Green Institute Backgrounder

Gunns proposed pulpmill: greenhouse gas emissions

Margaret Blakers, September 2007

Key finding. Gunns proposed pulpmill will result in annual greenhouse gas emissions of at least 10.2 Mt CO_2 per annum, equivalent to 2% of Australia's total emissions in 2005. If native forest wood is used, the total emissions will be higher.

Background. Neither the Commonwealth nor the Tasmanian government requires the greenhouse impact of major projects to be assessed. There is no Commonwealth legislation to implement the Climate Change Convention and greenhouse gas emissions are not a 'matter of national significance' under the Commonwealth *Envirionment Protection and Biodiversity Conservation Act*. Tasmania also lacks climate change legislation and, although the RPDC 2005 assessment guidelines included a section on greenhouse gas emissions, this was not carried through to the parliamentary process. As a result, the assessment process for Gunns proposed pulpmill has failed to consider the issue.

Quantity of emissions. The main source of emissions from the pulpmill will be the wood it consumes, stated to be up to 4.0 million green tonnes per annum (equivalent to a volume of 3.6 million m3). Assuming this all to be hardwood (native forest or plantation), this would generate CO_2 emissions of at least 10.2 Mt CO_2 per annum, comprising 4.3 Mt CO_2 in the pulplogs processed at the mill and at least 5.9 Mt CO_2 in the slash and other vegetation on the logging site. The greater the proportion of native forest logs and the older the forests, the higher the on-site and therefore total emissions will be. [1]

Emissions from activities such as plantation tending, log harvesting and transport have not been estimated here but will be relatively small by comparison.

Timing of emissions. Almost all the pulpmill-generated CO_2 will be released to the atmosphere either immediately or within a few years. In the coupe, slash will be burnt in the post-logging regeneration burn or decay. A large proportion of the pulplogs are waste, much of which will be burnt to generate electricity. The pulp itself is considered a 'very short term product' with a maximum life of three years.[2]

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[1] This calculation uses the methodology and ratios of the Australian Greenhouse Office (AGO). For details, see Green Institute working papers 1 and 2 (www.greeninstitute.com.au). The emissions from native forest logging are significantly under-estimated because soil carbon is not included and log volumes are not a good indicator of CO_2 in a coupe. A more accurate assessment requires measurement of actual CO_2 amounts in forests of different types and ages.

[2] In any case, the current recommendation of the Intergovernmental Panel on Climate Change is that all logging emissions should be accounted for at harvest.

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Recapturing emissions. Over time, the CO_2 emitted to the atmosphere will be recaptured as plantations and forests regrow. However, the recapture time – the time taken to completely recapture the CO_2 emitted – will vary from a few decades for plantations up to several centuries for old growth forests (the AGO assumes native forests continue capturing carbon until they are 200 years old but there is ample evidence of forests continuing to absorb carbon well past this age). Until recaptured, the CO_2 is resident in the atmosphere and causes global warming just as do fossil fuel emissions.

Significance of emissions. Australia has two sets of greenhouse gas accounts. One meets the requirements of the Kyoto Protocol but only partially covers emissions from land use change and forestry. The other is a more recently developed full-carbon accounting system that meets the requirements of the UN Framework Convention on Climate Change (UNFCCC). Australia's total emissions under the full-carbon account were 522 Mt CO_2 in 2005. The 10 Mt CO_2 per annum generated by the pulpmill is equivalent to 2% of Australia's total emissions, and similar in size to the annual emissions of the 1000 MW brown-coal fired Loy Yang B power station in Victoria.

Full-carbon accounting is likely to be adopted for the global post-Kyoto framework, if not before. That means emissions from logging will be counted in the future and Gunns proposed pulpmill represents a significant carbon risk for the suppliers of logs (whether plantation or native forest) and for buyers of the pulp. Plantation feedstock would be a much lower risk than native forests because the recapture time is shorter. (Incorporating a proportion of recycled paper would be even better.)

Under the existing Kyoto Protocol, Tasmania currently has emissions of 5 Mt CO_2 per annum from clearing native vegetation, mostly forests (this is close to 10% of Australia's total emissions from deforestation). The Tasmanian Regional Forest Agreement permits continued forest clearing until 2010 on public land and 2015 on private land. To the extent that the pulpmill promotes continued clearing of native vegetation during the Kyoto commitment period (2008-2012), it will be harder for Australia to achieve its Kyoto target.

From a public policy perspective, it would be a travesty if the impacts of Gunns' proposed pulpmill on Australia's greenhouse gas emissions were not thoroughly assessed.

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