

PUBLIC REPORT TEMPLATE 2010

Controlling Corporation

Fortescue Metals Group Limited

Period to which this report relates

Start 1 July 2007

End 30 June 2010

(eg. for a Corporate Group with the trigger-year 2005-06, the report will cover the period 1.7.2006-30.6.2010)

Part 1 – Information on assessments completed to date

Table 1.1 – Description of the way in which the Corporate Group (or part of it) has carried out its assessments

During the financial year 2009-2010, Fortescue Metals Group (Fortescue) commissioned a detailed energy assessment across the Cloudbreak mine site, Rowley Marshalling yards (which includes the locomotive fleet) and the Herb Elliott Port. The relevant findings from the assessment of the Cloudbreak mine have been applied to the Christmas Creek mine as part of a representative assessment of the Christmas Creek facility. The assessment of these facilities covered more than 80% of Fortescue's energy use. The assessment included detailed analysis of energy consumed by the haul trucks, surface miners, loaders, bulldozers and excavators, bore field infrastructure, locomotives, mine villages, ore processing facility, and the port and mine conveying systems. The results of this assessment are reported in Part 2A of this report.

A number of significant energy efficiency opportunities were identified through the assessment process. Involvement in the process by senior representatives of each operational area ensured that informed decisions on these projects have been made in a timely manner. Implementation of some projects has already commenced or been completed. Of the twenty (20) projects selected for detailed analysis, twelve (12) are undergoing further investigation, three (3) have been selected for implementation, one (1) has commenced implementation and implementation has been completed for four (4) projects.

Fortescue elected to assess all operations within this, the first assessment year rather than spread the assessments over the 5 –year assessment cycle. This decision was made to enable opportunities identified at this early stage in the company's development to be rolled into future expansions.

Fortescue is planning to continue its rapid growth strategy, which will result in increases in total energy consumption. Fortescue is aiming to further improve its energy efficiency based on energy per tonne of effective material movements undertaken across operations. Energy efficiency metrics have been developed for the various parts of Fortescue's operations and will be included in quarterly performance reports to the Board.

Part 1 – Information on assessments completed to date (continued)

| Table 1.2 – Energy use assessed | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------|
| 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). | Period over which assessment was undertaken¹ | Energy use for the period 1 July 2009 to 30 June 2010 of the assessed entity (or part thereof) expressed in GJ² |
| Cloudbreak | Nov 2009 - Jun 2010 | 4,965,524 |
| Christmas Creek | Nov 2009 - Jun 2010 | 709,501 |
| Herb Elliott Port | Nov 2009 - Jun 2010 | 218,166 |
| Rowley Yard | Nov 2009 - Jun 2010 | 543,382 |
| Total energy use of assessed entities (or part thereof) | | 6,436,573 |
| Total energy use of the whole corporate group in the period 1.7.2009 to 30 June 2010 | | 6,663,106 |
| Total energy use of assessed entities (or part thereof) for the period 1.7.2009 to 30.6.2010 expressed as a percentage of total energy use for the period 1.7.2009 to 30.6.2010 | | 97% |

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 assessed data | | |
|---------------------------------------------------------|-------------------|--------------------------------------------------------------|
| Entity | % achieved | Reasons for not achieving data accuracy to within ±5% |
| Cloudbreak | ±5% | Leave the table blank if accuracy is ±5%. |
| Christmas Creek | ±5% | |
| Herb Elliott Port | ±5% | |
| Rowley Yard | ±5% | |
| | | |

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

Part 2A - New assessments completed or not reported since your last Public Report

Name of Group member or business unit or key activity or site: **Cloudbreak and Christmas Creek mines**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

| | |
|-----------|----|
| 4,679,794 | GJ |
|-----------|----|

Table 2.1 – Opportunities assessed to an accuracy of better than or equal to (\leq) $\pm 30\%$

| Status of opportunities identified | | 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 | Under Investigation | 8 | 4 | 57,640 | 2 | 6,480 | 2 | 7,920 | 72,040 |
| | To be Implemented | 3 | 3 | 31,157 | | | | | 31,157 |
| | Implementation Commenced | 1 | | | 1 | 3,888 | | | 3,888 |
| | Implemented | 2 | 2 | 1,462 | | | | | 1,462 |
| | Not to be Implemented | 0 | | | | | | | |
| Outcomes of assessment | Total Identified | 14 | 9 | 90,259 | 3 | 10,368 | 2 | 7,920 | 108,547 |

Part 2A - New assessments completed during the reporting period (continued)

Name of Group member or business unit or key activity or site: **Herb Elliott Port**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

| | |
|---------|----|
| 217,920 | GJ |
|---------|----|

Table 2.2 – Opportunities assessed to an accuracy of better than or equal to (<=) ±30%

| Status of opportunities identified | | 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 | Under Investigation | 3 | | | 3 | 10,325 | | | 10,325 |
| | To be Implemented | | | | | | | | |
| | Implementation Commenced | | | | | | | | |
| | Implemented | 1 | 1 | 1,613 | | | | | 1,613 |
| | Not to be Implemented | | | | | | | | |
| Outcomes of assessment | Total Identified | 4 | 1 | 1,613 | 3 | 10,325 | | | 11,938 |

Part 2A - New assessments completed during the reporting period (continued)

Name of Group member or business unit or key activity or site: **Rowley Yard**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

| | |
|---------|----|
| 535,971 | GJ |
|---------|----|

Table 2.2 – Opportunities assessed to an accuracy of better than or equal to (<=) ±30%

| Status of opportunities identified | | 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 | Under Investigation | 1 | 1 | 15,440 | | | | | 15,440 |
| | To be Implemented | | | | | | | | |
| | Implementation Commenced | | | | | | | | |
| | Implemented | 1 | 1 | 26,055 | | | | | 26,055 |
| | Not to be Implemented | | | | | | | | |
| Outcomes of assessment | Total Identified | 2 | 2 | 41,495 | | | | | 41,495 |

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

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

Table 2.5 – Description of 3 significant opportunities

Opportunity 1

Road design - Removal of one stop per cycle per truck

The assessment identified an opportunity to review the haul road design to enable trucks to achieve and maintain an optimal trip speed. It was noted a considerable fuel saving would result if the road design could allow the removal of stop signs, where this does not compromise safety.

The truck manufacturers were asked to do modelling for a fully loaded truck to accelerate from stationary for 100 metres and to advise the final speed at this distance. They were also asked to model the same truck operating at this same final speed, but using this same speed for a distance of 1,000 metres, so that the steady state fuel consumption can be calculated. In this way the fuel saving as a result of the truck not having to stop is the difference between the two scenarios.

Evaluation of this opportunity revealed that for each stop removed from the load cycle, an estimated 361 kL per annum per truck (Caterpillar 777 haul truck) could be achieved. The estimated saving was higher (407 kL per annum per truck) for the Terex 3700 AC haul trucks.

This project is reported as 'to be implemented' and estimated savings are based on the removal of one stop-sign intersection. However, with careful consideration of traffic safety, FMG will continue to look for opportunities to remove stop signs.

Opportunity 2

Replace throttled pumps and gen-sets to improve efficiency

A review of dewatering bores on site revealed that many of the pumps are throttled as a means of decreasing water flow to meet the water productivity of the bore. Detailed analysis of the dewatering pump performance showed that highly throttled pumps use significantly more diesel per ML of water pumped than pumps with little or no throttling. The assessment identified two methods for improving the energy efficiency of these dewatering pumps:

1. Replace some pumps with smaller pumps; and/or
2. Convert the gen-sets to a variable speed alternator.

Pumps are progressively being swapped to smaller sizes where possible. Opportunities to optimise the bore field are undergoing further investigation. It is currently estimated that this opportunity would reduce diesel consumption by 730 kL per annum.

Opportunity 3

Installation of auto start/stop on locomotives to reduce idle times

Each locomotive engine logs lifetime data for a number of parameters, including throttle position and idle time. Although the idle fuel consumption rate is fairly low, the data showed that the engines remain idling for up to 74% of the time, resulting in approximately 7% of lifetime fuel consumption associated with idling. Analysis showed that up to 675 kL of diesel may be saved annually by the installation of GE's proprietary loco automatic engine stop start (AESS) system on each of the 15 engines.

These AESS systems have been installed on the locomotives and, whilst there is no direct means of measuring the fuel savings associated with reducing idle time, the locomotives do record the number of hours spent in each throttle notch (including idle time and total operation time). These data snapshots will enable evaluation of reductions in idle time and calculation of diesel savings. It is currently estimated that that this opportunity will result in diesel savings of 675 kL per annum.

Opportunity 4

Haul trucks utilising 'economy' mode

The assessment identified the relative flat haul routes at Cloudbreak and that energy savings were possible on the Caterpillar 777F haul trucks by utilising an economy mode built into the Engine Control Unit. When the economy mode is enabled, a separate engine map provides a reduction in power of approximately 4.5% from 700 kW net power to 668 kW. In the Economy mode, full power is provided in 1st gear, however the reduced power shift map is used for gears 2, 3 and up.

Modelling of the economy mode showed a 2.3% average reduction in fuel usage across the four routes, with an increase in cycle time of 1.8% or 16 seconds. Based on the consumption of 10.1 ML of diesel across the fleet of 777F haul trucks, the potential saving of a 2.3% fuel saving across the fleet of 27 trucks would result in a saving of 232 kL per annum and with a nil cost of implementation. The economy mode can be set by the Westrac technician in a few seconds on the 777F fleet owned by FMG, using an inbuilt software feature in their diagnostic computer. The same feature is easily reversible and can be deactivated by the technician if required.

The potential to apply an economy mode to FMG's fleet of Terex 3700 haul trucks was also assessed. The engine within the Terex 3700 haul truck has only as single map in the ECU and is not provided with an economy mode. However, the manufacturers have recently modelled the trucks with a new program in the ECU that de-rates the engine and reduces the power by 7.5%. The manufacturer's modelling data indicated an average reduction in productivity (t/h) of 2.2%, compared to the average fuel saving of 3.8%.

This project is being trialled on selected trucks by Fortescue.

Part 3 - Voluntary Contextual Information

Table 3.1 – Contextual Information

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|--|

Table 3.2 – Energy use expressed in Greenhouse Gas emissions and as an energy use indicator

Period of energy use _____ to _____

| Name of group member/ business unit/ key activity/site | Energy use pa (GJ) | Energy use pa (GGE) | Energy use as an indicator* |
|--------------------------------------------------------|--------------------|---------------------|-----------------------------|
| | | | |
| | | | |
| | | | |
| Total | | | |


Table 3.3 - Opportunities assessed to an accuracy of better than or equal to (<=) ±30% (\$ value)

| Status of opportunities identified | | Number of opportunities | Estimated energy savings per annum by payback period (\$) | | | Total estimated energy savings per annum (\$) |
|------------------------------------|--------------------------|-------------------------|-----------------------------------------------------------|---------------|-----------|-----------------------------------------------|
| | | | 0 – < 2 years | 2 – ≤ 4 years | > 4 years | |
| Business Response* | Under Investigation | | | | | |
| | To be Implemented | | | | | |
| | Implementation Commenced | | | | | |
| | Implemented | | | | | |
| | Not to be Implemented | | | | | |
| Outcomes of assessment* | Total Identified | | | | | |

Part 3 - Voluntary Contextual Information (continued)

| Table 3.4 – Changes in energy use as an indicator | | | |
|--------------------------------------------------------|------------------------------------|-------------------------------------|--------------------|
| Name of group member/ business unit/ key activity/site | Current energy use as an indicator | Previous energy use as an indicator | Reasons for change |
| | | | |
| | | | |
| | | | |
| Total | | | |

Part 4 - Declaration

| Table 4.1 - Declaration of accuracy and compliance (mandatory information) | |
|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------|
| <p>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 <i>Energy Efficiency Opportunities Act 2006</i> and <i>Energy Efficiency Opportunities Regulations 2006</i>.</p> |  |
| | <p>Herb Elliott, Chairman</p> |
| | <p>Date: 20/12/2010</p> |