

# PUBLIC REPORT FOR THE ENERGY EFFICIENCY OPPORTUNITIES ACT

SUNRISE DAM GOLD MINE

2011



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:

<b>Start</b>	<input type="text" value="1 July 2010"/>	<b>End</b>	<input type="text" value="30 June 2011"/>
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**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 2,730,357 GJ (2.730 PJ) in the 2010/11 financial year. This report is the final public report in the first cycle under the Australian Federal Government Energy Efficiency Opportunities Legislation.

Sunrise Dam Gold Mine conducted its assessment in previous reporting periods and this report is a status update. Updates to the opportunities identified were completed for FY 2010/2011 by an external consultant. This involved interviews with key personnel and project owners.

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



<b>Table 1.2 – Energy use assessed</b>		
<b>Group member and/or business unit and/or key activity and/or site (or part thereof) that has had an assessment completed by 30 June 2010 (Include all assessments completed to date for the current 5 year cycle).</b>	<b>Period over which assessment was undertaken<sup>1</sup></b>	<b>Energy use for the period 1.7.2009 to 30 June 2010 of the assessed entity (or part thereof) expressed in GJ<sup>2</sup></b>
Anglogold Ashanti (Sunrise Dam) Pty Ltd	July 2007 - June 2008	2,873,086
<b>Total energy use of assessed entities (or part thereof)</b>		<b>2,873,086</b>
<b>Total energy use of the whole corporate group in the period 1.7.2010 to 30 June 2011</b>		<b>2,680,775</b>
<b>Total energy use of assessed entities (or part thereof) for the period 1.7.2010 to 30.6.2011 expressed as a percentage of total energy use for the period 1.7.2010 to 30.6.2011</b>		<b>93.3%</b>

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.

<b>Table 1.3 – Accuracy of energy use assessed data</b>		
<b>Entity</b>	<b>% achieved</b>	<b>Reasons for not achieving data accuracy to within ±5%</b>
Anglogold Ashanti (Sunrise Dam) Pty Ltd	± 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 a 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: Anglogold Ashanti (Sunrise Dam) Pty Ltd

Total energy use for the period 1.7.2010 to 30.6.2011 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

2,680,775	GJ
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**Table 2.3 - Opportunities assessed to an accuracy of better than ±30%**

Status of opportunities identified		Number of opps	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	
Outcomes of assessment*	Total Identified	43	34	223,376	4	18,672	5	2,974	245,022
Business Response*	Under Investigation	1	-	-	-	-	1	-	-
	To be Implemented	1	1	45,212	-	-	-	-	45,212
	Implementation Commenced	7	4	13,961	1	4,227	2	-	18,188
	Implemented	29	26	162,663	3	14,445	-	-	177,108
	Not to be Implemented	5	3	1,540	-	-	2	2,974	4,514

**Table 2.4 - Opportunities assessed to an accuracy of worse than  $\pm 30\%$**

Status of opportunities identified		Number of opps	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	
Outcomes of assessment*	Total Identified	15	6	8,380	-	-	9	696	9,076
Business Response*	Under Investigation	3	1	1,912	-	-	2	-	1,912
	To be Implemented	3	1	696	-	-	2	700	1,396
	Implementation Commenced	1	-	-	-	-	1	-	-
	Implemented	2	2	348	-	-	-	-	348
	Not to be Implemented	6	2	5,424	-	-	4	-	5,424



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

<p><b>Table 2.5 – Description of 3 significant opportunities</b></p>
<p><b>Opportunity 1 – Second power line to underground mine</b></p>
<p>A second powerline to the underground mine has been installed. This has two energy benefits. Firstly, the overall resistance through the transmission lines is decreased with the second line. This means that losses are lower and the power plant load is reduced. The second energy benefit is that the installation of the new power line allows diesel generators located at the mine to be demobilised from site, decreasing overall diesel consumption. As the main power plant is LNG fired, some of the savings in diesel through removing the generators will be taken up with increased LNG.</p> <p>An overall energy saving of 3,600 GJ of diesel has been estimated for this opportunity.</p>
<p><b>Opportunity 2 – Mill optimization</b></p>
<p>There is currently a project underway to increase the efficiency of the milling circuit through improved process control. Grind surveys are being conducted regularly to ensure the mill is operating effectively. The overall aim of the improved control is to reduce incidences where a grind out is required. This situation occurs when the mill is overloaded and must be operated with no fresh feed being added to remove some of the load from inside the mill.</p> <p>Savings have been realized through the development and implementation of a list of normal operating parameters and operating bands for the plant. The plant operators now work to keep the plant within the specified envelope and energy savings are achieved as a result.</p>
<p><b>Opportunity 3 – Improved crusher operation</b></p>
<p>A program has been introduced to improve crusher operation on site. This involves operating the machine such that it is controlled within a power band, as defined by the ore being fed to the ROM. This mode of operation has decreased energy consumption through the crushing circuit by reducing the amount of recirculating load in the circuit. In the past, variability in the recirculating load has meant that energy is wasted “crushing out”, where the circuit is run with no fresh feed being added. This project has also resulted in a steadier operation of the crushing circuit, which allows optimization to be completed in downstream unit operations.</p> <p>The estimated energy savings for this project have been approximately 50 GJ/year for 2010/11.</p>

**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 in their power generation plant.

AngloGold Ashanti Australia is a leader in investigating and implementing renewable energies in the Gold Industry. AngloGold Ashanti has been, and still are investigating an alternative energy source involving wind power. 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:

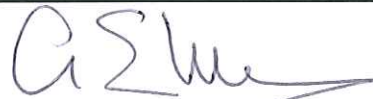
- AngloGold Ashanti continues to report on the Carbon Disclosure Project’s Carbon Intensive Sector Leadership Index of the largest 100 companies listed on the Johannesburg Stock Exchange.
- Integration of community and environmental disciplines at a corporate level.
- AngloGold Ashanti are presently working on three Clean Development Projects (CDM) within the South African operations. Other opportunities are being reviewed for future operational projects.
- With the escalation of energy costs within the global organization, AngloGold Ashanti are focusing on EEO initiatives in South Africa, Ghana and Brazil.



## 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*.



**Executive Vice President (EVP),  
Australia**

