



PUBLIC REPORT 2010

Controlling Corporation

Mossman Central Mill Co Ltd.

Period to which this report relates

Start 1 July 2006

End 30 June 2010

(eg. for a Corporate Group with the trigger-year 2005-06, the report will cover the period 1.7.2006-30.6.2010)

Part 1 – Information on assessments completed to date

Table 1.1 – Description of the way in which the Corporate Group (or part of it) has carried out its assessments

Mossman Central Mill monitors and records energy data for bagasse consumption, steam and electricity generation, electricity exported to the grid and electricity imported from the grid, oil and coal consumption etc through a computer database and accounts systems. Mossman Central Mill accounts department record diesel fuel and petrol fuel used. Mossman Central Mill routinely analyses and assesses power readings for electrical energy.

Mossman Central Mill's energy requirements come from on average > 98% renewable sources.

During the current period two improvement opportunities will be pursued. Improvement in boiler efficiencies and a power factor correction analysis, these will be explained further in this report.

As reported last year's report five opportunities of improvement had been identified to be assessed or implemented.

Opportunity 1 reduced electricity use on site via the use of variable speed drives at the cooling towers. This opportunity was assessed further during the year. It was determined that savings could be made by replacing the cooling tower internal baffles that had collapsed and by refurbishing the return water pumps. This work was conducted during the 2009/2010 maintenance season and has led to reduced fan run times on the cooling towers. It was concluded that variable drives were not required.

Opportunity 2 Increase the amount of green power exported to the grid. It was not economically possible to re-commission the 3mW generator at this stage.

Opportunity 3 Increase the renewable energy produced. Increased co-generation is still a potential for the mill, however reduced crop sizes will need to be addressed in future years to make the project financially viable.



Opportunity 4 and 5 Reduce inefficient steam use. This opportunity was to investigate and improve plant steam use. During the 2009/2010 maintenance period a number of repairs were conducted on the plant boilers to improve efficiency.

The crushing crop size dropped significantly during the reporting period which resulted in higher energy per tonne of cane crushed than in previous years. Improved data collection and recording through the NGERS process has improved accuracy of data. Significant increases in electricity cost have also been experienced.

Financial pressures continue to dictate capital funding priorities.



Part 1 – Information on assessments completed to date (continued)

Table 1.2 – Energy use assessed		
Group member and/or business unit and/or key activity and/or site (or part thereof) that has had an assessment completed by 30 June 2010 (Include all assessments completed to date for the current 5 year cycle).	Period over which assessment was undertaken¹	Energy use for the period 1.7.2009 to 30 June 2010 of the assessed entity (or part thereof) expressed in GJ²
Mossman Central Mill	Jan 2006 to June 2010	1,735,797
Total energy use of assessed entities (or part thereof)		
Total energy use of the whole corporate group in the period 1.7.2009 to 30 June 2010		1,735,797
Total energy use of assessed entities (or part thereof) for the period 1.7.2009 to 30.6.2010 expressed as a percentage of total energy use for the period 1.7.2009 to 30.6.2010		100%

1. This should be the start and finish date (month and year) for the assessment (planned assessment dates were nominated in Table 3.1 of the approved ARS).

2. Energy Bandwidth may only be used if approved in the Assessment and Reporting Schedule.

Table 1.3 – Accuracy of energy use assessed data		
Entity	% achieved	Reasons for not achieving data accuracy to within ±5%
Mossman Central Mill	+/-10%	Error accumulated due to level of accuracy and assumptions made in determining fibre and ash levels in cane, bagasse and mud.

Part 2 - Energy Efficiency Opportunities that have been identified and evaluated

Part 2A - New assessments completed or not reported since your last Public Report

Name of Group member or business unit or key activity or site: _____ Mossman Central Mill _____

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

1,735,797	GJ
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Table 2.1 – Opportunities assessed to an accuracy of better than or equal to (<=) ±30%

Status of opportunities identified		Total Number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – < 2 years		2 – ≤ 4 years		> 4 years		
			No of Opps	GJ	No of Opps	GJ	No of Opps	GJ	
Business Response	Under Investigation		nil	nil	nil	nil	nil	nil	
	To be Implemented	1	1	2000	nil	nil	nil	nil	2000
	Implementation Commenced	2	1	3500	nil	nil	nil	nil	3500
	Implemented								
	Not to be Implemented								
Outcomes of assessment	Total Identified	3	2	5500	nil	nil	nil	nil	5500

Part 2 - Energy Efficiency Opportunities that have been identified and evaluated

Part 2B - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: _____ Mossman Central Mill _____

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

1,735,797	GJ
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Table 2.3 – Opportunities assessed to an accuracy of better than or equal to (<=) ±30%									
Status of opportunities identified		Total Number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)
			0 – < 2 years		2 – ≤ 4 years		> 4 years		
			No of Opps	GJ	No of Opps	GJ	No of Opps	GJ	
Business Response	Under Investigation	1	1	200					
	To be Implemented								
	Implementation Commenced	1	1	50					
	Implemented	2	2	50					
	Not to be Implemented	3	2		1	460			
Outcomes of assessment	Total Identified	7	6	300	1	460			760

Part 2 - Energy Efficiency Opportunities that have been identified and evaluated

Part 2C - Details of at least three significant opportunities found through EEO assessments

Table 2.5 – Description of 3 significant opportunities

Opportunity 1

Improvement in boiler efficiencies.

The Mossman Mill boilers are inefficient due to years of reduced maintenance. In particular the boiler tubes and duct work needs to be refurbished. This is being planned to be conducted during the 2010/2011 maintenance off season. This work is expected to give an increase in efficiency and improved export of green power to the grid during the 2011 season. It has been calculated that this work could save approximately 3500 GJ of energy.

Opportunity 2

Power factor correction analysis

It has been investigated and shown that Mossman Mill by applying a power correction system can save approximately 250kwh during crushing operations. This will delivery approximately \$100k in saving in the first year and result in approximately 2000 GJ saving. An external consultant has been engaged to conduct this work in the 2010/2011 off maintenance season.

The Power Factor Correction System is designed to maximize the kw reductions from reduced I²R losses in cables and Transformers which will significantly improves the electrical efficiencies within the mill. The project involves the installation of four PFC systems which will provide a 240-300kwreduction at the 6MW generator which will reduce the import from ERGON.

The total 415V current will be reduced by in excess of 823A and the voltage improve by 7-9V at the switchboards with the systems installed.

Opportunity 3

Reduce inefficient steam loss

This project is designed to improve vacuum, steam and energy losses throughout the factory. This work will be conduct in line with general mill maintenance.

Opportunity 4

Increase the amount of renewable energy produced

This opportunity involves a capital partner installing high efficient boilers and the installation of larger electricity cogeneration plants. This opportunity relies heavily on the crop size for financial viability. However it would have a significant effect on the mill site energy use.



Part 3 - Voluntary Contextual Information

Table 3.1 – Contextual Information

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Table 3.2 – Energy use expressed in Greenhouse Gas emissions and as an energy use indicator

Period of energy use _____ July 2009 _____ to _____ June 2010 _____

Name of group member/ business unit/ key activity/site	Energy use pa (GJ)	Energy use pa (GGE)	Energy use as an indicator*
Mossman Central Mill	1,735,797	9,756 t CO ₂ -e	3.17 GJ per tonne of cane crushed
Total			

Table 3.3 - Opportunities assessed to an accuracy of better than or equal to (<=) ±30% (\$ value)

Status of opportunities identified		Number of opportunities	Estimated energy savings per annum by payback period (\$)			Total estimated energy savings per annum (\$)
			0 – < 2 years	2 – ≤ 4 years	> 4 years	
Business Response*	Under Investigation					
	To be Implemented					
	Implementation Commenced					
	Implemented					
	Not to be Implemented					
Outcomes of assessment*	Total Identified					



Part 3 - Voluntary Contextual Information (continued)

Table 3.4 – Changes in energy use as an indicator

Name of group member/ business unit/ key activity/site	Current energy use as an indicator	Previous energy use as an indicator	Reasons for change
Total			

Part 4 - Declaration

Table 4.1 - Declaration of accuracy and compliance (mandatory information)

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*.

Alan Johnstone - General Manager

Date 30th November, 2010.