



SECOND PUBLIC REPORT

Report Period - July 2008 to June 2009

Norske Skog Paper Mills (Australia) Limited

Norske Skog Paper Mills (Australia) Limited is the only manufacturer of newsprint grades of paper in Australia, operating the Boyer Mill in Tasmania and the Albury Mill in NSW. The company is part of Norske Skogindustrier ASA, a Norwegian based company, which is one of the largest newsprint manufacturers in the world. The Australian mills employ 600 people directly, create an estimated 1670 indirect jobs and contribute over \$250 million per annum to the regional economies around Albury in NSW and the Derwent Valley in Tasmania. Total energy use for our operations in Australia is 8.6 PJ.

Norske Skog acknowledges the reality of climate change and supports the need for action to mitigate the associated risks. The company recognises the important role industry must play in meeting this challenge and has committed to a global target of a 25% reduction in absolute emissions by 2020, compared to 2006 emissions (see <http://www.norskeskog.com>).

Information on assessments completed to date

The intent and key requirements of the Energy Efficiency Opportunities legislation have been met with energy assessments having been carried out in 2007/2008 at each of the two operating sites. Both manufacturing plants use greater than 0.5 PJ and both were assessed. The two sites account for virtually all of Norske Skog's energy use in Australia. No new assessments were therefore carried out for reporting purposes in 2008/2009. Updates of the assessments reported in the first public report are included.



Energy Use Assessed

Group member and/or business unit and/or key activity and/or site that has had an assessment completed by the end of this reporting period.	Period over which assessment was undertaken	Energy use per annum in GJ in the current reporting year
Norske Skog Albury Mill	July 1 2006 - June 30 2007	4,369,212
Norske Skog Boyer Mill	July 1 2006 - June 30 2007	4,356,731
Total energy assessed		8,725,943
Total energy use of the group in the current reporting year		8,726,270
Total energy assessed expressed as a percentage of total current energy use		>99%

All energy use has been assessed within an accuracy range of $\pm 5\%$.



Update of assessments originally reported in previous reporting periods

Facility: Norske Skog Albury Mill

Energy use of the entity during the current reporting period: 4,369,212 GJ

Opportunities assessed to an accuracy of $\pm 30\%$ or better					
Status of opportunities identified		Number of opportunities	Estimated energy savings per annum by payback period (GJ)		Total estimated energy savings per annum (GJ)
			0 – < 2 years	2 – \leq 4 years	
Outcomes of assessment*	Total Identified	7	93,700	48,200	141,900
Business Response*	Under Investigation	2	18,300	0	18,300
	To be Implemented	1	900	0	900
	Implementation Commenced	3	68,300	48,200	116,500
	Implemented	0	0	0	0
	Not to be Implemented	1	6,100	0	6,100
Opportunities assessed to an accuracy of worse than $\pm 30\%$					
Status of opportunities identified		Number of opportunities	Estimated energy savings per annum by payback period (GJ)		Total estimated energy savings per annum (GJ)
			0 – < 2 years	2 – \leq 4 years	
Outcomes of assessment*	Total Identified	6	47,700	93,500	141,200
Business Response*	Under Investigation	4	47,700	11,200	58,900
	To be Implemented	1	0	10,700	10,700
	Implementation Commenced	0	0	0	0
	Implemented	1	0	71,600	71,600
	Not to be Implemented	0	0	0	0



Facility: Norske Skog Boyer Mill

Energy use of the entity during the current reporting period: 4,356,731 GJ

Opportunities assessed to an accuracy of $\pm 30\%$ or better					
Status of opportunities identified		Number of opportunities	Estimated energy savings per annum by payback period (GJ)		Total estimated energy savings per annum (GJ)
			0 – < 2 years	2 – \leq 4 years	
Outcomes of assessment*	Total Identified	4	80,100	525,300	605,400
Business Response*	Under Investigation	4	80,100	525,300	605,400
	To be Implemented	0	0	0	0
	Implementation Commenced	0	0	0	0
	Implemented	0	0	0	0
	Not to be Implemented	0	0	0	0
Opportunities assessed to an accuracy of worse than $\pm 30\%$					
Status of opportunities identified		Number of opportunities	Estimated energy savings per annum by payback period (GJ)		Total estimated energy savings per annum (GJ)
			0 – < 2 years	2 – \leq 4 years	
Outcomes of assessment*	Total Identified	3	63,200	0	63,200
Business Response*	Under Investigation	0	0	0	0
	To be Implemented	1	10,700	0	10,700
	Implementation Commenced	2	52,500	0	52,500
	Implemented	0	0	0	0
	Not to be Implemented	0	0	0	0

Significant Opportunities

Waste steam recovery re-boiler (Boyer Mill)

An opportunity has been identified to install a steam recovery re-boiler on a new thermo mechanical pulping plant. The new plant is to be installed in 2009 to replace an existing chemic-mechanical pulping process. It is anticipated that the introduction of the Carbon Pollution Reduction Scheme will provide sufficient financial incentive to justify investment in additional steam recovery equipment. This will have an upfront cost of around four million dollars and provide energy savings of around 500TJ per annum, through a reduction in steam load on the existing boiler. This opportunity was identified as under investigation.

Update: The new thermo mechanical pulping plant has been commissioned and the installation of a steam re-boiler to recover heat from this process will continue to be investigated and financially assessed in light of emissions trading developments. This opportunity is under investigation

Advanced process control of thermo mechanical pulping (Albury Mill)

This project involves the installation of advanced process control technology to improve process stability and product quality with lower energy consumption. Suppliers have been evaluated and a 12 month trial is to be conducted in 2009. Based on estimated savings and experiences elsewhere, energy savings of around 50TJ could be realised. If the trials prove successful, project costs of over one million dollars will be required for full installation. This opportunity was identified as to be implemented.

Update: Full scale trials are currently underway with some promising results. However, concerns have also been raised around the impact of lower energy input on final product quality and this may limit the extent of savings finally able to be achieved. The trials will continue and a decision on any permanent control system based on financial assessments will be made based on the outcomes of the trials. This opportunity is being implemented.

Optimisation of heat recovery systems to reduce steam demand (Albury Mill)

This project involved reviewing operation and maintenance of process heat recovery equipment to increase waste recovery and thereby reduce steam demand. Some engineering changes were required, as well as improved monitoring and cleaning of equipment. The upfront investment cost to enable optimisation was around \$100,000. To date heat recovery has improved by 27TJ per annum. The goal is to continue to increase the amount of heat recovered through refinement of operating practices and cleaning frequency during 2009. This opportunity was identified as being implemented.

Update: The heat recovery system has been further optimised. Modifications to piping, revised cleaning strategies and improved performance tracking have been implemented. Heat recovery rates have improved from 1.0 to 1.2 GJ per tonne of pulp processed to 1.4 GJ per tonne (+ 15-20%). This is equivalent to an achieved improvement of ~50 TJ per year. Optimisation and performance monitoring will continue. This opportunity has been implemented.



Voluntary Contextual Information

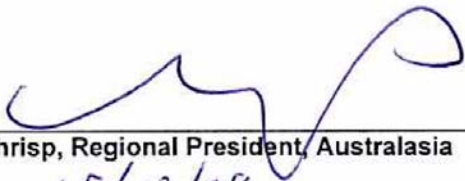
In addition to continuous improvement through improved efficiency and practices, technological advances in pulp and paper processing technologies are also being pursued to achieve our global emissions reduction target. Additional energy efficiency and emissions reduction opportunities with longer payback than 4 years are also being investigated. For example, there is ongoing technological development work on the thermo mechanical pulping process to achieve reductions in energy consumption by looking at woodchip pre-treatment and pulping techniques.

The main areas of opportunity for step change investment projects includes conversion to alternative energy sources such as bio-energy and other renewable technologies along with increasing the internal generation of power and heat. These types of projects are currently being explored, though they often require technological innovation as well as significant capital investment and are decided on an individual basis, taking into account a variety of factors. These projects are focussed on reductions in greenhouse emissions, although energy efficiency improvements are also anticipated.

Norske Skog is a foundation signatory of the 3C Initiative (Combat Climate Change). The 3C Initiative consists of a group of companies showing leadership by promoting a global solution for climate change issues and urging a worldwide policy framework that should come in 2013, to replace the Kyoto protocol. See <http://www.combatclimatechange.org> for more information.

Declaration

The information included in this report has been reviewed and noted by the board of directors and is to the best of my knowledge, correct and in accordance with the *Energy Efficiency Opportunities Act 2006* and *Energy Efficiency Opportunities Regulations 2006*.



Peter Chrisp, Regional President, Australasia

Date 15/12/09