

PUBLIC REPORT FOR THE ENERGY EFFICIENCY OPPORTUNITIES ACT

SUNRISE GOLD MINE

2009



ANGLOGOLD ASHANTI



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INTRODUCTION



AngloGold Ashanti has a vision 'to be the leading mining company'. To support this it has developed a value:

"We respect the environment"

We are committed to continually improving our processes in order to prevent pollution, minimise waste, increase our carbon efficiency and make efficient use of natural resources. We aim to develop innovative solutions to mitigate environmental and climate risks.

AngloGold Ashanti Australia's (AGAA) goal of continually improving its carbon efficiency aligns with the Australian Federal Government's Energy Efficiency Opportunities Act. This legislation requires corporations that use more than 0.5 petajoules (PJ) of energy per year to participate in an Energy Efficiency Opportunities program. AngloGold Ashanti Australia uses more than 0.5 PJ of energy annually at the Sunrise Dam Gold Mine, and therefore we must report the results of our energy use, assessment and response to this assessment.

AGAA is aiming to improve our energy efficiency by identifying, evaluating and reporting publicly on cost effective energy saving opportunities. AngloGold Ashanti Australia's Energy Efficiency Opportunities process is designed to:

- identify and implement cost-effective energy efficiency opportunities
- improve productivity and reduce greenhouse gas emissions
- enable greater scrutiny of energy use by management and key operational staff

This report relates to the following period:

Start **End**

PART 1 – INFORMATION ON ASSESSMENTS COMPLETED TO DATE

Table 1.1 – Description of the way in which the Corporate Group has carried out its assessments

AngloGold Ashanti Australia Limited (AGAA), Sunrise Dam Gold Mine consumed 2,585,839 GJ in the 2008/09 financial year. This report is the second public report under the Australian Federal Government Energy Efficiency Opportunities Legislation.

Sunrise Dam Gold Mine conducted its assessment in the previous reporting period and this report is a status update.

AGAA considers that energy efficiency and the EEO process are an on-going part of its business and therefore has continued to quantify and review opportunities identified from the EEO process. There are several ways this process is supported:

- Monthly Management Cost Meetings - energy is an agenda item at these meetings
- EEO Steering Committee – this comprises champions from each section (open pit, processing, underground, village/administration)
- Process Plant Database – this is a detailed & comprehensive database which tracks and allows reporting on key energy metrics
- Business Improvement Process – the Business Improvement process tracks financial outcomes of the energy efficiency opportunities
- External Consultants – are used on an annual basis to assess progress of opportunities and provide feedback
- AngloGold Ashanti Australia Regional Report– an additional level of accountability is added by the EEO information being required to be included in this Report. The Public EEO report is also posted on AGAA’s website as a requirement



Table 1.2 – Energy use assessed

Site that has had an assessment completed by the end of this reporting period.	Period over which assessment was undertaken ¹	Energy use per annum in GJ ² in the current year
AGAA Sunrise Dam Gold Mine	July 2007 – June 2008	2,585,839
Total energy assessed		2,585,839
Total energy use of the group in the current reporting year		2,585,839
Total energy assessed expressed as a percentage of total current energy use		100%

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.

Table 1.3 – Accuracy of energy use data

Entity	% achieved
AGAA Sunrise Dam Gold Mine	5%



PART 2 - ENERGY EFFICIENCY OPPORTUNITIES THAT HAVE BEEN IDENTIFIED AND EVALUATED

Part 2A - New assessments completed during the reporting period

AGAA's assessment took place in the previous reporting period, and therefore a new assessment was not required for this reporting period.

AGAA performed reviews on all previous opportunities and continued to identify new opportunities during the reporting period.

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

Name of site: AGAA Sunrise Dam Gold Mine

Energy use of the entity during the current reporting period

2,585,839	GJ
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An additional four opportunities were identified during the current reporting period. This resulted in a significant increase of 60% in the total estimated energy savings per annum compared to the last reporting period. A further seven opportunities were implemented, and it was decided not to implement another two opportunities.

Table 2.3 - 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	26 (22)	66,721 (43,488)	14,444 (14,444)	3,670 (0)	84,835 (57,932)
Business Response*	Under Investigation	5 (8)	6,129 (17,061)	692	2,974 -	9,795 (17,061)
	To be Implemented	4 (4)	4,951 (8,761)	-	696 -	5,647 (8,761)
	Implementation Commenced	3 (5)	9,951 (10,206)	- (692)	-	9,951 (10,898)
	Implemented	12 (5)	45,626 (7,460)	13,752 (13,752)	-	59,378 (21,212)
	Not to be Implemented	2 (0)	64 -	-	-	64 (0)



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

Table 2.5 – Description of 3 significant opportunities
<p>Opportunity 1 – Removal of Scats to Increase Mill Efficiency</p> <p>AngloGold had commissioned research which found that mill efficiency increases by removing the ball scats from a mill. Scats are non-spherical ball fragments resulting from uneven wear of balls with included porosity. Previously these scats would reside in the mill and would not have enough potential energy to grind the ore, but would still consume energy as the mill rotates.</p> <p>The removal of scats was implemented in two stages. The first stage involved a trommel screen being installed at the end of the mill which allowed the separation of scats and larger rocks from the overflow. This allowed for the effective removal of scats. The second stage involved a further screen which separates the rock from the scats. This reduces the rock in the scats pile which increases gold recovery. The stockpile with the valuable ore has been fed back through the mill.</p> <p>The research by AngloGold showed that mill throughput can increase by 10%. This opportunity resulted in a saving of 6,060 GJ/year, with a payback period of 0.9 years.</p>
<p>Opportunity 2 – Reduce underground backfilling energy cost through gravity fed pipeline</p> <p>Previously underground back-filling was achieved by trucking cement mixture underground to the disused stope. A paste plant was built to combine a mixture of tails with cement (3-6%) which is then piped to the underground stope using a gravity fed pipeline. This removes the need to truck cement (500,000 tonnes/year) to the fill area, resulting in significant diesel savings.</p> <p>Additionally the mixture also utilises underground waste rock, making a paste of three to one. This results in less waste rock needing to be hauled above ground, resulting in an additional saving by 182,500 tonnes of rock not needing to be hauled. This initiative has resulted in an energy saving of 26,000 GJ/year with a payback period of 0.9 years.</p>
<p>Opportunity 3 – Water Management</p> <p>On site fresh water was either pumped from an external bore or trucked in. Reducing water wastage therefore has an energy efficiency payoff. Demand management was initiated to reduce water wastage. A series of activities were initiated. A water saving campaign was implemented as part of a maintenance program. Maintenance staff identified water saving opportunities which resulted in a reduction of water usage by 15%. The reduction in water demand resulted in one less water truck making the trip to site. The energy savings are associated with the diesel savings with the truck.</p>

This results in 704 GJ/year being saved, with a payback period of 0.3 years.

PART 3 - VOLUNTARY CONTEXTUAL INFORMATION

Table 3.1 – Contextual Information

SITE ENVIRONMENTAL KEY DEVELOPMENTS

AngloGold Ashanti Australia is continually actively investigating cleaner energies as an opportunity to reduce its carbon footprint while simultaneously strategically diversifying its energy sources.

In addition to identifying and progressing energy efficiency opportunities, AngloGold Ashanti Australia has implemented a significant fuel switching project from diesel to LNG. Sunrise Dam Gold Mine is also a foundation customer for the new Wesfarmers LNG plant. This has resulted in significant reductions in GHG emissions since this has replaced diesel generation.

AngloGold Ashanti Australia is a leader in investigating and implementing renewable energies in the Gold Industry. AngloGold Ashanti has been investigating alternative energy sources including solar thermal and wind. Wind generation is currently being used on a groundwater control pump.

CORPORATE ENVIRONMENTAL KEY DEVELOPMENTS

While this report pertains to the Sunrise Dam Gold Mine, there are several exciting Corporate Environmental Key Developments that align with the EEO Act:


- AngloGold Ashanti ranked third in the Carbon Disclosure Project's Carbon Intensive Sector Leadership Index of the largest 100 companies listed on the Johannesburg Stock Exchange.
- Integration of community and environmental disciplines at a corporate level.
- Further development of the group's position on climate change, including the quantification of its carbon footprint and the identification of potential Clean Development Mechanism (CDM) projects as part of the group's business case for greenhouse gas (GHG) emission reductions.



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*.



for M. ERICKSON

Insert Title of Signatory here

ND. SUSTAINABILITY

