

PUBLIC REPORT

Controlling Corporation

Newmont Australia Ltd

Period to which this report relates

Start 1st January 2009

End 31st December 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

Newmont Australia limited has continued to undertake planned assessments over the reporting period under the Energy Efficiency Opportunities (EEO) Programme. An efficiency opportunities assessment of the Newmont Jundee Operations was completed and results are reported in part 2A of this report. The assessment involved three key features:

- Regional resources and commitment
- Site resources and commitment
- Technical review by external experts

As part of its commitment at a corporate/regional level, Newmont Australia Limited has established a regional carbon team, which oversees the management of issues relating greenhouse gas emissions including facilitation of the EEO programme. The carbon team has prepared guidance material to assist sites with improving energy efficiency and reducing greenhouse gas emissions in line with the company's objectives and targets and the requirements of the EEO programme.

As for the Tanami Operation in the previous year, the Newmont Jundee Operation established an energy team to facilitate the identification, assessment and implementation of any opportunities to improve energy efficiency and/or reduce greenhouse gas emissions. The energy team comprises representatives from key areas of the operation, including mining, processing, electrical, environmental and finance. The management of energy and greenhouse gas emissions has been integrated into the site's management systems and has been documented in the site's Energy Efficiency and Greenhouse Gas Management Plan.

To initiate the identification and detailed assessment of opportunities, an external consultant was commissioned to conduct a review at the Newmont Jundee Operations. The review involved assessment of historical data as well as specific sub metering for particular areas and equipment of interest. An energy mass balance for the site was prepared and a number of potential opportunities were identified as part of the review.

The opportunities identified internally via the site energy team and those identified via the external review have been assessed in detail to determine their viability for implementation. Newmont Australia Limited has also progressed the assessment of opportunities identified at Newmont Tanami Operations in the previous reporting period and the outcomes are reported in Part 2B of this report.



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
Newmont Tanami Operations	January 2008 – June 2008	1,688,891
Newmont Jundee Operations	January 2009 – June 2009	1,592,021
Total energy assessed		3,280,912
Total energy use of the group in the current reporting year		5,060,037
Total energy assessed expressed as a percentage of total current energy use		65%

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 $\pm 5\%$
Newmont Tanami Operations	$\pm 5\%$	N/A
Newmont Jundee Operations	$\pm 5\%$	N/A

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: _____ Newmont Jundee Operations

Energy use of the entity during the current reporting period

1,592,021	GJ
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Table 2.1 – 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 – ≤ 4 years	> 4 years	
Outcomes of assessment*	Total Identified	6	22,148			22,148
Business Response*	Under Investigation	2	15,380			15,380
	To be Implemented	4	6,768			6,768
	Implementation Commenced					
	Implemented					
	Not to be Implemented					



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

Energy use of the entity during the current reporting period

	GJ
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Table 2.2 - 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 2B - Update of assessments originally reported in previous reporting periods

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

Energy use of the entity during the current reporting period

1,688,891

GJ

Table 2.3 - 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 – ≤ 4 years	> 4 years	
Outcomes of assessment*	Total Identified	7	24,432	125,933		150,365
Business Response*	Under Investigation	6	5,132	125,933		131,065
	To be Implemented	1	19,300			19,300
	Implementation Commenced					
	Implemented					
	Not to be Implemented					



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

Energy use of the entity during the current reporting period

	GJ
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Table 2.4 - 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 2C - Details of at least three significant opportunities found through EEO assessments

Table 2.5 – Description of 3 significant opportunities

Opportunity 1

Secondary Mine Ventilation Fans (Newmont Jundee Operations)

There are 35 secondary fans located at various levels within the underground mine which circulate air to operating levels and new developments and headings. In the past, all of the secondary fans were run all of the time. An opportunity was identified to turn fans off in areas of the underground mine where they are not required to reduce the energy demand of the secondary fans. A change to the management practice has already been implemented for fans to be turned on as required by calling up mine control, which has already created significant energy savings. This project has been budgeted for 2010 to connect all of the secondary fans to a centralised control system which will eliminate the requirement of relying on operators to call up mine control. In addition to significant energy savings and greenhouse gas emissions this project has the potential to defer the need to install a refrigeration plant by one year. This project is budgeted for 2010 and will save an estimated 1,400 MWh annually.

Opportunity 2

Primary Mine Ventilation Fans (Newmont Jundee Operations)

The Jundee mine has a total of 7 primary ventilation fans with 5 in operation and two spares, which is likely to change in the future to operating 6 fans with one spare. The fans are currently operating at sub-optimal efficiencies due to historical modifications to allow the fans to be interchanged between exhaust risers. In addition, the fans and risers have a large amount of sediment build up which is common due to the conditions in which they operate. The removal of this sediment build up would reduce the airflow restriction and friction, thereby improving efficiency.

The primary fans are sourced from three different manufacturers with varying specifications such as number of fan blades (varying between 6, 8, 9, 12 and 16 blades), different blade pitch profile and duty application. Each of the five exhaust risers at Jundee has a different required duty due to varying pressures and air flow requirements. Therefore in order to maximize the efficiency of the fans the fans should be optimized for a specific application based on the duty requirement of the exhaust riser. This would require a more detailed engineering assessment to determine the original specifications of each fan, choosing the most suitable fan for each application and then optimizing the configuration of each fan. The fans would then require upgrading to the optimized specification based on a sequential upgrade plan. This project has been estimated to save 3,200 MWh annually.

This project will require additional investigation and is an ongoing project with a longer term target. In 2010, the operation



plans to install adjustable louvers on the primary fans to improve airflow control, and review the longer term ventilation options for the mine given recent and planned future expansions and will integrate this opportunity into the updated plan.

Opportunity 3

Waukesha AT Generator Fan Control (Newmont Jundee Operations)

The Waukesha AT generators of the power station are cooled by two independent systems, one for the engine jacket water and another auxiliary loop for the intercooler and oil circuit. The current configuration has the thermostatic valve cycling together with the cooling fans, creating a number of inefficiencies. An opportunity was identified to modify the temperature control strategy of both the engine jacket and auxiliary circuits to separate the control ranges of the thermostatic valves and cooling fans. This would reduce the number of operational fans and provide better control of the coolant returning to the engine. This project is budgeted for implementation in 2010 and will save approximately 160-200 MWh annually.

Opportunity 4

Thermal Oil Burner Fuel Switching (Newmont Jundee Operations)

LPG is currently used at the process plant to provide heating to the thermal oil burner, gold smelting furnace and the carbon regeneration kiln, which are all operated 2-3 times per week. A fuel switching opportunity has been identified to convert all three items of equipment from LPG to natural gas. Natural gas is a suitable alternative fuel, is already supplied to the main electricity plant and is a cheaper fuel with a slightly lower greenhouse gas emission intensity. This opportunity is budgeted to be implemented in 2010 and will reduce costs and a small amount of carbon dioxide emissions.

Opportunity 5

Cooled Water to Generator Intercoolers (Newmont Tanami Operations)

Electricity generation at the Newmont Tanami Operation is currently by diesel gen-sets, which are owned and operated by a third party contractor. 13 gen-sets provide power to The Granites and 18 provide power to Dead Bullock Soak (DBS), a total of 31 gensets. An opportunity exists whereby intercoolers could be reinstalled onto the existing gen-sets and fed with water that is cooled through a cooling tower.

Lowering the temperature of the inlet air decreases the fuel consumption for two reasons. Air at lower temperature has higher density, thus increasing the mass flow of air through the engine, increasing power output. Secondly, reducing the air temperature in the charge air cooler reduces its specific volume which reduces the compression stroke effort and thereby improves engine efficiency. These dual mechanisms are affected by ambient temperature, both at the inlet air flow and the after turbo charge air coolers.

A trial of this opportunity was conducted during 2009. An intercooler was reinstalled onto an existing gen-set and a cooling



tower was installed to feed cool water to the gen-set intercooler. The trial confirmed the feasibility of the opportunity and provided further data to refine the cost estimates and possible savings.

The estimated capital cost for this project is AUD \$710,000 (+/-10%), with anticipated savings of 500kL of diesel per annum (equivalent to approximately AUD \$500,000). This project is contingent on successfully negotiating a number of variations to the existing electricity supply contract. These are currently being negotiated.

The project is also dependent on the reliable supply of good quality water for the cooling tower. Good quality water is currently sourced from two reverse osmosis (RO) plants, which are currently operating at capacity. However a review of the site water balance was conducted during 2009 and there are plans to expand the RO plants in 2010. This will allow the implementation of this in 2010.



Part 3 - Voluntary Contextual Information

none

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*.

Tim Netscher, Senior Vice President Newmont Asia Pacific

Date: 23/12/09

