



BARRICK (PD) AUSTRALIA LTD

PUBLIC REPORT
FOR THE
ENERGY EFFICIENCY
OPPORTUNITIES ACT

DECEMBER 2009



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Introduction

Barrick (PD) Australia Ltd is part of the Barrick Gold Corporation (Barrick). At Barrick, our goal is to minimise our environmental footprint and safeguard the environment, now and for future generations. Responsible environmental management is central to our success as a leading gold mining company and we seek to continually improve our performance. Barrick is a leading international gold mining company with operating mines and projects on five continents and exploration activities world wide. The company's head office is in Toronto, Canada.

Barrick has a global climate change program with key stakeholders in all countries and representation from key business units. As a part of this program there is a drive to improve energy efficiency and to minimise greenhouse gas emissions. Responsible energy use benefits Barrick's bottom line, the environment and the communities where we operate. The program aligns with the Australian Government's Energy Efficiency Opportunity Legislation.

This EEO Public Report pertains to Barrick (PD) Australia Ltd and relates to the following period:

Start **End**



Part 1 – Information on assessments completed to date

Barrick Gold's Methodology for carrying out its assessments

Table 1.1 - Description of the way in which Barrick Gold has carried out its assessments

This report is the second public report for Barrick (PD) Australia Ltd as required under the Australian Federal Government Energy Efficiency Opportunities Legislation. The first public report published last year relates to the period 01 July 2006 to 31 December 2007. This report relates to the period 01 January 2008 to 31 December 2008.

Barrick (Australia Pacific) Limited (formerly Barrick Gold of Australia Limited, manager of the two reporting corporations Barrick (PD) Australia Ltd and Barrick (Australia Pacific Holdings) Pty Ltd, conducted preliminary energy efficiency assessments across all of the Australian operations during the previous reporting period.

Barrick (PD) Australia Ltd continues to incorporate business improvement practises with energy management and energy efficiency. As an example of this, in 2008, the following actions were carried out:

- Existing opportunities across all Barrick sites were reviewed
- Sites were provided with an updated opportunity list including key learnings from all sites.
- Site interviews and reviews were internally by corporate and regional personal to identify the status of existing opportunities
- Opportunities were analysed to identify their status and new opportunities were identified.

The Barrick office in Cairns in Queensland was not assessed.

In calendar year 2008 Barrick PD Australia Limited had a total energy use 2.70 PJ or 42% of Barrick Australian Operations (6.51 PJ).

Energy Use Assessed

Name of Group member: **Barrick (PD) Australia Ltd**

Table 1.2 – Energy use assessed		
Sites	Period over which assessment was undertaken	Current period energy use (GJ/p.a.)
Barrick (Granny Smith) Pty Ltd	January to December 2007	766,343
Barrick (Kanowna) Ltd	January to December 2007	742,470
Barrick (Henty) Ltd	January to December 2007	132,426
Barrick (Osborne) Pty Ltd	January to December 2007	1,058,417
Total energy assessed (during the 2007 assessment period)		3,123,225
Total energy use of the group in the current reporting year (2008)		2,699,656
Total energy assessed expressed as a percentage of total current energy use¹		116%
Total energy assessed expressed as a percentage of total energy use from assessment year²		100%

¹ This percentage is greater than 100% because the total energy use for 2008 is lower than the energy use in the assessment period of 2007

² This shows that the energy assessed in 2007 was the total energy used in 2007

Accuracy of Energy Use Data

Table 1.3 – Accuracy of energy use data	
Entity	% achieved
Barrick (Granny Smith) Pty Limited	5%
Barrick (Kanowna) Limited	5%
Barrick (Henty) Limited	5%
Barrick (Osborne) Pty Limited	5%

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

Part 2A - New Assessments completed during the reporting period

Name of Group member: **Barrick (PD) Australia Ltd**

All site assessments took place in the last reporting period, and therefore were not required for the current reporting period. There is a continuous process of identifying new opportunities and progressing opportunities already identified.

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

Name of Group member: **Barrick (PD) Australia Ltd**

Energy use of the entity during the current reporting period

2,699,656	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 p.a. by payback period (GJ)			Total estimated energy savings p.a. (GJ)
			0 – <2 yrs	2–≤4yrs	> 4 yrs	
Outcomes of assessment*	Total Identified	3 (12)	29,697 (43,290)	6,129 (5,144)	-	35,827 (48,434)
Business Response*	Under Investigation	3 (7)	29,697 (12,994)	6,129 (4,915)	-	35,827 (17,909)
	To be Implemented	(0)	-	-	-	-
	Implementation Commenced	(1)	- (0)	- (148)	-	- (148)
	Implemented	(4)	(30,295)	(81)	-	(30,376)
	Not to be Implemented	(0)	(0)		-	(0)

X - the bold number represents the total figure for the current reporting period

(Y) - the number in brackets is the figure for the last reporting period

Name of Group member or business unit or key activity or site: **Barrick (PD) Australia Ltd**

Energy use of the entity during the current reporting period

2,699,656	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	14 (2)	369,677 (10,429)	113 -	-	369,790 (10,429)
Business Response*	Under Investigation	3 (1)	7,046 (4,602)	-	-	7,046 (4,602)
	To be Implemented	-	-	-	-	-
	Implementation Commenced	-	-	-	-	-
	Implemented	9 (1)	360,037 (5,828)	113 -	-	360,150 (5,828)
	Not to be Implemented	2 -	2,594 -	-	-	2,594

X - the bold number represents the figure for the current reporting period
 (Y) - the number in brackets is the figure for the last reporting period

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

Name of Group member: **Barrick (PD) Australia Ltd**

Table 2.5 – Description of 3 significant opportunities
Opportunity 1 – Compressor Optimisation
<p>An underground mine operation utilised compressed air for various purposes. Compressed air supply was met through the use of a surface mounted diesel compressor and two electric compressors which continually tripped due to over-heating. Together these compressors did not efficiently supply continuous and reliable compressed air. A new Kaeser electric compressor was installed which resulted in decreased energy usage and continuous compressed air supply. This resulted in a net energy saving of 5,982 GJ per annum.</p>
Opportunity 2 – Mill Reconfiguration
<p>This opportunity was reported in the last public report but savings were higher than anticipated. In 2007 there was a reduction in Mill throughput that resulted in an investigation in to ways that electricity consumption could be reduced. The investigation lead to reconfiguration of the mill processing plant and the retiring of major plant equipment including the ball mill, secondary crushing circuit and leach tank agitators. Variable speed drives were installed on the SAG Mill discharge motors. In the last public report the energy savings were estimated at 119,000 GJ. This opportunity was implemented in March 2008. The March to December 2008 energy saving was 328,724 GJ.</p>
Opportunity 3 – Optimal use of Air-Conditioners
<p>The Operation Offices had air-conditioning units left on overnight. A new sub-board has been installed and the air-conditioning circuits have been redirected into the new sub-board. A no-volt relay power point to all room air-conditioners has also been installed allowing air-conditioners to be turned of at a central location. This resulted in an energy saving of 156 GJ per annum.</p>

Part 3 - Voluntary Contextual Information

Table 3.1 – Contextual Information

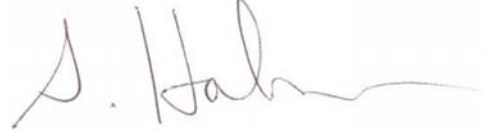
Barrick incorporates business improvement practises around carbon intensity and energy efficiency that contribute to the spirit of the EEO legislation. These practise includes:

- Carbon Working Group – The committee meets regularly to strategise how Barrick can mitigate its carbon footprint
- Energy Continuous Improvement Handbook – The handbook was developed in 2008 to assist sites in the identification and assessment of energy efficiency and greenhouse gas emission reduction opportunities. This handbook was rolled out to all sites
- Energy and Mass Balance Tool – A Barrick site has developed an energy and mass balance tracking and reporting tool that utilises metered energy data. This allows sites to see how their energy is consumed throughout the process and tracks all key energy waste streams. There is an intention to roll this out to all sites.
- Renewable Energy Options – Renewable energy options are being reviewed on Barrick sites.
- Carbon Abatement Curves - There is an intention to develop carbon abatement curves for all sites in order to quantify their carbon abatement opportunities.
- Other Activities – There are many activities which Barrick initiates which contribute to improvements in energy efficiency. Examples include:
 - *Optimisation of Pebble Crusher* – The pebble crusher consumes significant amounts of energy. Optimisation of the crusher to consume less energy has commenced. This includes optimising the gap adjustment/kW ratio, analysing liner profiles and ensuring it is choke fed at all times to ensure maximum throughput.
 - *Metering installed for an underground mine* – The underground mine consumes significant amounts of energy. The use of this energy is not measured. Metering allows personnel to have meaningful data which can then be reviewed on a regular basis to assist in identifying energy efficiency opportunities and reaching energy reduction targets
 - *Energy Awareness Programs* – Creating an energy efficient culture can be developed through awareness programs. An awareness program at a mine site is to be revitalised through campaign which will involve publishing energy initiatives, having suggestion boxes, and monitoring and publishing electricity usage and targets in each area.

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*.



President – Australia Pacific

Date: