logging industry.....	15
Total industry.....	15
Native forestry.....	16
Conclusion	17
References.....	18

List of acronyms

CAGR	Compound Annual Growth Rate
AEMO	Australian Energy Market Operator
AFPA	Australian Forest Products Association
CAGR	Compound Annual Growth Rate
CSO	Community Service Obligations
EBIT	Earnings Before Interest and Tax
ERF	Emissions Reduction Fund
LCOE	Levelised Cost of Electricity
LGCs	Large-scale Renewable Energy Generation Certificates
NEM	National Energy Market
RET	Renewable Energy Target
ROCE	Return on Capital Employed

Overview of the Forestry Corporation of NSW

The Forestry Corporation of NSW ('Forestry Corporation' or 'the Corporation') is a state-owned corporation (SOC) that manages more than 2 million hectares of commercial native and plantation forests in NSW. The principal objectives of the Corporation are to grow, manage, harvest, and supply timber from crown and other land under management in an efficient and sustainable manner, which maximises value to the state of NSW, considers the interests of the local community, and promotes regional development¹.

Forestry Corporation has two operating segments: the Softwood Plantations Division, and the Hardwood Forests Division. The Softwood Plantations Division grows and harvests plantation-grown pine (predominantly radiata pine) for a variety of softwood applications, such as house framing, furniture, panelling, and engineered wood products. The Corporation is the largest producer of radiata pine in Australia, supplying the equivalent of 25% of the timber required for domestic housing construction².

The Hardwood Forests Division harvests a variety of native species (predominantly *Eucalyptus*, *Corymbia* and *Callitris*) for the production of timber products, such as flooring, structural beams, telegraph poles, and woodchips. While some hardwood plantations exist on the NSW North Coast, the vast majority (~95%) of roundwood removals in the Hardwood Forests Division currently come from NSW's native forests (Exhibit 1).

Exhibit 1 Forestry Corporation harvested sawlog timber by type, 2012-13
Sawlog '000 m³



Source: Forestry Corporation of NSW, "Annual Report 2012-13"

Note: separate data on plantation and native hardwood is not split out in more recent annual reports.

¹ Forestry Act 2012 (NSW) - Section 10

² Forestry Corporation of NSW, "Forests – all about wood"

NSW has a large native forest endowment, with approximately 22 million hectares of forest covering 28% of the state³. Of this area, Forestry Corporation manages 1.8 million hectares under the state forest estate, the NSW National Parks and Wildlife Service manages a further 5.6 million hectares as national parks or protected areas, and the remainder is either private or unmanaged Crown land³.

The state forests estate managed by Forestry Corporation has reduced in size over the last two decades, down from a peak of 3.7 million hectares in 1994 to its current area of 1.8 million hectares, primarily due to transfers to the National Parks and Wildlife Service⁴. Currently, about 2% of the native forest from the state forests estate is harvested annually by Forestry Corporation⁶. Forestry Corporation manages a further 265,000 hectares of plantation forest (230,000 softwood, and 35,000 hardwood), bringing the total area under to management to just over 2 million hectares⁵.

³ Australian Government Department of Agriculture, "Australia's State of the Forests Report 2013"

⁴ The Australia Institute, "The Australian native forest sector: causes of the decline and prospects for the future"

⁵ Forestry Corporation of NSW, "Annual Report 2012-13"

⁶ Forestry Corporation of NSW, "Our Forests"

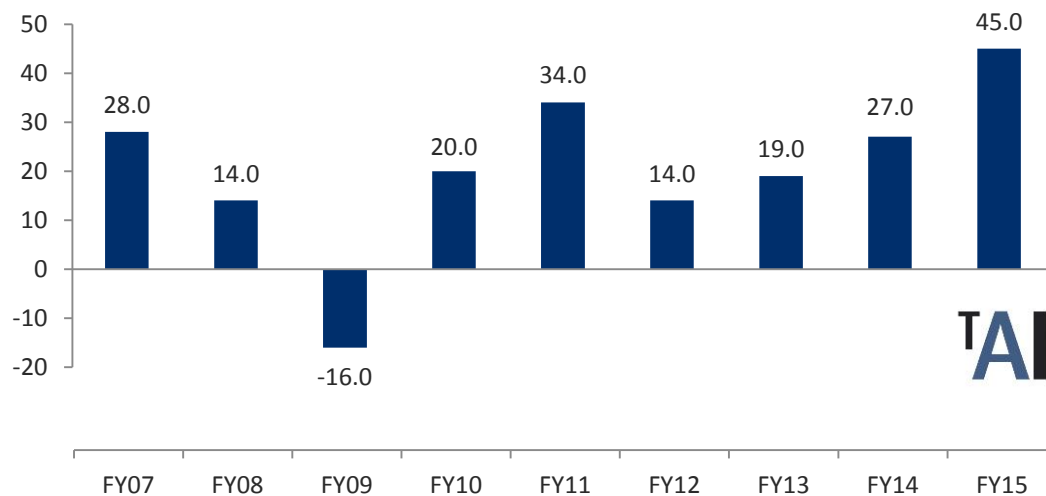
Forestry Corporation total financial performance

HISTORIC PROFITABILITY

Forestry Corporation has had mixed financial success over the past decade. In terms of total comprehensive income, a total net loss of \$63m was incurred over the decade, however, this was largely a result of impairments and revaluations of biological assets as a result of falling prices. Excluding these items (and interest and tax), an average operating profit of \$20.5m per annum was achieved since FY07, with a notable loss in FY09.

Exhibit 2 Forestry Corporation operating profit, FY07 to FY15

A\$ Millions



Source: Forestry Corporation of NSW, "Annual Reports 2004-05 to 2013-14"

Forestry Corporation has paid a total of \$119m in dividends to the NSW Government in the past 10 years. Over the same period, the NSW Government paid Forestry Corporation a total of \$136m in grants related to Community Service Obligations (CSOs) and other non-operational activities. The grants reimburse the Corporation for expenses incurred through the provision of recreation facilities, education and advisory services, government liaison and regulatory services, community fire protection, and research. From the NSW Government's perspective, dividends from

total forestry activities have therefore fallen \$17m short of paying for the management of the NSW state forest estate.

EXEMPTION FROM LOCAL RATES

Forestry Corporation does not pay local government rates on any of the 1.8 million hectares of land under its management. The *State Owned Corporations Act 1989* states that statutory SOCs are not exempt from rates or taxes simply by nature of their link to the public sector. However, since the state forests estate is classified as Crown land, the Corporation is exempted from paying rates under provisions of the *NSW Local Government Act 1993*⁷.

Regardless of legislative treatment, Forestry Corporation benefits from the provision of services administered by local governments, and contributes incremental expenses primarily through an increased rate of local road asset degradation⁷.

Assessing the benefit to NSW from forestry activities therefore requires these incremental costs borne by local governments to be subtracted from Forestry Corporation's economic profit. In Bega Valley Shire alone, the local council estimates that Forestry Corporation is avoiding rates of \$6.4m per annum on land that has an active logging licence⁸. Extrapolating this figure to the rest of NSW, it is likely that the total incremental costs borne by all local governments as a result of Forestry Corporation's activities will exceed the \$20.5m in average annual operating profit it earns, thereby making it value destructive for NSW ratepayers.

⁷ Deloitte Access Economics, "Review of local government rating exemption provisions", (2013).

⁸ Bega Valley Shire Council, "Ordinary Meeting Minutes, 12 June 2013"

Financial performance of the native forestry division

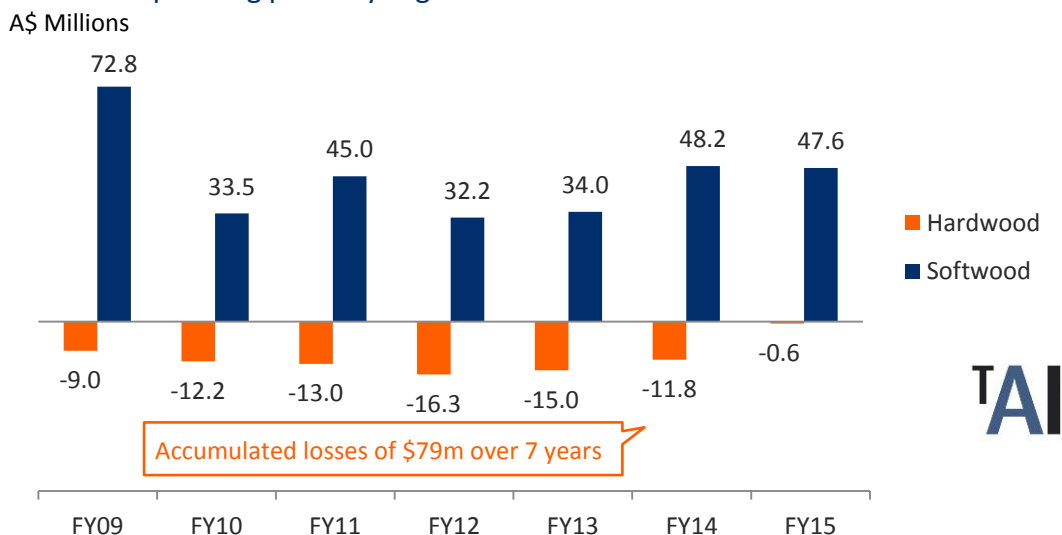
HISTORIC PROFITABILITY

Although Forestry Corporation has on average recorded modest operating profits over the past decade, hidden in these results is a cross-subsidisation between softwood and hardwood operations.

The only segment reporting that Forestry Corporation provides in its annual reporting is between the Hardwood Forests Division and the Softwood Plantation Division. The Hardwood Forests Division includes both native and plantation hardwood logging, but native logging accounts for approximately 95% of revenue (Exhibit 1). The softwood division is comprised completely of wood harvested from pine plantation assets, and therefore the split between Forestry Corporation’s operating segments is essentially a split between native forest logging and plantation forest logging.

Analysis of the financial performance of these segments reveals that in the 6 years between FY09 and FY14 (the only period for which segment reporting exists), the Hardwood Forests Division (native forestry) lost an average of \$11m per annum in operating profit (Exhibit 3).

Exhibit 3 Operating profit by segment



Source: Forestry Corporation of NSW, “Annual Reports 2008-09 to 2014-15”

The negative earning potential from native forest logging is further confirmed in Forestry Corporation's annual reports (including the latest report) under the biological asset valuation section, where it states that "... as the net cash flows from the CGU (native forests) are negative, related assets apart from land are 100% impaired"⁹. In other words, native forestry assets are essentially worthless in the Corporation's accounts. Forestry Corporation also acknowledges it "... may have onerous contracts in relation to wood supply agreements for native forest timber", for which the present value of the contract is negative, but the full amount cannot be determined due to allowances for movements in price and volume in the supply agreements⁹.

The significance of these results is that Forestry Corporation has been running a loss-making business unit for the last decade, which has been cross-subsidised by the profitable plantation business. In the Corporation's own words "FY15 saw the HFD deliver an EBIT profit result for the first time in over a decade"⁹. The cost of this decision has been borne by the citizens of NSW by means of lower dividend payments from Forestry Corporation (and its predecessor) to the NSW Government.

During 2014, Forestry Corporation went through a major organisational restructure, reducing costs by \$5m per annum (presumably primarily through redundancies). As a result of lower overheads, the hardwood division recorded marginally positive earnings before interest and tax (EBIT) of \$2m in 2014-15, the first positive result in over a decade⁹. The division's operating profit, however, remained negative at -\$0.6m (Exhibit 3).

The marginally positive earnings result the division recorded in FY15, however, does not consider the debt it is servicing. Forestry Corporation as a whole pays annual interest to service its debt of \$7.8m⁹, so in the event that the Corporation were broken up, the hardwood division would have to make a multi-million-dollar profit just to cover its debt, let alone meet any sensible Return on Capital Employed (ROCE) rate that NSW citizens should demand.

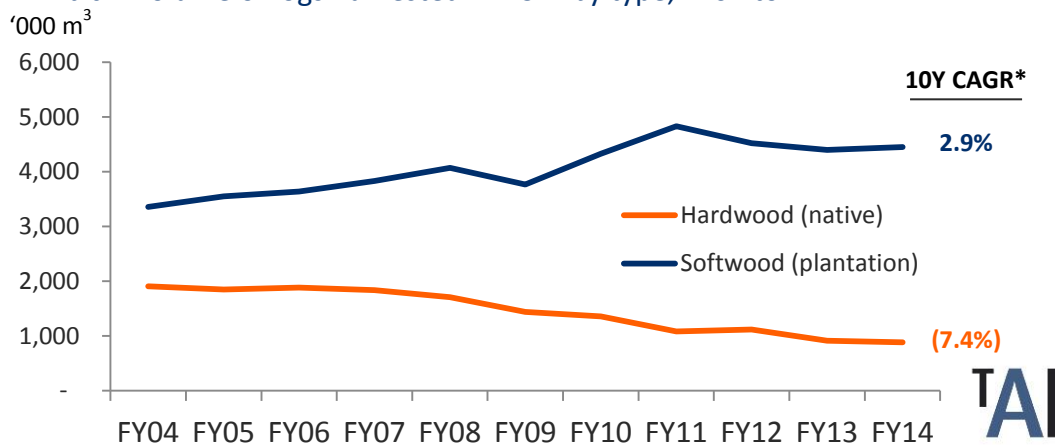
While the division made a strong turnaround in an aggregate financial sense in 2014-15, the fundamentals of the native forestry business did not change; neither the value or volume of product improved, with revenue remaining flat at \$99m. Businesses can always cut costs to make a short-term financial improvement, but without changes in technology or operating practices, there is generally no long-term benefit.

⁹ Forestry Corporation of NSW, "Annual Report 2014-15"

DEMAND FOR NATIVE FOREST LOGGING

Demand for hardwood from native forestry has been declining steadily over the last decade at an average rate of 7.4% per annum, which is in stark contrast to the 2.9% per annum growth experience by softwood from plantations (Exhibit 4).

Exhibit 4 Volume of logs harvested in NSW by type, FY04 to FY14



Source: Department of Agriculture and Water Resources, "Australian forest and wood products statistics", (2015)

* Compound annual growth rate

A number of persisting factors has been responsible for the historic decline in hardwood production volumes¹⁰, such as:

- Increasing domestic and international competition from softwood and hardwood plantations
- Weak demand for structural timber due to low detached housing construction growth
- Decreasing demand from the Japanese pulp and paper industry from falling paper product consumption
- Wood saving efficiencies and substitutions in production processes
- Increased operating costs relative to international competitors
- Reductions in the land available for native forestry

Given that many of these trends will continue, it is likely that demand for the Corporation's hardwood will continue its downward trajectory into the future, making the positive profit result in FY15 for the division increasingly difficult to repeat.

While Forestry Corporation has demonstrated its willingness to shed jobs in order to turn a loss making division into a cost neutral one, if it wants to begin generating a

¹⁰ Macintosh, A., "The Australian native forest sector: causes of the decline and prospects for the future" (The Australia Institute, 2013).

return that justifies its existence, it will need to radically transform its business model, and search for new markets to sell its product. One such new market the industry has hitched its hopes to is biomass power generation.

BIOMASS POWER GENERATION

Background

Biomass power generation is the process of generating electricity from burning or decomposing biomass solids such as wood. To fight declining volumes, and poor economic performance, the native forestry industry has long lobbied for waste products from logging activities to be permitted for use in biomass power plants.

In 2013, the *Protection of the Environment Operations (General) Regulations* were amended in NSW to allow invasive native species, pulpwood, and trees from thinning activities to be used as fuel in biomass power plants¹¹. Two years later, a bill was passed in federal parliament to allow the burning of native forest waste to be counted as a renewable energy source under the Renewable Energy Target (RET) legislation¹².

Biomass cost competitiveness against other renewables

According to Bloomberg, the minimum levelised cost of electricity¹³ (LCOE) generated using biomass technologies in Australia is around A\$140 per MWh. This is currently comparable to the cost of large-scale solar PV, but significantly more expensive than onshore wind projects on an unsubsidised basis (Exhibit 5).

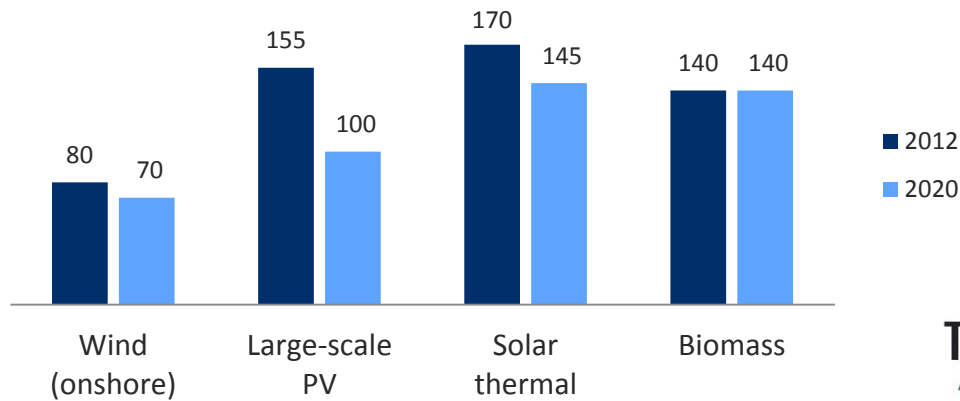
Biomass power generation, however, is a relatively mature technology, and therefore the cost is unlikely to decrease significantly over the next decade. On the contrary, the cost solar PV is still on a downwards trajectory, and is likely to reach a LCOE of \$100/MWh by 2020 (Exhibit 5).

¹¹ NSW Environmental Protection Agency, "Amendments to the burning of native forest biomaterials: questions and answers", (2015).

¹² Clarke, M. "Renewable Energy Target: Greens accuse Government of creating 'dead koala certificates'" (ABC News, 2015)

¹³ The LCOE represents the effective cost per unit of energy produced by different power generation technologies. It can be used to compare the cost of competing technologies regardless of their cost structure.

Exhibit 5 Minimum LCOE for renewables in Australia, 2012
LCOE A\$/MWh (Real)



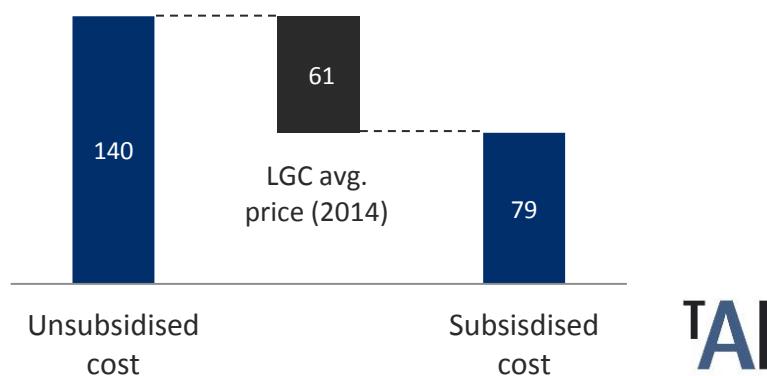
Source: Bloomberg New Energy Finance



Impact of inclusion in the RET

After changes to the RET were passed in mid-2015, electricity generated from native forest waste is now eligible for large-scale renewable energy generation certificates (LGCs). LGCs effectively subsidise the cost of generating renewable energy by issuing the producer with a certificate for every MWh of electricity they generate, which they can then sell on an open market. The average price for LGCs in 2014 was \$60.98 per MWh¹⁴, which based on the minimum LCOE estimated by Bloomberg implies an effective cost of \$79 per MWh for biomass power generation (Exhibit 6).

Exhibit 6 LCOE of biomass with Large Scale Generation Certificate (LGC)
LCOE A\$/MWh



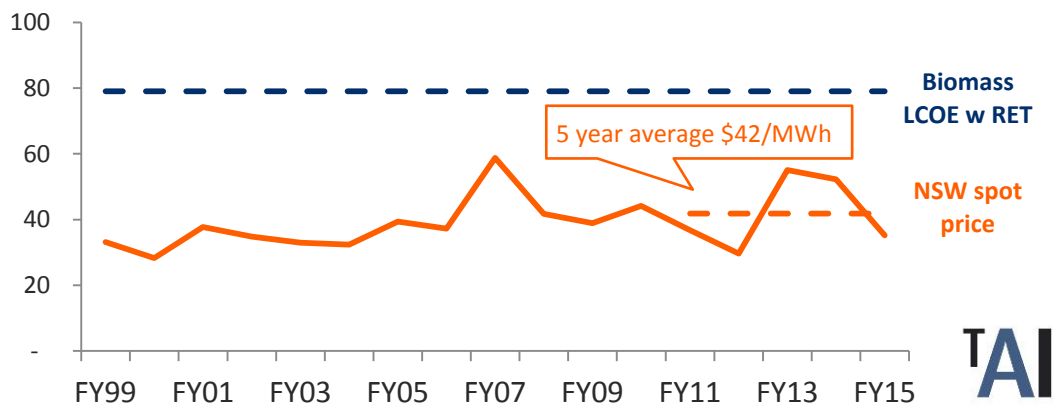
Source: Bloomberg New Energy Finance; Mercari, "LCG Closing Rates", (2015).

In simple terms, for biomass power to be economically viable, the cost of producing energy must be less than the price it is sold for. The average spot price for electricity

¹⁴ Mercari, "LCG Closing Rates", (2015).

sold on the wholesale National Energy Market (NEM) in NSW over the past 5 years was \$42 per MWh. Since estimates for the subsidised cost of producing biomass energy are almost twice as high at \$79 per MWh, without a dramatic increase in wholesale prices, or decrease in the cost of producing biomass electricity, it is unlikely that a new woodchip-fired power plant would be economic under current conditions.

Exhibit 7 Historical NSW wholesale electricity spot market price
A\$ / MWh (nominal)



Source: Australian Energy Market Operator (AEMO): *Average Price Tables*

The current level of supply of power generation in the NEM, and the lack of a carbon price, means that new power generators must effectively compete with the short-run marginal cost of existing coal-fired power stations, which is typically around \$30 per MWh.

Although the average price of electricity is only around \$42 per MWh, prices can spike to more than 10 times that amount during peak periods. Gas and hydro power plants currently provide additional capacity to the market during these times, and therefore receive a higher price for their output. Since biomass power can be turned on and off (unlike other renewables) it may be possible for the technology to make an economic return in the peak power market, but even here it would once again have to compete with existing and already paid for peak power stations.

Benefit of biofuels to Forestry Corporation

According to the Australian Forest Products Association (AFPA), 3,000 GWh of electricity could be supplied annually from wood related wastes by 2020¹⁶, equivalent to about 1.5% of the total electricity supply in Australia¹⁵. In a briefing note prepared by The Australia Institute, this figure was found to be possible only if practically all

¹⁵ Australian Energy Market Operator (AEMO), "National Electricity Forecasting Report Overview (NEFR)", (2015).

hardwood timber production across the country was diverted to biofuel¹⁶. Since the local commodity price for biofuel from native forestry is likely to be pegged to the net back export price¹⁷ of wood chips, however, this transition alone won't be expected improve profitability for Forestry Corporation.

The *Protection of the Environment Operations (General) Amendment (Native Forest Bio-material) Regulation 2013* requires that there be no increase to the intensity of clearing or logging as a result of biofuel production. Increasing production to meet growing demand from biofuels is therefore not possible under current law. However even if the regulations were relaxed to allow greater volumes for biomass, since Forestry Corporation is currently barely profitable from 700,000 m³ of sawlog and 500,000 tonnes of pulp annually¹⁸, and it is a predominantly variable cost business, simply increasing volume without increasing price is unlikely to improve to profitability.

The benefit to Forestry Corporation is therefore limited to increasing the value received from pulpwood, tree crowns, and thinning trees associated with current logging activities. The breakdown of revenue and cost for this segment is not disclosed in the corporation's annual reporting, so further analysis is difficult. For arguments sake, however, assuming an incremental operating profit margin of 50%, and a commodity price of \$80 per tonne for biomass woodchips, Forestry Corporation would need to sell an additional 325,000 tonnes of pulpwood (84% of FY13 volumes) just to restore what the Hardwood Forests Division lost in FY14. Generating a sensible return to the state of NSW would require at least that much again.

¹⁶ Denniss, R., "Briefing note: Do we need to burn the forests to save the environment?", (The Australia Institute, 2015).

¹⁷ Seaborne commodity price of wood chips less the cost of freight to port.

¹⁸ Forestry Corporation of NSW, "Annual Reports 2004-05 to 2013-14"

Forests and the Emissions Reduction Fund

Native forest logging activities generate considerable greenhouse gas emissions, since typically less than 5% of harvested biomass ends up in long-term timber products, such as furniture. The majority of wood harvested from native forests in Australia is consumed in short term products such as paper, which generally only delays emissions by around three years¹⁹. Biomass waste from native forest logging which is not removed also contributes incremental emissions, due to accelerated decomposition once felled¹⁹.

Nationally, native forestry logging generates 38 million tonnes of carbon dioxide emissions, which if reversed, would constitute a substantial proportion of Australia's required emissions abatement to 2030. Avoiding deforestation, however, is currently only recognised as a method under the Emissions Reduction Fund (ERF) if "...a clearing consent for the purpose of converting the native forest to cropland or grassland..." exists, which therefore excludes more Forestry Corporation logging activities²⁰. While there is nothing that specifically excludes logging from the ERF legislation, for Forestry Corporation to claim revenue from the cessation of logging activities in native forests under the ERF, a new method would need to be designed, agreed upon, and introduced^{21 22}.

The results of the first ERF auction released in April 2015 showed the Clean Energy Regulator had awarded contracts for 47 million tonnes of abatement at an average price of \$13.95 per tonne²³. While national emissions from forestry are estimated at 38 million tonnes annually, the Kyoto Protocol limits credits from forest management to 3.5% of base-year emissions, which is approximately 15 million tonnes of CO₂ equivalent per year¹⁹. If Forestry Corporation were to capture just one fifth of this budget, it would be worth over \$40 million per year in revenue from the ERF. Given

¹⁹Lindenmayer, D., Mackey, B., "Native forests can help hit emissions targets – if we leave them alone", (The Conversation, 2015).

²⁰Clean Energy Regulator, "Native forest protection (avoided deforestation)", (2015).

²¹Arup, T., "Highlands logging halt would earn Victoria \$30m a year in emissions reductions: report" (The Age, 2015)

²²Excluding those projects specifically allowed under the Verified Carbon Standard (a small group of transition projects in Tasmania)

²³The Hon. Greg Hunt MP, "First Emissions Reduction Fund auction delivers significant abatement", (Media release, 2015).

that native forestry doesn't currently provide any economic value to the state of NSW, citizens of NSW would be \$40 million per year better off if native forests were left alone rather than logged.

Funding forest protection

Irrespective of commercial activities, native forests require some level of management to reduce the risk and damage from fires, contain invasive species, and build and maintain infrastructure for the enjoyment of the public. Much of this management of the native forestry areas is already funded by the public through state government grants. In 2014-15, Forestry Corporation received Community Service Obligations grants worth \$15.6 million for the provision of non-commercial services relating to its native forestry estate including “provision of recreation facilities, education and advisory services, government liaison and regulatory services, community fire protection and research”²⁴.

If native forestry were discontinued in NSW, funding for the maintenance and management of these areas would still need to continue, but could easily be done through the National Parks and Wildlife Service, rather than Forestry Corporation. By consolidating state forests into the much larger National Parks program, significant ecological and conservation benefits could be realised by the sharing of knowledge and practices in a much broader organisation. Furthermore, since much of the overheads and organisational capabilities for managing land by the National Parks and Wildlife Service already exist, this is unlikely to be a higher cost alternative.

²⁴ Forestry Corporation of NSW, “Annual Report 2014-15”, p28

Employment from the forestry and logging industry

Forestry Corporations mandate, as set out in the *Forestry Act (NSW) 2012 – Section 10*, is to maximise the net worth of the Corporation to its shareholder, the Government of NSW. For an ordinary business, the best way to achieve this mandate would be to close or divest the loss-making division, rather than continuing to run it at a loss. Although inconsistent with the rationale for corporatisation, Forestry Corporation’s public sector ownership will no doubt mean that other factors, such as the impact to the labour force, will need to be considered in any decision.

TOTAL INDUSTRY

The forestry and logging industry is a relatively small employer in the Australian economy. In 2011, the industry employed 5,398 people nationally, with a further 2,168 people employed in forestry support services. New South Wales has the largest share of workers, with a total of 2,126 engaged either directly or through a support service, followed by Victoria [1,487], Tasmania [1,130] and Queensland [1,122]²⁵.

In NSW, people employed in the forestry and logging industry represented less than 0.1% of the total workforce. For context, the financial and insurance industry employs over 150,000 [5%], and the manufacturing industry over 250,000 [9%], more than 100 times that of forestry²⁵.

Furthermore, the forestry and logging industry (including support services) rarely represents an overly large proportion of the workforce in any single region, directly employing more than 1% of the workforce in just 5 of the 152 NSW Local Government Areas (Table 1).

²⁵ Australian Bureau of Statistics, “Census of Population and Housing”, (2011).

Table 1 Forestry employment in NSW

NSW Local Government Area	Employed in Forestry ²⁶ (#)	Total Workforce (#)	Forestry (%)
1. Bombala	77	997	7.7%
2. Oberon	78	2,018	3.9%
3. Tumut Shire	121	4,279	2.8%
4. Walcha	21	1,335	1.6%
5. Tumbarumba	20	1,306	1.5%
6. Wakool	6	758	0.8%
7. Balranald	12	1,523	0.8%
8. Bega Valley	61	11,212	0.5%
9. Bathurst	71	15,229	0.5%
10. Eurobodalla	51	11,014	0.5%
All other NSW (142)	1,608	2,983,855	0.1%
Total NSW	2,126	3,033,526	0.1%

Source: Australian Bureau of Statistics: *2011 Census of Population and Housing*

NATIVE FORESTRY

Native forestry represents an even smaller share of total employment. Employment figures for native forestry were not available in the 2011 census, but considering it represents only 25% of total harvesting volume by Forestry Corporation (Exhibit 1), it is likely that not more than 600 people are directly employed in the native forestry and logging industry in NSW.

There is some related employment in wood processing and transport as a result of native forest logging, although precise numbers are difficult to estimate due to crossover with other industries and plantation forestry. Given the cost to NSW taxpayers of propping up an unprofitable business, and the potential value left on the table from ERF revenue, the question of how much more we are willing to pay to keep this small industry afloat must be answered.

²⁶ Forestry and Logging, and Forestry Support Services

Conclusion

Native forest logging in NSW imposes costs on the NSW taxpayer through the losses of the Hardwood Forests Division of the Forestry Corporation of NSW, which have averaged \$11 million per year in recent years. Further costs are incurred by local councils and their ratepayers as the Corporation uses council facilities without contributing through the payment of rates due to an administrative exemption to these payments.

Changes to the Renewable Energy Target to include electricity generation through burning of biomass will not affect the economics of forestry in NSW as very few locations will be able to compete with biomass energy in the National Electricity Market and the cost of renewable energy decreases. Conversely, changes to the Emissions Reduction Fund to include native forest protection would make conservation the economically obvious choice.

Taxpayers are already paying for the basic management of much of the native forestry area through state government grants and through the losses that native forestry incurs. This funding could be diverted to the National Parks and Wildlife Service to incorporate these areas into the national park estate.

Forestry is not a major employer in NSW at a state level or at a local level. Native forestry is a fraction of total forestry employment, perhaps 600 people in the state representing less than 0.1% of the total workforce.

Native forest logging could end in NSW with minimal economic disruption and potentially substantial savings for NSW taxpayers.

References

- Arup, T., "Highlands logging halt would earn Victoria \$30m a year in emissions reductions: report", published 20/1/15, (The Age, 2015).
<http://www.theage.com.au/victoria/highlands-logging-halt-would-earn-victoria-30m-a-year-in-emissions-reductions-report-20150120-12ua1z.html>
- Australian Bureau of Statistics, "Census of Population and Housing", (2011) .
- Australian Energy Market Operator (AEMO), "National Electricity Forecasting Report Overview (NEFR), (2015).
- Australian Government Department of Agriculture, "Australia's State of the Forests Report", (2013).
http://www.agriculture.gov.au/abares/forestsaustralia/Documents/criterion1_web.pdf
- The Australia Institute, "The Australian native forest sector: causes of the decline and prospects for the future", (2013).
http://www.tai.org.au/system/files_force/TB%2021%20State%20of%20the%20native%20forest%20industry_1_3.pdf?download=1
- Bega Valley Shire Council, "Ordinary Meeting Minutes, 12 June 2013", (2013).
http://begavalley.infocouncil.biz/Open/2013/06/OC_12062013_MIN.htm
- Clarke, M. "Renewable Energy Target: Greens accuse Government of creating 'dead koala certificates", published 24/6/15, (ABC News, 2015)
<http://www.abc.net.au/news/2015-06-24/greens-accuse-government-of-creating-27dead-koala-certificates/6569594>
- Clean Energy Regulator, "Native forest protection (avoided deforestation)", (2015).
<http://www.cleanenergyregulator.gov.au/ERF/>
- Deloitte Access Economics, "Review of local government rating exemption provisions", (2013).
- Denniss, R., "Briefing note: Do we need to burn the forests to save the environment?", (The Australia Institute, 2015).
- Department of Agriculture and Water Resources, "Australian forest and wood production statistics", (2015).
<http://www.agriculture.gov.au/abares/forestsaustralia/publications/pubs?url=http://1>

43.188.17.20/anrd/DAFFService/pubs.php?seriesName=AustForestStat%26sort=date%26sortOrder=desc%26showIndex=true%26outputType=list%26indexLetter=

Department of Environment & Climate Change, "New South Wales National Parks Establishment Plan", (2008).

Department of Environment, Climate Change and Water NSW, "Economic benefits of national parks and other reserves in New South Wales", (2009).

Edwards, N., "A Target Return on Equity for Forestry Tasmania", Tasmanian Parliament Submissions, (2011).

http://www.parliament.tas.gov.au/ctee/Council/Submissions/Govt%20A_ForestryTasF_inancials%20-%20Naomi%20Edwards%20Submission%202.pdf

Forestry Corporation of NSW, "About Us", (n.d.).

<http://www.forestrycorporation.com.au/about>

Forestry Corporation of NSW, "Annual Report 2012-13", (2013).

Forestry Corporation of NSW, "Annual Report 2013-14", (2014).

Forestry Corporation of NSW, "Annual Report 2014-15", (2015).

Forestry Corporation of NSW, "Annual Reports 2004-05 to 2013-14"

Forestry Corporation of NSW, "Forests – all about wood", (n.d.)

http://www.forestrycorporation.com.au/_data/assets/pdf_file/0019/391114/All-About-Wood-poster.pdf

Forestry Corporation of NSW, "Our Forests", (n.d.)

<http://www.forestrycorporation.com.au/management/our-forests>

Lindenmayer, D., Mackey, B., "Native forests can help hit emissions targets – if we leave them alone", (2015).

<http://theconversation.com/native-forests-can-help-hit-emissions-targets-if-we-leave-them-alone-44849>

Macintosh, A., "The Australian native forest sector: causes of the decline and prospects for the future", (The Australia Institute, 2013).

Mercari, "LCG Closing Rates", (2015).

<http://lgc.mercari.com.au/>

NSW Environmental Protection Agency, "Amendments to the burning of native forest biomaterials: questions and answers", (2015).

<http://www.epa.nsw.gov.au/licensing/natforestbiofuel.htm>

NSW Government, "Forestry Act 2012 - Section 10", (2012).

http://www.austlii.edu.au/au/legis/nsw/consol_act/fa2012139/s10.html

NSW Government, "Advantage NSW - Creating value in the circular economy", (2014).

<http://www.environment.nsw.gov.au/resources/business/sustainabilityadvantage/140840-circular-economy-wme.pdf>

NSW National Parks and Wildlife Service, "About", (n.d.).

<http://www.nationalparks.nsw.gov.au/about-npws>

The Hon. Greg Hunt MP, "Media release: First Emissions Reduction Fund auction delivers significant abatement", (2015).

<https://www.environment.gov.au/minister/hunt/2015/mr20150423a.html>