



PUBLIC REPORT 2011

Part 1 - Corporation Details

Controlling Corporation

Period to which this report relates

Sims Metal Management Limited

From

1 July 2006

To

30 June 2011

Table 1.1 - Major Changes to Corporate Group Structure or Operations

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At the end of the first 5-year cycle of the Energy Efficiency Opportunities (EEO) program, Sims Metal Management energy consumption is at its lowest level since the commencement of the program, at just **0.554 PJ in fiscal 2011 (F11)**.

During F11 energy use continued to be dominated by metal shredders (89% of total shredder site electricity and 75% of the metal division's electricity), the Laverton aluminium manufacturing facility, and diesel usage by transport vehicles and plant.

Several factors have adversely influenced the energy intensity of Sims' Australian operations over the first 5-year cycle of the EEO program, including over the most recent 12-month period.

- The energy KPI (MWh per net shred tonne) at metal shredder sites has been impacted by several factors, including weaker market conditions, higher waste content in scrap, customer demands for a more dense shred, the recent Queensland floods, and in some cases by non-ferrous Recovery Plants (ref Brooklyn example noted below). These factors are seen to have the greatest impact when viewed over the period F07 (pre-GFC) to F11, however improved or steady performance in KPI is seen at all sites except Brooklyn since F09/F10.
- The implementation of non-ferrous Recovery Plants at metal shredder sites increases the overall energy use at these locations, though the energy used to recover and then re-process metals such as copper and aluminium is only a fraction of the energy used to process these metals from virgin materials.
- Total production volumes for the Manufacturing (aluminium) division have declined significantly over the last five years, with a consequent adverse impact on energy KPIs. Efficiency measures have helped to mitigate this, particularly over the last three years where the natural gas KPI at Laverton has remained steady despite production volume decline.

Notwithstanding these factors, several major initiatives over the five year period have improved energy efficiency, most notably:

- Replacement of the metal shredder at Rocklea, and substantial shredder refurbishments at Gillman and St Mary's,
- Implementation of several retrofit / control energy efficiency initiatives at the Laverton plant, and
- Replacement of Excavators (Scrap Handlers) and Front End Loaders, representing 70% of the Australian fleet for these types of machines



Several initiatives are planned for the future that will help to underpin Sims' efforts in the next five year EEO cycle. These include:

- Implementation of two major projects at Brooklyn that will greatly improve the efficiency of the shredding process.
- Construction of a greenfield Scrap processing site incorporating a new Shredding Plant and an Off Line Recovery Plant in Western Australia, to replace the Spearwood site that has been in use since the early 1980s'.
- It is anticipated that the Environmental Module within the new Financial Platform will be implemented for F13, which will enable Sims to develop and produce reports that track the diesel fuel use and efficiency at the level of individual machines.

Energy efficiency will continue to be a key operational focus at all major sites, and a major factor influencing future capital projects and developments, in line with Sims' Energy Policy and practices that are evidenced in Australia and internationally.


Table 1.2 – Aggregate energy assessed covered in this report

Total energy use covered by all assessments in this report	480,611	GJ
Total energy assessed as percentage of total energy use of the corporate group	87	%

Declaration

Declaration of accuracy and compliance

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*.


DARRON MCGREE
Managing Director
Sims Metal Management (Australia) Limited
Date: 23/12/11

Part 2 - Assessment Outcomes

Table 2.1 – Assessment Details

Name of group member or business unit or key activity	Sims Aluminium Pty Ltd		
Total energy use in the last financial year	169,687		GJ
Energy use assessed in this entity as a percentage of total entity energy use*	100		%
Energy use assessed in this entity as a percentage of total corporate energy use	31		%
Accuracy of above estimates related to energy use assessed - <u>only required if not ±5% or better</u>	NA		%
NA			
Period over which assessment was undertaken		01/07/2006	30/06/2011
Description of the way in which the entity carried out its assessment			
<p>The Laverton aluminium manufacturing site undertook an assessment of energy efficiency opportunities as part of its Victoria EPA EREP and DRET EEO obligations, and reported on the outcomes of this assessment in its first EEO Public report in 2008.</p> <p>Further energy efficiency opportunities were identified in the course of F09 and were reported in the EEO report for 2009. A further opportunity was identified and reported on in 2010, as was the business decision to sell the Moolap site, which had been due to be assessed.</p> <p>No new assessments were carried out in the F11 year.</p> <p>Two projects are updated in Table 2.3.</p>			

Table 2.2 - Energy efficiency opportunities identified in the assessment

Table 2.2 – Energy efficiency opportunities identified in the assessment									
Status of opportunities identified to an accuracy of better than or equal to ±30%		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	Implemented	5	2	9,200	2	7,500*	1	648	17,348
	Implementation Commenced								
	To be Implemented								
	Under Investigation								
	Not to be Implemented	1	1	1,000					1,000
Outcomes of assessment	Total Identified	6	3	10,200	2	7,500*	1	648	18,348
Status of opportunities identified to an accuracy of worse than ±30%									
Business Response	Implemented								
	Implementation Commenced								
	To be Implemented								
	Under Investigation								
	Not to be Implemented								
Outcomes of assessment	Total Identified								

* The baghouse bypass project was implemented and exceeding its target savings before the furnace was mothballed. The salt-free technology project was achieving less than its estimated savings in the first year. This figure represents the revised annualised savings for both projects.

Table 2.3 - Details of significant opportunities identified in the assessment

Description of Opportunity	Voluntary Information	
<p>A baghouse bypass system on the liquid holding furnace was completed in June 2011 and operated for approximately 1 month during which a business decision was made to mothball the furnace. Savings for the one month were estimated to be 21,000 kWh of electricity and 385 GJ of natural gas, indicating that the project was on track to exceed its expected energy savings of 4,000 GJ per year.</p>	Business Response	Implemented (then mothballed)
	Energy saved (GJ)	5,500 (annualised based on 1-month post-implementation data)
	Greenhouse gas abated (CO2-e)	NA – mothballed after implementation
	\$ saved	NA – mothballed after implementation
	Payback period	NA – mothballed after implementation

Description of Opportunity	Voluntary Information	
<p>A salt-free technology project, part funded by the Victoria EPA's HazWaste Fund grant, was completed in Oct 2010. Savings in natural gas for FY11 are estimated to be 1,220 GJ, somewhat less than the 6,600 GJ full year savings anticipated. These savings will rise over a full year of operation, and savings estimates are revised to 2,000 GJ per year. The payback remains at 2-4 years, with most savings being non-energy related</p>	Business Response	Implemented
	Energy saved (GJ)	2,000 (1,220 GJ for 8 months, rounded to a revised estimate of 2,000 GJ per year)
	Greenhouse gas abated (CO2-e)	104 tCO2-e
	\$ saved	NA
	Payback period	2-4 years

Part 2 - Assessment Outcomes

Table 2.1 – Assessment Details

Name of group member or business unit or key activity	Sims Metal Holdings Ltd (electricity consumption)		
Total energy use in the last financial year		121,434	GJ
Energy use assessed in this entity as a percentage of total entity energy use*		48.5	%
Energy use assessed in this entity as a percentage of total corporate energy use		11	%
Accuracy of above estimates related to energy use assessed - <u>only required if not ±5% or better</u>		NA	%
NA			
Period over which assessment was undertaken		01/07/2006	30/06/2011
Description of the way in which the entity carried out its assessment	<p>Sims Metal Management has progressed energy efficiency best practice at its metal shredding sites via the replacement or substantial upgrades to core shredding systems. As indicated above during F11 energy use in this division continued to be dominated by metal shredders, which accounted for 89% of total shredder site electricity and 75% of the metal division's electricity consumption.</p> <p>The company's 2008 EEO report included the upgrade of the Gillman Shredder, which covered the installation of a more energy efficiency shredder motor and a new air system incorporating a VSD on the main fan. The Rocklea shredder was reported in 2009 as a project to be implemented, and this was subsequently completed in F10. The St Mary's shredder was also substantially upgraded. All shredder upgrades achieved 5-15% improvement in energy efficiency, though non-energy factors have served to mask much of the savings.</p> <p>As indicated in Table 1.1, the two remaining shredders are to be the focus of company efforts regarding energy efficiency in coming years, including the complete replacement of the Spearwood site to a greenfield location, and measures to restore the efficiency of the Brooklyn shredder.</p> <p>Capital Evaluation Submissions support all of the upgraded and replaced shredders.</p> <p>Savings estimates are not yet prepared for Brooklyn and Spearwood; these will be reported as new projects in future EEO reporting.</p> <p>An outline of measures planned for Brooklyn and Spearwood are provided in Table 2.3.</p>		

Table 2.2 - Energy efficiency opportunities identified in the assessment

Table 2.2 – Energy efficiency opportunities identified in the assessment									
Status of opportunities identified to an accuracy of better than or equal to ±30%		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	Implemented	3	1	3,240			2	4,650	7,890
	Implementation Commenced								
	To be Implemented								
	Under Investigation								
	Not to be Implemented								
Outcomes of assessment	Total Identified	3	1	3,240			2	4,650	7,890
Status of opportunities identified to an accuracy of worse than ±30%									
Business Response	Implemented								
	Implementation Commenced								
	To be Implemented	1							TBC
	Under Investigation	1							TBC
	Not to be Implemented								
Outcomes of assessment	Total Identified	2							TBC

Table 2.3 - Details of significant opportunities identified in the assessment

Description of Opportunity	Voluntary Information	
<p>Brooklyn Shredder – Melbourne</p> <p>Over the past 12 to 18 months the Brooklyn Shredder has operated at reduced tonnes per hour in order to increase the Non Ferrous Shred Recovery from the plant. Because the Recovery Plant at Brooklyn is still On-Line its performance was being affected by the surging nature of the Shredder. By reducing the throughput rate of the Shredder regulation of the material flow through the Recovery Plant was achieved, resulting in increased Non-Ferrous recoveries but also an increase in the energy used per tonne of metal scrap processed by operating below the energy efficient “full box” shredding process normally used.</p> <p>Two major projects will greatly improve the efficiency of the Shredding process at Brooklyn.</p> <ol style="list-style-type: none"> 1. Replacement of the downstream with improved magnetic and air separation systems that will allow full utilisation of the processing capability of the Shredder. 2. Building a new Off Line Recovery Plant which will also negate the need to slow the throughput rate and run the Shredder at optimum production rates. 	Business Response	To be implemented (F12)
	Energy saved (GJ)	To be confirmed
	Greenhouse gas abated (CO2-e)	To be confirmed
	\$ saved	To be confirmed
	Payback period	To be confirmed

Description of Opportunity	Voluntary Information	
<p>Perth Operations</p> <p>Sims' is in the process of gaining approval to relocate the major scrap processing operation in Perth. The Spearwood site has been the major processing site since the early 80's with the Shredder being installed there in 1987.</p> <p>A green field site has been acquired to replace Spearwood. A Development Application for this new site has been submitted with a view to construction of the new site commencing by the start of F13. This new site will have all new Scrap processing equipment including a new Shredding Plant and an Off Line Recovery Plant. Both installations will utilise the most efficient equipment available in terms of Scrap processing and Energy Efficiency.</p>	Business Response	Under Investigation
	Energy saved (GJ)	To be confirmed
	Greenhouse gas abated (CO2-e)	To be confirmed
	\$ saved	To be confirmed
	Payback period	To be confirmed



Part 2 - Assessment Outcomes

Table 2.1 – Assessment Details

Name of group member or business unit or key activity	Sims Metal Holdings Ltd (diesel consumption)		
Total energy use in the last financial year	252,035		GJ
Energy use assessed in this entity as a percentage of total entity energy use*	100		%
Energy use assessed in this entity as a percentage of total corporate energy use	45		%
Accuracy of above estimates related to energy use assessed - <u>only required if not ±5% or better</u>	NA		%
NA			
Period over which assessment was undertaken		01/07/2006	30/06/2011

Description of the way in which the entity carried out its assessment

Sims has undertaken an extensive Mobile Equipment replacement program over the past 5 years which has seen a large number of old inefficient machines replaced by the latest fuel efficient models, following Sims' capital submission processes including evaluation of energy efficiency among other aspects. Over this period 75 Excavators (Scrap Handlers) and 16 Front End Loaders have been replaced. This represents approximately 70% of Sims' Australian Fleet for these types of machines. The impact this extensive replacement program has had on diesel usage is demonstrated by the gradual decline in Litres / Tonne.

	F07	F08	F09	F10	F11	
LITRES / PURCHASED TONNE	3.94	3.89	3.84	3.52	3.56	
EXCAVATORS	14	18	17	11	15	75
FEL	5	3	5	2	1	16

A new Financial Platform complete with an Environmental Module was delayed primarily due to the GFC in F09 / F10; however it was implemented and commissioned for F12. As yet the Environmental Module has not been commissioned but is planned for F13. Since F06 Sims has maintained a data base where all energy usage has been logged against individual sites. This data has provided accurate information for EEO, NGER and Internal Sustainability Reporting.

Table 2.3 - Details of significant opportunities identified in the assessment

Description of Opportunity	Voluntary Information	
<p>Cumulative savings from upgrading of diesel fleet updated opportunity</p> <p>In 2010 Sims reported savings of 11,700 GJ in 2010 compared with 2009 based on an improved KPI measured on output, or net tonnes.</p> <p>A revised measure looks at energy (diesel) use against total gross purchase tonnes for Ferrous and Non Ferrous, as this is more reflective of the work diesel-powered equipment performs.</p> <p>An analysis of this KPI over the 5-year EEO period indicates savings of 26,890 GJ, with a rise in total purchased tonnes of less than 10%.</p>	Business Response	Implemented
	Energy saved (GJ)	26,890
	Greenhouse gas abated (CO ₂ -e)	1,869 t CO ₂ -e
	\$ saved	NA
	Payback period	2-4 years