



PUBLIC REPORT

Controlling Corporation

Bundaberg Sugar Group Ltd

Period to which this report relates

Start 1 July 2008

End 30 June 2009

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

Bundaberg Sugar Group Ltd assessed the energy use by its South Johnstone group member during the period January through December 2009. The South Johnstone facility has a total energy use of more than 0.5 PJ and represents about one third of the total energy use of the Bundaberg Sugar group. Almost all (in excess of 99 %) of the energy used at South Johnstone is in the form of renewable energy - predominantly bagasse.

The Energy Efficiency Opportunities (EEO) assessment of energy use at South Johnstone was led by Bundaberg Walkers Engineering Ltd (a member of the Bundaberg Sugar Group) with the assistance of South Johnstone staff and the full support of Bundaberg Sugar's Board and senior management. The assessment process was closely aligned with the six, key elements outlined in the Government's EEO *Industry Guidelines*. The process made use of NGRS data for the first time plus detailed, site specific information. A group session to identify and rank specific opportunities for evaluation was conducted.

Previously identified opportunities to improve boiler efficiency and electrical generation at the Millaquin mill and refinery group member have been implemented. Electrification of boiler ancillaries has not been pursued. Rather, a superior proposal to electrify mill drives is planned. Other energy saving measures including increased vapour bleeding, plate primary juice heaters and a continuous vacuum pan are also scheduled for installation at Millaquin.

The South Johnstone assessment is considered to comply with the intent and key recommendations of the Energy Efficiency Opportunities legislation.

Table 1.2 – 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 undertaken¹	Energy use per annum in GJ² in the current reporting year
Millaquin mill and refinery business unit	Jan 08 – Sep 08	3,165,907
South Johnstone mill business unit	Jul 08 – Jun 09	4,067,751
Total energy assessed		7,233,658
Total energy use of the group in the current reporting year		12,893,986
Total energy assessed expressed as a percentage of total current energy use		56 %

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.



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

Table 1.3 – Accuracy of energy use data

Entity	% achieved	Reasons for not achieving data accuracy to within $\pm 5\%$
Millaquin mill and refinery business unit	$\pm 15\%$	As per Assessment and Reporting Schedule: <ul style="list-style-type: none"> • uncertainties and variability associated with both the quantity of bagasse consumed and its calorific value; • the difficulty of making accurate, precise steam flow measurements at reasonable cost; and • the dynamic and variable nature of factory operations.
South Johnstone mill business unit	$\pm 15\%$	As per Assessment and Reporting Schedule: <ul style="list-style-type: none"> • uncertainties and variability associated with both the quantity of bagasse consumed and its calorific value; • the difficulty of making accurate, precise steam flow measurements at reasonable cost; and • the dynamic and variable nature of factory operations.



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

Part 2A - New Assessments completed during the reporting period

Name of Group member or business unit or key activity or site: South Johnstone mill business unit

Amount of energy assessed which generated the results below (and is reported in Table 1.2)

4,067,751	GJ
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Table 2.1 – Opportunities assessed to an accuracy of ±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 – ≤4 years	> 4 years	
Outcomes of assessment*	Total Identified	8	30,023	5,000	8,700	43,723
Business Response*	Under Investigation					
	To be Implemented (subject to funding)	3	30,000	5,000		35,000
	Implementation Commenced	1	23			23
	Implemented					
	Not to be Implemented	4			8,700	8,700



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

Amount of energy assessed which generated the results below (and is reported in Table 1.2)

	GJ
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Table 2.2 - 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 - ≤ 4 years	> 4 years	
Outcomes of assessment	Total Identified					
Business Response	Under Investigation					
	To be Implemented					
	Implementation Commenced					
	Implemented					
	Not to be Implemented					



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

Part 2B - Update of assessments originally reported in previous reporting periods

Name of Group member or business unit or key activity or site: Millaquin mill and refinery business unit

Amount of energy assessed which generated the results below (and is reported in Table 1.2)

3,165,907	GJ
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Table 2.3 - Opportunities assessed to an accuracy of ±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 – ≤4 years	> 4 years	
Outcomes of assessment*	Total Identified	6	7	105,400		105,407
Business Response*	Under Investigation					
	To be Implemented(subject to funding)					
	Implementation Commenced	1	7			7
	Implemented	1		100,000		100,000
	Not to be Implemented	4		5,400		5,400



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

Amount of energy assessed which generated the results below (and is reported in Table 1.2)

	GJ
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Table 2.4 - Opportunities assessed to an accuracy of worse than ±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 – ≤4 years	> 4 years	
Outcomes of assessment*	Total Identified					
Business Response*	Under Investigation					
	To be Implemented					
	Implementation Commenced					
	Implemented					
	Not to be Implemented					

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
High efficiency electric motors Numerous sources report good payback on MEPS high efficiency electric motors. Site specific calculations confirm this despite South Johnstone generating its own electricity for around half of each year. However, the good payback occurs only in the case of motors: <ul style="list-style-type: none">• for new applications or which require replacement for some other reason; and• with high annual operating hours. That is, the incremental cost of high efficiency motors over the cost of standard efficiency motors is justified where motors run year round. Motors which operate only during the crushing season; and the replacement of standard efficiency motors which are serviceable are not justified. Care needs to be taken to ensure that any high efficiency motors are suitably rugged for the duty.
Opportunity 2
Exhaust pressure steam control Deficiencies in the existing system of controlling low pressure steam at South Johnstone mean there is some unnecessary venting of exhaust steam. Funding to install and implement an improved control system will be sought in 2010-2011. Some ancillary benefits are expected.
Opportunity 3
Audit of steam traps Information from a variety of sources suggests favourable payback on checking the operation of steam traps and then performing the necessary maintenance. Indicative calculations for South Johnstone confirm this. Ancillary benefits in terms of an updated asset register are anticipated. The factory plans to assemble an asset register of steam traps and seek funding for an audit by a specialist contractor in 2010-2011.

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 _____ to _____			
Name of group member/ business unit/ key activity/site	Energy use pa (GJ)	Energy use pa (GGE)	Energy use as an indicator*
Total			

Table 3.3 - Opportunities assessed to an accuracy of ±30% or better (\$ 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	
Outcomes of assessment*	Total Identified					
Business Response*	Under Investigation					
	To be Implemented					
	Implementation Commenced					
	Implemented					
	Not to be Implemented					



Part 3 - Voluntary Contextual Information (continued)

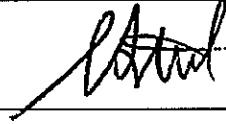
Table 3.4 – Changes in energy use as an indicator

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*.

	
	Colin A Stitt (Chairman)
Date	18/1/2010