



PUBLIC REPORT 2011

Part 1 - Corporation Details

Controlling Corporation

Newmont Australia Pty Ltd

Period to which this report relates

From

1 July 2006

To

30 June 2011

Table 1.1 - Major Changes to Corporate Group Structure or Operations

Table 1.1 – Major Changes to Corporate Group Structure or Operations

No major changes to Newmont's Australian operations occurred during the last 12 months. Production rates at the recently-expanded Newmont Boddington Gold operation have progressively increased since commissioning in mid-2009. Mill throughput during 2010/11 increased by 59% from the 2009/10 year.

Table 1.2 – Aggregate energy assessed covered in this report

Total energy use covered by all assessments in this report	9,802,125	GJ
Total energy assessed as percentage of total energy use of the corporate group	99.92	%

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*.

Jeff Huspeni

Senior Vice President, Newmont Asia Pacific

Date *December 16, 2011*



Part 2 - Assessment Outcomes

Table 2.1 – Assessment Details

Name of group member or business unit or key activity	Newmont Boddington Gold		
Total energy use in the last financial year		5,562,652	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		57	%
Accuracy of above estimates related to energy use assessed - <u>only required if not ±5% or better</u>		NA	%
Period over which assessment was undertaken			
		1/1/2011	30/6/2011
Description of the way in which the entity carried out its assessment			
<p>The Energy Efficiency Opportunities (EEO) assessment of Newmont Boddington Gold was conducted as planned in the first half of 2011. The assessment marks the successful completion of the first five-year cycle of assessments for Newmont Australia. All of Newmont's Australian operations have now had EEO assessments conducted – Tanami in 2008, Jundee in 2009 and Boddington). Newmont Boddington Gold was selected as the final assessment so as to fit in with the timing of the sites recent significant expansion.</p> <p>Improving energy efficiency across the company is a key element of Newmont Australia's climate change strategy and general business objectives. To facilitate this, Newmont also applied much of the EEO assessment framework to the Batu Hijau operation in Indonesia in 2010. Although outside the formal jurisdiction of the Government's EEO program, Newmont has sought to identify and evaluate potential energy efficiency projects at Batu Hijau in the same manner as for the Australian operations.</p> <p>The assessment at Boddington during 2011 was conducted in a similar way to the previous assessments at the Tanami and Jundee operations. A site energy team was established, comprising representatives from various areas of the operation. External experts were engaged to conduct much of the detailed data analysis and project evaluation. The systems and processes established as part of the assessment have been progressively documented within the site's Energy and Greenhouse Gas Management Plan and other supporting documents.</p> <p>Activities scheduled for 2012 will involve follow-up of existing identified actions and reinforcement of introduced systems and processes for the ongoing identification, evaluation and implementation of energy efficiency projects.</p>			

Table 2.2 - Energy efficiency opportunities identified in the assessment

Table 2.2 – Energy efficiency opportunities identified in the assessment (Boddington)									
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	0	0	0	0	0	0	0	0
	Implementation Commenced	0	0	0	0	0	0	0	0
	To be Implemented	0	0	0	0	0	0	0	0
	Under Investigation	11	6	60,960	3	6,048	2	5,076	72,084
	Not to be Implemented	0	0	0	0	0	0	0	0
Outcomes of assessment	Total Identified	11	6	60,960	3	6,048	2	5,076	72,084
Status of opportunities identified to an accuracy of worse than ±30%									
Business Response	Implemented	0	0	0	0	0	0	0	0
	Implementation Commenced	0	0	0	0	0	0	0	0
	To be Implemented	0	0	0	0	0	0	0	0
	Under Investigation	1	0	0	0	0	1	109,200	109,200
	Not to be Implemented	0	0	0	0	0	0	0	0
Outcomes of assessment	Total Identified	1	0	0	0	0	1	109,200	109,200



Name of group member or business unit or key activity

Newmont Tanami Operation

Total energy use in the last financial year

2,365,114 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

24.1 %

Accuracy of above estimates related to energy use assessed - only required if not $\pm 5\%$ or better

NA %

Period over which assessment was undertaken

From Aug-07 to Dec-08

Table 2.2 – Energy efficiency opportunities identified in the assessment (Tanami)

Status of opportunities identified to an accuracy of better than or equal to $\pm 30\%$	Total Number of opportunities	Estimated energy savings per annum by payback period (GJ)						Total estimated energy savings per annum (GJ)	
		0 – < 2 years		2 – \leq 4 years		> 4 years			
		No of Opps	GJ	No of Opps	GJ	No of Opps	GJ		
Business Response	Implemented	1	1	2,320	0	0	0	0	2,320
	Implementation Commenced	0	0	0	0	0	0	0	0
	To be Implemented	0	0	0	0	0	0	0	0
	Under Investigation	10	5	63,285	4	238,865	0	0	304,573
	Not to be Implemented	0	0	0	0	0	0	0	0
Outcomes of assessment	Total Identified	11	6	65,605	4	238,865	0	0	306,893
Status of opportunities identified to an accuracy of worse than $\pm 30\%$									
Business Response	Implemented	0	0	0	0	0	0	0	0
	Implementation Commenced	0	0	0	0	0	0	0	0
	To be Implemented	0	0	0	0	0	0	0	0
	Under Investigation	1	0	0	0	0	1	117,939	117,939
	Not to be Implemented	0	0	0	0	0	0	0	0
Outcomes of assessment	Total Identified	1	0	0	0	0	1	117,939	117,939

Table 2.3 - Details of significant opportunities identified in the assessment

Description of Opportunity	Voluntary Information	
<p>2011 Assessment, Newmont Boddington Gold</p> <p>Potential Opportunity - Optimisation of South Pit Haul Road</p> <p>A potential opportunity was identified to optimise the South Pit haul road at Boddington for energy efficiency. The current profile of the haul road comprises a combination of downhill and level sections. Real time monitoring of various truck variables on the truck fleet showed that the trucks consumed fuel on the level sections. Modeling of a modified haul road profile showed that fuel consumption could potentially be reduced on both downhill and uphill journeys for the truck fleet resulting in improved fuel consumption. The potential saving was estimated to be a saving of 750kL of diesel per year for the truck fleet. This project is one of a number of projects to be considered by the site energy team in 2012 for practicality and implementation potential.</p>	Business Response	Under investigation
	Energy saved (GJ)	27,300 pa
	Greenhouse gas abated (CO ₂ -e)	2,012 tonnes CO ₂ -e pa
	\$s saved	\$798,000 pa
	Payback period	0.24 years

Description of Opportunity	Voluntary Information	
<p>2011 Assessment, Newmont Boddington Gold</p> <p>Potential Opportunity - Lighter truck bodies</p> <p>A potential opportunity was identified to fit lighter truck bodies to the haul truck fleet at Boddington. This would reduce the weight of the vehicle and therefore allow the truck to carry more ore/waste thereby increasing the potential payload of the truck fleet. The project would require a large capital investment in the truck fleet with a payback period greater than four years. This project is one of a number of projects to be considered by the site energy team in 2012 for practicality and implementation potential.</p>	Business Response	Under investigation
	Energy saved (GJ)	109,200 pa
	Greenhouse gas abated (CO ₂ -e)	8,048 tonnes CO ₂ -e pa
	\$s saved	\$3.4M pa (excluding capital cost)
	Payback period	4.72 years



Description of Opportunity	Voluntary Information	
<p>2010 Assessment, Batu Hijau, Indonesia (voluntary assessment)</p> <p>Potential Opportunity - Optimisation of truck gear</p> <p>A potential opportunity was identified during the voluntary Batu Hijau assessment to improve the fuel efficiency of the haul truck fleet. Real time monitoring of the truck fleet identified that some trucks are stuck in first gear when climbing up the haul road out of the bottom of the open pit. Other trucks are able to change into second gear for the long haul up the ramp thereby reducing their fuel consumption. The opportunity identified was to ensure that all haul trucks change to second gear on inclines greater than 10%. This opportunity was estimated to save approximately 3.5ML of diesel each year for the haul fleet. This project is one of a number of projects to be considered by the site energy team in 2012 for practicality and implementation potential.</p>	Business Response	Under investigation
	Energy saved (GJ)	127,400 pa
	Greenhouse gas abated (CO2-e)	9,389 tonnes CO2-e pa
	\$s saved	\$3M pa
	Payback period	0.02 years

Description of Opportunity	Voluntary Information	
<p>2010 Assessment, Batu Hijau, Indonesia (voluntary assessment)</p> <p>Potential Opportunity - Santong 3 Booster Station</p> <p>A potential opportunity was identified during the voluntary Batu Hijau assessment relating to the water management of one of the booster stations. The opportunity identified is to reduce the throttling of the booster station pump to reduce the energy consumption of the booster station. The booster station pump is often run heavily throttled to reduce the flow rate to the concentrator plant. This would require reducing the flow rate of a second input to the concentrator to maintain the overall total flow rate to the concentrator., Reducing the throttling could potentially save an estimated 2600MWh of electricity or \$140K each year. This project is one of a number of projects to be considered by the site energy team in 2012 for practicality and implementation potential.</p>	Business Response	Under investigation
	Energy saved (GJ)	31,244 GJ
	Greenhouse gas abated (CO2-e)	3,199 tonnes CO2-e pa
	\$s saved	\$131,000 pa
	Payback period	0 years



Description of Opportunity	Voluntary Information	
<p>2009 Assessment, Newmont Jundee Operations</p> <p>Implemented Opportunity - Secondary Mine Ventilation Fans</p> <p>Historically, all secondary fans underground were run all of the time at Jundee. There are 35 secondary fans located at various levels within the underground mine which circulate air to operating levels and new developments and headings. 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. This prompted a change to the management practices to turn fans in areas of the underground mine where there was no activity, and have them turned on by mine control in advance of moving into a particular area of the mine. A further improvement to this project involved connecting all secondary fans to a centralised control system which eliminated the requirement of relying on operators to call mine control. This project provided significant energy savings to the mine as well as associated greenhouse gas emission reductions.</p>	Business Response	Implemented
	Energy saved (GJ)	98,363 GJ pa
	Greenhouse gas abated (CO ₂ -e)	5,344 tonnes CO ₂ -e pa
	\$\$ saved	\$1.18M pa
	Payback period	0.04 years

Description of Opportunity	Voluntary Information	
<p>2009 Assessment, Newmont Jundee Operations</p> <p>Implemented Opportunity - Gas Genset Retune</p> <p>The natural gas gensets at Jundee were retuned to improve efficiency. The new tune allows these gensets to operate at a higher load level, and to be less susceptible to variations in the ambient temperature. The benefit of this project is that the operation is able to run the gensets at a 1950kW loading, even during summer, compared to a cool weather load of ~1750kW, and a summer load of ~1600kW. This has allowed the operation to generate a higher percentage of our power using gas, rather than diesel, therefore saving approximately 200kL less diesel per month.</p>	Business Response	Implemented
	Energy saved (GJ)	87,360 GJ pa
	Greenhouse gas abated (CO ₂ -e)	6,438 tonnes CO ₂ -e pa
	\$\$ saved	\$1M pa
	Payback period	0.27 years



Description of Opportunity	Voluntary Information	
<p>2008 Assessment, Newmont Tanami Operations</p> <p>Potential Opportunity - Genset Inlet Cooling</p> <p>Electricity generation at the Newmont Tanami Operation is provided by diesel gen-sets, which are owned and operated by a third party contractor. 13 KTA50 gen-sets provide power to The Granites and 18 provide power to Dead Bullock Soak (DBS), a total of 31 gensets. A potential opportunity was identified to reduce the inlet air temperature to the gensets to improve their efficiency. 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 project is dependent on partnering with the third party owner and operator of the gensets and also dependent on the reliable supply of good quality water for the cooling tower. Good quality water is currently sourced from reverse osmosis (RO) plants. A detailed engineering analysis on the capital installation for the project was completed during 2011 and the potential implementation of the project will be considered by the site energy team in 2012.</p>	Business Response	Under investigation
	Energy saved (GJ)	54,600 GJ pa
	Greenhouse gas abated (CO2-e)	4,024 tonnes CO2-e pa
	\$\$ saved	\$1.3M pa
	Payback period	0.89 years

Description of Opportunity	Voluntary Information	
<p>2008 Assessment, Newmont Tanami Operations</p> <p>Potential Opportunity - Waste Heat Capture</p> <p>Electricity generation at the Newmont Tanami Operation is provided by diesel gen-sets, which are owned and operated by a third party contractor. By conducting a detailed energy mass balance investigation, a potential opportunity was identified to capture waste heat from the diesel gensets in order to generate additional electricity using a variety of technologies. Waste heat currently goes up the exhaust stack to atmosphere. The potential opportunity would involve capturing this waste heat and running it through an organic rankine cycle unit to generate electricity. The generation of additional electricity from waste heat could reduce the diesel consumption of the gensets and possibly reduce the number of diesel gensets required to be run at any one time. This project is one of a number of projects to be considered by the site energy team in 2012 for practicality and implementation potential.</p>	Business Response	Under investigation
	Energy saved (GJ)	86,969 GJ pa
	Greenhouse gas abated (CO2-e)	6,419 tonnes CO2-e pa
	\$\$ saved	\$937,000 pa
	Payback period	2.6 years