



## FIRST PUBLIC REPORT TEMPLATE

### Controlling Corporation

Kalgoorlie Consolidated Gold Mines Pty Ltd

### Period to which this report relates

(See sub-section 22(2) of the Act and Regulation 7.1 of the *Energy Efficiency Opportunities Regulations (the Regulations) 2006*)

Start 1<sup>st</sup> July 2006

End 30<sup>th</sup> June 2008

### Part 1 - Summary of assessments conducted thus far

**Table 1.1 - Description of the way in which the corporation has carried out its assessments and over what period was each assessment taken. A statement saying that the intent and key requirements of the Energy Efficiency Opportunities legislation have been met must be made.**

In accordance with Energy Efficiency Opportunities (EEO) legislation, the impending introduction of an Emissions Trading Scheme (ETS) in 2010 and the requirements of the six key elements set out in the Assessment & Reporting Schedule (ARS), an EEO Steering Committee and a cross functional project team known as the Energy Action Team (EAT), has been established, with the objective of increasing energy awareness and facilitating, reviewing and implementing potential energy saving opportunities. The following is a current estimate of percent complete status for each of the six key elements and related activities set out in the ARS: (1) Leadership 70%; (2) People 60%; (3) Information, Data and Analysis 20% (4) Opportunity Identification and Evaluation 50%; (5) Decision Making 20%; (6) Communicating Outcomes 20%.

An energy consultancy (Energetics) was initially engaged by KCGM to assist in the identification and listing of potential EEO projects. The project list has been reviewed and consolidated by KCGM management and EAT members and selected projects have been progressed. A high level energy assessment for the two reporting periods July 2006 to June 2007 and July 2007 to June 2008 has been completed and reviewed by an external consultancy (Greenbase) and a site wide survey of more than 600 employees and contractors undertaken to gauge levels of energy efficiency awareness. This has provided KCGM management with a sense of the current EEO culture and has allowed for the creation of an 'energy awareness' baseline, against which future energy efficiency opportunities activity can be developed and compared. Further detailed analysis and progression of potential Energy Efficiency Opportunities will occur in 2009.

| Table 1.2 - Group member/business unit/key activity/site that have been assessed     | Energy use per annum in the year the assessment is completed * | Energy data accuracy (if not within $\pm 5\%$ ) ** | Reasons for not achieving data accuracy to within $\pm 5\%$ ** |
|--|--|--|--|
| KCGM : July 06 to June 07  | 4,352,954 GJ   |  |  |
| KCGM : July 07 to June 08  | 4,309,932 GJ   |  |  |
| <b>Total</b>   | <b>8,662,886 GJ</b>  |  |  |
| <b>Total as a percentage of total energy use of the group covered by this report</b> | <b>100%</b>  |  |  |

\* Energy Bandwidth may only be used if approved in the Assessment and Reporting Schedule

\*\* Data accuracy not within  $\pm 5\%$  can only be included if approved in the Assessment and Reporting Schedule

## Part 2 - Outcomes of and business response to opportunities that have been identified and evaluated for each group member, business unit, key activity or site assessed

(See paragraphs 3-6 of Schedule 4 and Schedule 6 of the Regulations)

Group member/business unit/key activity/site >0.5 PJ name: **Kalgoorlie Consolidated Gold Mines Pty Ltd**

| Table 1.3<br>Status of Opportunities |                                     | Number of Opportunities | Estimated energy savings per annum by payback period (GJ) |               | Total estimated energy savings per annum (GJ) | *Accuracy range (%) |
|--------------------------------------|-------------------------------------|-------------------------|---|---------------|---|---------------------|
|                                      |                                     |                         | 0 - < 2 years   | 2 - = 4 years |   |                     |
| Outcomes of assessment               | Identified (accuracy = $\pm 30\%$ ) | 3                       | 3   |               | 10,728  | +/-10%              |
|                                      | Identified (accuracy > $\pm 30\%$ ) | 9                       |   |               | N/A   |                     |
|                                      | <b>**Total Identified</b>           | <b>12</b>               | <b>3</b>  |               | <b>10,728</b>                                 | <b>+/-10%</b>       |
| ***Business Response                 | Under Investigation                 | 3                       |   |               |   |                     |
|                                      | To be Implemented                   | 0                       |   |               |   |                     |
|                                      | Implementation Commenced            | 1                       |   |               |   |                     |
|                                      | Implemented                         | 7                       |   |               |   |                     |
|                                      | Not to be Implemented               | 1                       |   |               |   |                     |

\*The accuracy range for projected or actual costs, benefits and energy savings.

\*\*You must ensure that this row is the sum of the two rows above it.

\*\*\* The data contained in each row of the business response area must total to the data contained in the 'Total Identified' row.

**Note:** An opportunity is any potential change to a system, activity or piece of equipment that:

- is identified during an EEO assessment;
- is consistent with legal requirements such as OHS, and
- may result in energy savings projects with payback periods of 4 years or less.

### Details of at least three significant opportunities found through EEO assessments

(See paragraph 7 of Schedule 4 of the Regulations)

Details must include a brief description of the opportunity and may optionally include details of the costs of implementation, energy/dollar savings and any other benefits (such as greenhouse reductions).

**Table 1.4**

**Opportunity 1**

Replacement of two air compressors at the Gidji Roaster with one or more efficient compressor. This improves compressor efficiency and uses less electricity. This has resulted in significant cost savings of around \$228k per annum and a reduction of approximately 2200 tonnes of CO<sub>2</sub>.

**Opportunity 2 \***

Various energy savings resulting from replacement of dated and inefficient centralised air conditioning units in the main administration office, with dedicated inverter reverse cycle air conditioning units which are only turned on only when the office is being used. Also general behavioural changes brought about by increased energy awareness (e.g.,) employee suggestions to reduce energy usage. Some of the ideas that have been implemented, include the installation of push button lights in toilets, the reporting of external lights being left on during daylight hours, turning lights and air conditioners off when not in use, monitored turning off of lights and computers overnight etc. This is helping to create a culture of energy efficiency awareness that will be further developed in 2009. Increased EEO awareness and a consequential change in employee behaviours in 2008 has resulted in estimated cost savings of around \$90k per annum and a reduction of around 900 tonnes of CO<sub>2</sub>.

**Opportunity 3 \*\***

Mt Charlotte underground ventilation fans represent the bulk of energy used underground. Fluid couplings were initially added to each of the three UG ventilation fans allowing a soft start and for the facility to turn the fans on and off each day saving around 2000 tonnes of CO<sub>2</sub> per annum. UG mining activity has since increased with the discovery of new gold deposits. A project is now underway to review the suitability of the existing fans and optimize UG ventilation requirements. Recommendations for refurbishment or replacement will be made in Q1 2009. This project is the first energy project to be managed using a continuous improvement (plan-do-check-act) approach, incorporating Six Sigma DMAIC (Define, Measure, Analyse, Improve and Control) methodology. All future energy projects will be developed around this framework.

\*If there are less than three significant opportunities, provide details of those identified.

\*\*If no significant opportunities have been identified in the assessment, a statement to this effect.

### Part 3 - Voluntary Contextual Information

Reporting corporations may supply additional information that provides more context to the public report. Such information may include:

An energy consultancy (Energetics) was engaged to identify and develop a list of potential energy saving opportunities. The majority of opportunities identified by the consultancy required additional specialist investigation and dedicated project management. Progress in this area has been affected by high levels of staff turnover, including the loss of a full time EEO project leader, specialist skills shortages, low levels of productivity upon appointment as a consequence of relative inexperience, JV owner budgetary (operating and capital expenditure) constraints and various changes in focus and priority.

As part of the Greenhouse Gas Challenge (GHG), KCGM Pty Ltd has voluntarily submitted Greenhouse Gas Emissions data (assisted by the consultancy Greenbase) for the 2006 and 2007 periods. During this time, various potential abatement initiatives were identified and reviewed. While increased EEO awareness has begun to have a noticeable effect on employee and contractor behaviours, anticipated CO<sub>2</sub> savings identified on key EEO projects (e.g.,) underground ventilation (electricity savings) and LPG fuel injection (diesel savings) have not been realised. This is because of an increase in underground mining activity and associated ventilation requirements following the discovery of new gold reserves at Mt Charlotte and confirmation by CAT (the 793C dump truck OEM) not to support the LPG fuel injection trial. Each of these EEO projects will be subject to further analysis (e.g.,) optimisation of ventilation and alternative fuels additives in 2009.

The Energy Efficiency Opportunities (EEO) Steering Committee, which is chaired by the General Manager, will provide the necessary oversight relating to ARS activities and to the recently established cross functional Energy Action Team (EAT) who will facilitate the identification, review and implementation of additional EEO activities across the site in 2009.

**Part 4 - Declaration**

(See paragraph 8 of Schedule 4 of the Regulations and paragraph 22(4)(c) of the Act)

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*.



24/12/08

**Russell Cole: General Manager**

Chair of the Board of Directors/CEO/Managing  
Director/equivalent officer (state position)

