



Huon Valley Environment Centre
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Southwood Forest Furnace- NOT Renewable Energy

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Abstract

For almost a decade, Forestry Tasmania has been seeking to develop a 30-50 MW Wood-Fired Power station at Southwood in the Huon Valley. This document outlines major impacts and problems arising from the development of this proposal and demonstrates how a wood fired power station would have serious detrimental affects upon forest health and biodiversity, climate change, river health, air quality and public amenity. It argues that responsible Federal and State Governments should not provide support to such proposals and ensure that approval to generate Renewable Energy Certificates (RECs) is not granted to this proposal.

The Proponents

As of 2007, two companies – US energy company National Power and Australian investment bank Babcock and Brown – were seeking approval to generate RECs and operate the Southwood Power Station. However, Forestry Tasmania has recently expressed that it is seeking investors for the project, despite having pursued it for almost a decade (1). This suggests that the project is fundamentally unviable from a business perspective.

Public Rejection

Tasmania is the only state in Australia that actively supports the burning of native forests to generate energy. No other Australian state endorses the burning of old growth forests and rainforest to produce electricity, as is planned at Southwood. The Southwood “Biomass Plant” is one of three current proposals to burn forests for power. Other proposals include at Circular Head and at Gunns' proposed Pulp Mill in the Tamar Valley. The Wood-Fired Power Station is the only component of the Southwood complex that does not specifically exclude the use of old growth (2).

The practice of burning native forests for power is deeply unpopular with the Australian public. A Morgan Poll commissioned by the Wilderness Society in 2001 found that 88% of people opposed the use of native forest for wood-fired power. Huon Valley residents should not be foisted with a type of development rejected by the rest of the country.

Native forest biomass has been overwhelmingly rejected by leading renewable energy industry players, including the national GreenPower accreditation group, who have ruled out sourcing power from this source (3).

Impacts

The risks and impacts associated with wood-fired power stations and industrial fuel wood harvesting are well documented. It is vital that the Australian and Tasmanian Governments do not provide support to these proposals either through granting of RECs or other funding arrangements.

Impacts, risks and problems associated with the development of the Southwood wood-fired power station include:

The proposal would lead to intensified logging and major biodiversity impacts

Industrial fuel-wood harvesting is environmentally destructive and at odds with Ecologically Sustainable Forest Management (ESFM) principles.

Harvesting of fuel wood for the power station will lead to a significant increase (around 25%) in wood removal from the Southern Forests (4). This intensified logging has the potential to impose severe impacts upon the forest ecosystem. Impacts include: increased soil disturbance and lowered fertility, poor regeneration after logging, decreases in forest carbon stocks, especially in forest soils and coarse woody debris (CWD), disturbance and removal of (CWD) habitat (an important storehouse of biodiversity in forest systems) (5).

The retention of CWD in harvesting residue is essential to maintaining forest biodiversity and health. As Forestry Tasmania's own research notes, "decaying logs on the forest floor are an extremely valuable biological resource. They support a rich diversity of invertebrates and fungi, as has been documented repeatedly in the scientific literature," (6).

There is clear potential for fuel wood harvesting to undermine the health, biodiversity and long-term productivity of the forest environment. Removal of biomass for the proposed power station is therefore not consistent with ESFM principles. As a 2002 CSIRO review into the science surrounding wood fired power states:

"It seems inevitable that the intensity of energy-wood harvesting on some coupes and in some years will be so great as to cause concern for the capacity to sustain soil fertility and soil organic matter," (7).

European Authorities have recently noted the impacts associated with increased harvesting for fuel-wood. Slovenian Authorities have commented, "the increased use of wood for energy has already shifted management towards intensification of production, which may negatively impact biodiversity," (8).

In Canada, conservation groups have also expressed concern that harvesting for wood-fired power stations will encourage more logging and further threaten the sustainability of the region's forests and the stability of the global climate. (CPAWS Wildlands League. Media Release. "Ontario puts ecosystems and climate in jeopardy by encouraging burning forests for energy." January 21, 2009.)

Even Forestry Tasmania's own research concludes that the collection of CWD as fuel wood is also fraught with negative ecological implications. As FT's Hans Driselma has noted: "The issue of waste raises interesting issues, as we now understand the importance of maintaining coarse woody debris on the forest floor for future maintenance of forest biodiversity, therefore the retention of logging residues is seen as an environmental necessity," (9).

There remain major uncertainties and information gaps regarding the process of fuel wood collection in Tasmanian forests and associated impacts.

The precautionary principle suggests that such an activity should not be allowed to proceed while such uncertainty remains. As the CSIRO report again states:

“The impacts of residue removal on biodiversity at both a logging unit (coupe) and landscape scale are poorly understood,” (10).

“There are large information gaps that need to be filled before CWD biodiversity can be confidently managed in forest subjected to CBS silviculture and fuel wood harvest,” (11).

The fuel-source is not a genuine "waste".

Over 330,000 tonnes of timber would be supplied to the power station per annum (12). Claims that power will be generated from “waste” wood do not stand up. Much of the timber would be collected in conventional harvests, not as post-harvest "residue" (13). Furthermore, over 20,000 tonnes p.a of woodchips may be diverted from the Southwood woodchip mill directly into the power station (14). Woodchips may also be trucked to the site from other locations (15).

The huge volumes of timber required to feed the power station would be equivalent to major wood-production categories such as pulpwood (16). Last year (2007), the single largest production component from the Huon district was pulp wood (298,702 tonnes). The proposed power station at Southwood would use in excess of 300,000 tonnes, extracted from forests in the Huon District. This would make fuel wood the single largest product category in the Huon district. There can be no claim to be utilising a "waste" product when that product is the primary product category. Even the Institute of Foresters of Australia (a professional body engaged in branches of forest management and conservation in Australia) concedes that “biomass energy policies should be carefully created to avoid perverse incentives. The IFA considers that biomass energy should only be produced as a by-product from native forest harvesting, not a primary product,” (17).

By increasing the intensity of harvesting and diverting vast amounts of timber to a very low-value use (burning), fuel wood harvesting will not only impact upon forest health and biodiversity, but also destroy valuable resources for other forest users. Studies conducted by local timber workers suggest that so called "harvest residues" include large amounts of valuable merchantable wood, including special species (18). Leatherwood honey producers also rely on the very understorey species that are often left as “harvest residue” in old growth logging coupes.

Local Forest users Timber Workers for Forests (TWFF) have concluded that “Wood fired power stations legitimise continued waste of forest resources and will create a continuing demand for fodder.” TWFF also explains “A simpler, morally justifiable and sensible solution is not to use silvicultural techniques that create large quantities of waste. It is difficult to foresee such power stations becoming anything other than the tails that wag the dogs of the future, leading to further destruction of forests, the need to produce ever greater quantities of “residue” and ultimately, purpose-planted plantations in order to feed the power stations and recover the substantial capital expenses required to build them,” (19).

The power station will target old-growth and high-conservation-value forests in the Huon and Derwent forest districts.

The Power Station is situated in close proximity to large stands of pristine old growth and rainforest along the border of the Tasmanian World Heritage Area. While the currently operating sawmill and newly developed Veneer Mill will process only "regrowth" timbers, the proposed power station is the only component of the Southwood complex that will still utilise old growth and rainforest timber. The power station will thus encourage increased logging in the remaining pristine forests of Southern Tasmania.

Forestry Tasmania documents show that timber from old growth forests will be specifically targeted as fuel wood for power stations at Southwood and across Tasmania. (Grove, Simon. *Operational prescriptions for fuelwood and firewood harvesting at first-rotation forest harvesting in Tasmanian production forests*. Forestry Tasmania. August 2008. p. 2.) It is clear that Forestry Tasmania intends to direct old growth wood to power stations because customers for sawn timber and wood fiber products do not wish to purchase this wood.

The power station will require 3.3 Million litres of water per day, contributing to the site-wide consumption of up to 5 ML of water per day (20).

Water will be drawn from the Huon River, affecting stream flows, downstream users and drinking water. The Huon River is already subject to periodic Health Warnings and any further water removals could exacerbate this problem, especially in times of drought. The removal of this large volume would exacerbate recent very low water levels in the Huon River that would in turn affect downstream irrigators, residents and recreational users.

This proposal will lead to increased carbon emissions and is at odds with the stated Objects of the Renewable Energy Act

Renewable Energy Act: Object b) to reduce emissions of greenhouse gases.

The power station will lead to immediate emissions of up to 500,000 tonnes of CO₂ per year (21) and reductions in forest carbon storage, especially in forest soils, as a result of fuelwood harvesting, (22). While replanted forests do re-store carbon, it will take up to sixty years before these emissions are accounted for. The problem of carbon emissions is compounded by the use of old growth forest and rainforest in the proposed power station. Old growth forest ecosystems have a very high carbon-carrying capacity, (23). When old growth forest is logged, burned and converted to regrowth managed on shorter (80 year) rotations, carbon storage per hectare drops by as much as two thirds, (24). Hence, a wood-fired power station can never be carbon neutral if it utilises wood sourced from logging in these old growth forests.

In the United State, the Massachusetts Environmental Energy Alliance has led research indicating that burning trees for energy produces 1.5 times as much carbon as coal and three to four times more than natural gas. The Alliance explains that "the assumption of carbon neutrality, which depends on re-growth of forests, would not be met for decades, if ever, given that forests may not recover at the cutting rates that are proposed." (Biomass Briefing, August 2009. Massachusetts Environmental Energy Alliance www.massenvironmentalenergy.org)

Furthermore, increased truck and machinery movements mean that fuel wood collection and

burning cannot be carbon neutral. Energy from burning wood produces greater carbon emissions than equivalent coal-generated energy.

The proposed Power Station would see increasing direct carbon emissions in a time when urgent action is needed to mitigate climate change. The carbon released would not be re-stored for decades or centuries. When old growth is used, the lost carbon will never be accounted for.

Object c) to ensure that renewable energy sources are ecologically sustainable.

At best, there is major uncertainty about the Ecological Sustainability of this fuel source. At worst, the use of this fuel source will impose a severe impact upon forest health, biodiversity and productivity.

Regeneration burning will continue

Forestry Tasmania claims that fuel wood harvesting and wood fired power will be a solution to the environmental and social impacts of regeneration burning. However, there is no intention to cease regeneration burning. FT also claims that the burns will be cooler, reducing smoke impacts. Even if cooler burns are conducted, these can often lead to heightened local pollution effects, as the convection current, which draws smoke into the higher atmosphere, is not present. Smoke persists in the lower atmosphere. The Huon Valley will be subject to increased impacts from ongoing regeneration burning in addition to constant emissions from a power station, as well as increased emissions from trucks and machinery movements.

Pollution and Particulates

As emissions from a wood fired power station will continue all year, in addition to the annual emissions from forest burn-offs, the health and environmental impacts from wood smoke pollution will inevitably increase. Of further concern are the persistent emissions of particulates from the station stack (150,000 kg/yr) (25). Wood-smoke and particulates are now recognised as a major human health risk. Recent Tasmanian research suggest that wood smoke could be worse for people's health than exhaust pollution (26). Increased wood smoke in the atmosphere generated by the 24/7 operation of a power station in addition to regeneration burning will pose increase health risks to Huon Valley residents.

A number of very reputable medical associations in the United States, have recently rejected wood fired power stations due to their severe human health impacts. The Massachusetts Medical Society, a leading American health association and publisher of the prestigious *New England Journal of Medicine*, recently released a policy opposing wood-fired power station proposals on the grounds that “biomass power plants pose an unacceptable risk to the public’s health by increasing air pollution.” (Massachusetts Medical Society Adopts Policy Opposing Biomass Power Plants” December 9, 2009. <http://www.massmed.org/AM/Template.cfm?Section=Search8&template=/CM/HTMLDisplay.cfm&ContentID=32796>)

The American Lung Association, another prominent health advocacy group has called on the US congress to reject biomass burning, as it has the potential to “generate significant increases in emissions of nitrogen oxides, particulate matter and sulfur dioxide and have severe impacts on the health of children, older adults, and people with lung diseases.” (Charles D. Connor. President & CEO. American Lung Association. *Letter to United States House of Representatives*. June 24, 2009.)

Conclusion:

No project to utilise native forest biomass as the primary fuel source for a power station has been granted approval to generate RECs. It is patently clear that proposals to burn native forest to generate power exacerbate the environmental risks already associated with logging and are publicly unpopular.

We hope that the Australian and Tasmanian Governments will act in the best interests of the community and recognise the suite of problems associated with native forest biomass energy by ruling out the granting of REC accreditation or other funding incentives/subsidies to this project.

This is a synopsis of our concerns about the accreditation of a native forest burning power station in Tasmania. While the risks associated with this particular development must be addressed, a vital long-term solution is to remove native forest wood waste from the list of renewable Energy Sources in the Renewable Energy Act.

The Huon Valley Environment Centre advocates for a ban on the burning of native forest and native ecosystem biomass for electricity generation or the collection or export of native forest biomass for energy production overseas.

Huon Valley Environment Centre
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