



FY2012 BHP Billiton EEO Public Report

Controlling Corporation

BHP Billiton Limited

Period to which this report relates

Start

1 July 2011

End

30 June 2012

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

BHP Billiton EEO reporting entities

Figure 1 illustrates BHP Billiton's Group structure and participation status under the Energy Efficiency Opportunities (EEO) regulations. Discrete locations are referred to as sites. Some sites form combined groups referred to as businesses, and reporting entities may be either sites or businesses depending on the grouping. All sites and businesses are categorised into Customer Sector Groups (CSGs) according to their main product type.

Summary of BHP Billiton EEO reporting and results

The period of this report is from 1 July 2011 to 30 June 2012. Energy use data is sourced from energy consumption information gathered for the purposes of National Greenhouse and Energy Reporting (NGER) and is reported for the trigger year and the financial year July 2011 to June 2012.

As reported in December 2008 (the First Public Report), all site assessments were generally completed as of December 2007 with the exception of Stybarrow, which was assessed in financial year July 2009 to June 2010. Activity in the current reporting period has therefore focused on the progress of opportunities identified as a result of these assessments.

The table below summarises the opportunities identified since the commencement of the EEO program:

Reporting year	Total number of opportunities with payback < 4 years	Opportunities "Implemented" or "Implementation Commenced"	
		Number of opportunities	Energy savings (TJ per annum) ¹
FY2008 (First Public Report)	447	72	4,420
FY2009 (Second Public Report)	334	110	5,360
FY2010 (Third Public Report)	258	127	5,670
FY2011 (Fourth Public Report)	216	135	5,630
FY2012 (Fifth Public Report)	211	126	5,233

¹ Energy savings include projects evaluated to within $\pm 30\%$ accuracy only.

The reduction in the total number of opportunities reported over time is a result of improvements to opportunity evaluations resulting in payback periods of greater than four years for some opportunities.

The year-on-year increase in the number of "Implemented" or "Implementation Commenced" projects (up to FY11) reflects the continued evaluation and progression of projects across the business. However, in FY12, the number of projects classified as "Implemented" or "Implementation Commenced" reduced by nine. In the current year, energy savings from these projects represent a reduction of approximately 5.4% in energy consumption for the Group.



Figure 1: BHP Billiton Group Structure (as recorded in the current EEO Assessment and Reporting Schedule)

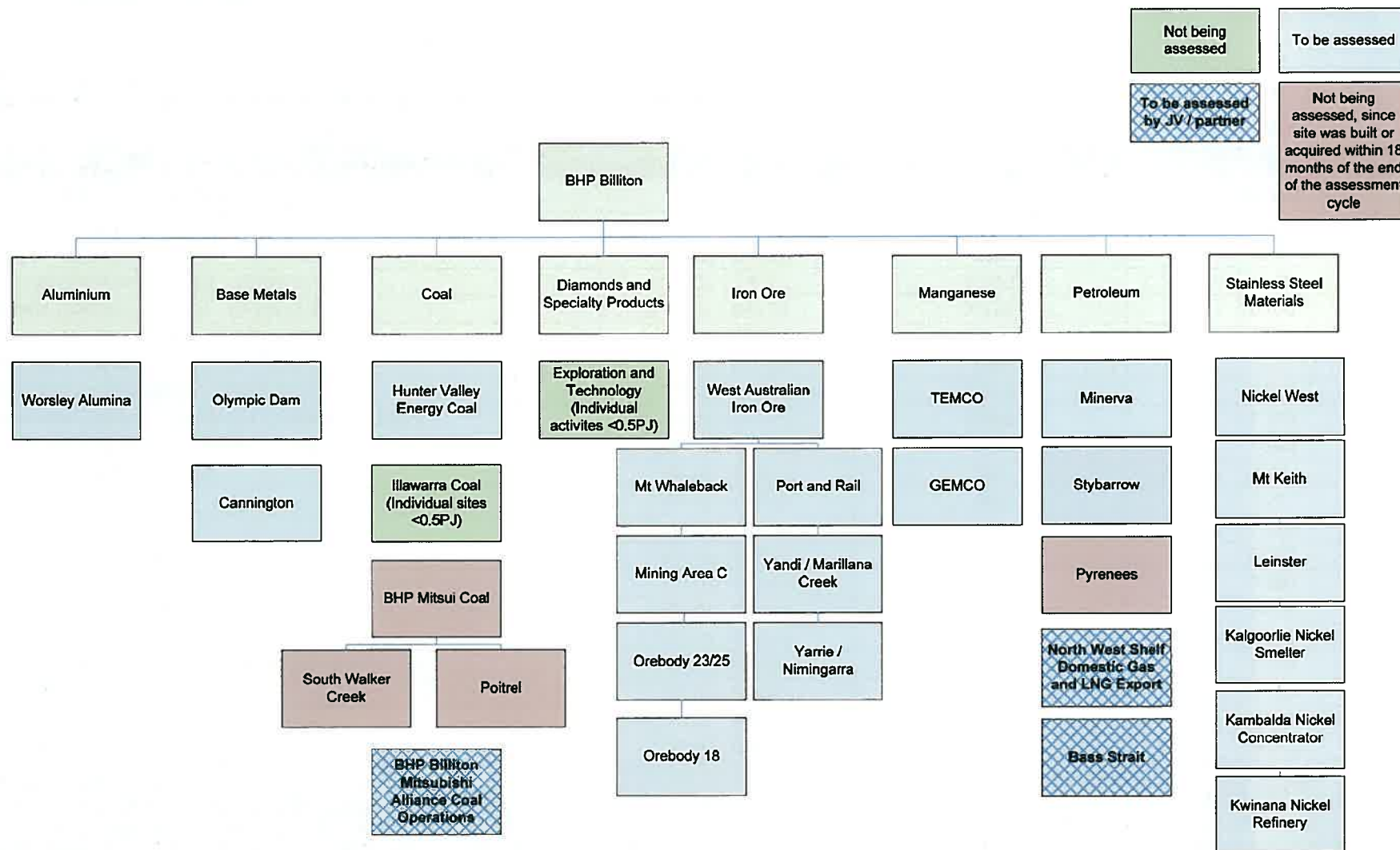


Table 1.2 – Energy use assessed

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 2011 (Include all assessments completed to date for the current 5 year cycle) ¹ .	Period over which the assessment was undertaken ¹	Energy use in the trigger year of the assessed entity expressed in TJ ¹	Energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity expressed in TJ ^{2,3,4}
Worsley Alumina	Jul 06 - Dec 07	34,820	36,500
Olympic Dam	Jul 07 - Dec 07	5,460	6,340
Cannington	Jul 07 - Dec 07	2,450	2,670
Hunter Valley Energy Coal (formerly Mt Arthur Coal)	Jul 07 - Dec 07	2,490	4,950
Port & Rail – WAIO	Apr 07 - Dec 07	3,900	6,750
Mt Whaleback – WAIO	Apr 07 - Dec 07	3,240	3,160
Area C – WAIO	Apr 07 - Dec 07	1,130	3,190
Marillana Creek (Yandi) – WAIO	Apr 07 - Dec 07	1,140	2,280
Ore Body 18 – WAIO	Apr 07 - Dec 07	400	1,260
Ore Body 23/25 – WAIO	Apr 07 - Dec 07	360	755
Yarrie / Nimingarra – WAIO	Apr 07 - Dec 07	620	264
Groote Eylandt Mining Company – GEMCO	May 07 - Dec 07	880	1,760
Tasmanian Electro Metallurgical Company – TEMCO	Jul 07 - Dec 07	4,160	5,560
Kalgoorlie Smelter (KNS) – Nickel West	Jul 07 - Dec 07	4,940	2,910
Kambalda Concentrator (KNC) – Nickel West	Jul 07 - Dec 07	940	352
Kwinana Refinery (KNR) – Nickel West	Jul 07 - Dec 07	5,070	3,250
Leinster Operations (LNO) – Nickel West	Jul 07 - Dec 07	2,180	1,100
Mt Keith Operations (MKO) – Nickel West	Jul 07 - Dec 07	5,960	3,560
Minerva - Petroleum	Jun 07 - Dec 07	730	501
Stybarrow – Petroleum (acquired FY09)	Jul 09 - Dec 09	2,110	2,020
Total energy use of assessed entities (or part thereof)		82,980	89,140
Total energy use of the whole corporate group		84,050	97,550
Total energy use of assessed entities (or part thereof) for the relevant period expressed as a percentage of total energy use for the relevant period		99%	91%

1. FY06 energy use as per current Assessment and Reporting Schedule, with the exception of Stybarrow, where energy use is reported for FY09.

2. Energy Use Data is a subset of FY2012 NGER Energy Consumption Data, includes only primary energy sources, and excludes non-combusted energy sources. Totals include energy used as reductants and electrodes.

3. Differences between total and individual energy use are due to rounding.

4. Total Energy Use of the group in the current reporting year is the sum of energy use of all sites in the Assessment and Reporting Schedule (ARS) (both assessed and non-assessed sites) plus other small NGER facilities (such as offices and closed sites). Illawarra Coal sites are not assessed as part of the program as individual site energy use falls below 0.5PJ. Note that Total Energy Use does not include BHP Billiton Mitsubishi Alliance Coal Operations.



Table 1.3 – Accuracy of energy use assessed data

Entity	% achieved ¹	Reasons for not achieving data accuracy to within ±5%
Worsley Alumina	±5%	N/A
Olympic Dam	±5%	N/A
Cannington	±5%	N/A
Hunter Valley Energy Coal (<i>formerly Mt Arthur Coal</i>)	±5%	N/A
Port & Rail – WAIO	±5%	N/A
Mt Whaleback – WAIO	±5%	N/A
Area C – WAIO	±5%	N/A
Marillana Creek (Yandi) – WAIO	±5%	N/A
Ore Body 18 – WAIO	±5%	N/A
Ore Body 23/25 – WAIO	±5%	N/A
Yarrie / Nimingarra – WAIO	±5%	N/A
Groote Eylandt Mining Company – GEMCO	±5%	N/A
Tasmanian Electro Metallurgical Company – TEMCO	±5%	N/A
Kalgoorlie Smelter (KNS) – Nickel West	±5%	N/A
Kambalda Concentrator (KNC) – Nickel West	±5%	N/A
Kwinana Refinery (KNR) – Nickel West	±5%	N/A
Leinster Operations (LNO) – Nickel West	±5%	N/A
Mt Keith Operations (MKO) – Nickel West	±5%	N/A
Yabulu	±5%	N/A
Minerva - Petroleum	±5%	N/A
Stybarrow – Petroleum (Trigger Year FY09)	±5%	N/A

1. Satisfies the methods and criteria for the measurement of the consumption of energy provided in then National Greenhouse and Energy Reporting (Measurement) Determination 2008.



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

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

Table 2.1(a) - New assessments completed or not reported since your last Public Report

There were no new assessments completed since the last Public Report.

Part 2B - Update of assessments reported in previous Public Reports

Table 2.2(a) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Worsley Alumina

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

36,500

TJ

Table 2.2(a) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	33	3,176,878	777,514	3,954,391
	Identified (accuracy > ±30%)	-	-	-	-
	Total Identified	33			
Business Response	Under Investigation				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	To be Implemented				
	(accuracy ≤±30%)	3	66,352	-	66,352
	(accuracy > ±30%)	-	-	-	-
	Implementation Commenced				
	(accuracy ≤±30%)	12	2,485,525	433,289	2,918,815
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	15	466,322	344,224	810,547
	(accuracy > ±30%)	-	-	-	-
	Not to be Implemented				
	(accuracy ≤±30%)	3	158,678	-	158,678
	(accuracy > ±30%)	-	-	-	-

BHP Billiton note: Differences between total and individual energy savings are due to rounding

Contextual notes:

[1] Evaluation undertaken since the FY11 EEO Public Report has resulted in three opportunities being progressed from Under Investigation to Implementation Commenced (one opportunity) and To be Implemented (two opportunities).

[2] The change in total energy savings identified is due to further evaluation of projects and several implemented projects not meeting the energy reduction that was first anticipated.



Table 2.2(b) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Olympic Dam

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

6,340

TJ

Table 2.2(b) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	4	83,025	4,600	87,625
	Identified (accuracy > ±30%)	2	V-NA	V-NA	V-NA
	Total Identified	6			
Business Response	Under Investigation				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	To be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implementation Commenced				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	3	82,363	4,600	86,963
	(accuracy > ±30%)	1	V-NA	V-NA	V-NA
	Not to be Implemented				
	(accuracy ≤±30%)	1	662	-	662
	(accuracy > ±30%)	1	V-NA	V-NA	V-NA

BHP Billiton note: V-NA indicates voluntary information – Not Available

Contextual notes:

[1] An additional project has been implemented since the FY11 EEO Public Report.

[2] The FY12 EEO Public Report contains 2 fewer projects than the FY11. Further investigation of these opportunities identified that no energy savings are foreseeable.

Table 2.2(c) - Update of assessments reported in previous Public Reports
Name of Group member or business unit or key activity or site: Cannington

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

2,670	TJ
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Table 2.2(c)		Number of opportunities	Estimated energy savings per annum by payback period (GJ)		Total estimated energy savings per annum (GJ)
Status of opportunities identified			0 – < 2 years	2 – ≤4 years	
Outcomes of assessment	Identified (accuracy ≤±30%)	5	70,943	0	70,943
	Identified (accuracy > ±30%)	-	-	-	-
	Total Identified	5			
Business Response	Under Investigation				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	To be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implementation Commenced				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	3	64,634	0	64,634
	(accuracy > ±30%)	-	-	-	-
	Not to be Implemented				
	(accuracy ≤±30%)	2	6,309	0	6,309
	(accuracy > ±30%)	-	-	-	-

BHP Billiton note: Differences between total and individual energy savings are due to rounding

Contextual notes: [1] An additional project has been implemented since the FY11 EEO Public Report.

Table 2.2(d) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Hunter Valley Energy Coal (formerly Mt Arthur Coal)

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

4,950	TJ
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Table 2.2(d) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	7	27,002	230	27,232
	Identified (accuracy > ±30%)	5	V-NA	V-NA	V-NA
	Total Identified	12			
Business Response	Under Investigation				
	(accuracy ≤±30%)	1	2,401	-	2,401
	(accuracy > ±30%)	3	V-NA	V-NA	V-NA
	To be Implemented				
	(accuracy ≤±30%)	1	-	230	230
	(accuracy > ±30%)	1	V-NA	V-NA	V-NA
	Implementation Commenced				
	(accuracy ≤±30%)	1	2,401	-	2,401
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	4	22,200	-	22,200
	(accuracy > ±30%)	1	V-NA	V-NA	V-NA
	Not to be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-

BHP Billiton note: V-NA indicates voluntary information – Not Available

Contextual notes

- [1] HVEC continues to evaluate opportunities and monitor implemented projects.
 [2] As a result, five additional opportunities are reported in 2012 that were not reported in 2011.
 [3] Five opportunities that were reported in 2011 are no longer reported. Further evaluation of three opportunities has resulted in paybacks which now exceed 4 years. One opportunity is no longer implemented due to safety concerns, while another opportunity no longer results in energy savings due to increased production.
 [4] An implemented opportunity with large energy savings has been further evaluated, which has resulted in a large decrease in the associated energy savings.

Table 2.2(e) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Western Australia Iron Ore - WAIO

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

17,660	TJ
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Table 2.2(e) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	14	307,001	243	307,244
	Identified (accuracy > ±30%)	17	V-NA	V-NA	V-NA
	Total Identified	31			
Business Response	Under Investigation				
	(accuracy ≤±30%)	8	169,251	-	169,251
	(accuracy > ±30%)	-	-	-	-
	To be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implementation Commenced				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	6	137,749	243	137,992
	(accuracy > ±30%)	-	-	-	-
	Not to be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	17	V-NA	V-NA	V-NA

BHP Billiton note: V-NA indicates voluntary information – Not Available

BHP Billiton note: Differences between total and individual energy savings are due to rounding

Contextual notes: [1] No change has been made to the status of these opportunities since the FY11 EEO Public Report.

Table 2.2(f) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Groote Eylandt Mining Company - GEMCO

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

1,760 TJ

Table 2.2(f) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	11	18,369	56,913	75,282
	Identified (accuracy > ±30%)	2	V-NA	V-NA	V-NA
	Total Identified	13			
Business Response	Under Investigation				
	(accuracy ≤±30%)	2	7,565	-	7,565
	(accuracy > ±30%)	1	V-NA	V-NA	V-NA
	To be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	1	V-NA	V-NA	V-NA
	Implementation Commenced				
	(accuracy ≤±30%)	1	-	46,320	46,320
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	7	10,804	9,253	20,057
	(accuracy > ±30%)	-	-	-	-
	Not to be Implemented				
	(accuracy ≤±30%)	1	-	1,340	1,340
	(accuracy > ±30%)	-	-	-	-

BHP Billiton note: V-NA indicates voluntary information – Not Available

BHP Billiton note: Differences between total and individual energy savings are due to rounding

Contextual notes: [1] One project reported as Implementation Commenced in FY11 has been removed as further evaluation has indicated a payback exceeding 4 years.

Table 2.2(g) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Tasmania Electro Metallurgical Company - TEMCO

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

5,560	TJ
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Table 2.2(g) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	9	502,784	1,083	503,867
	Identified (accuracy > ±30%)	-	-	-	-
	Total Identified	9			
Business Response	Under Investigation				
	(accuracy ≤±30%)	2	400	1083	1,483
	(accuracy > ±30%)	-	-	-	-
	To be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implementation Commenced				
	(accuracy ≤±30%)	1	16,769	-	16,769
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	4	378,439	-	378,439
	(accuracy > ±30%)	-	-	-	-
	Not to be Implemented				
	(accuracy ≤±30%)	2	107,176	-	107,176
	(accuracy > ±30%)	-	-	-	-

Contextual notes:

- [1] Two new projects were added as Under Investigation to TEMCO's project list in FY12. These additions, along with further evaluation of existing opportunities, have resulted in an increase in annual energy savings of identified opportunities from approximately 403,570 GJ in FY11 to 503,867 GJ in FY12.
[2] One project Under Investigation in FY11 was further evaluated and reclassified as Not to be Implemented.

Table 2.2(h) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Nickel West

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

11,180	TJ
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Table 2.2(h) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	52	750,504	1,155,457	1,905,962
	Identified (accuracy > ±30%)	36	V-NA	V-NA	V-NA
	Total Identified	88			
Business Response	Under Investigation				
	(accuracy ≤±30%)	2	46,735	309	47,044
	(accuracy > ±30%)	12	V-NA	V-NA	V-NA
	To be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	2	V-NA	V-NA	V-NA
	Implementation Commenced				
	(accuracy ≤±30%)	5	19,774	1,332	21,105
	(accuracy > ±30%)	6	V-NA	V-NA	V-NA
	Implemented				
	(accuracy ≤±30%)	42	598,779	40,317	639,096
	(accuracy > ±30%)	6	V-NA	V-NA	V-NA
	Not to be Implemented				
	(accuracy ≤±30%)	3	85,217	1,113,500	1,198,717
	(accuracy > ±30%)	10	V-NA	V-NA	V-NA

BHP Billiton note: V-NA indicates voluntary information – Not Available

BHP Billiton note: Differences between total and individual energy savings are due to rounding

Contextual notes:

- [1] 14 opportunities remain Under Investigation compared to 23 projects in FY11; showing further evaluation was completed in FY12 to progress to decisions.
- [2] One large energy saving opportunity has changed classification from Under Investigation to Not to be implemented, due to capital restraints in the current economic climate.
- [3] Three moderate energy saving opportunities reported as Implementation Commenced in FY11 are now fully implemented.
- [4] One large energy saving opportunity reported as implemented in FY11 is now classified as Under Investigation. Changes in operation have resulted in the opportunity becoming unfeasible; however investigations are being conducted into modifications to make the opportunity viable under the new operating conditions.

Table 2.2(i) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Petroleum - Minerva

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

501	TJ
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Table 2.2(i) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	6	45,558	2,700	48,258
	Identified (accuracy > ±30%)	-	-	-	-
	Total Identified	6			
Business Response	Under Investigation				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	To be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implementation Commenced				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	6	45,558	2,700	48,258
	(accuracy > ±30%)	-	-	-	-
	Not to be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-

Contextual notes:

[1] No change has been made to the status of these opportunities since the FY10 EEO Public Report.

Table 2.2(j) - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: Petroleum - Stybarrow

Total energy use for the period 1.7.2011 to 30.6.2012 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).

2,020 TJ

Table 2.2(j) 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	
Outcomes of assessment	Identified (accuracy ≤±30%)	2	35,450	-	35,450
	Identified (accuracy > ±30%)	6	V-NA	V-NA	V-NA
	Total Identified	8			
Business Response	Under Investigation				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	To be Implemented				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implementation Commenced				
	(accuracy ≤±30%)	-	-	-	-
	(accuracy > ±30%)	-	-	-	-
	Implemented				
	(accuracy ≤±30%)	1	19,000	-	19,000
	(accuracy > ±30%)	1	V-NA	V-NA	V-NA
	Not to be Implemented				
	(accuracy ≤±30%)	1	16,450	-	16,450
	(accuracy > ±30%)	5	V-NA	V-NA	V-NA

BHP Billiton note: V-NA indicates voluntary information – Not Available

Contextual notes: [1] No change has been made to the status of these opportunities since the FY11 EEO Public Report.

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

Desilication by indirect steam heaters – Worsley Alumina

Status: Implementation Commenced

Area: Refinery

Prior to the commencement of this project, heating of desilication feed slurry was achieved by the direct injection of 450 kPa steam, which resulted in significant excess water entering the process. This project provided for the installation of indirect steam heaters which eliminated this excess water, resulting in an annual energy use reduction of 919 TJ.

Dilution air control – Kalgoorlie Nickel Smelter

Status: Implemented

Area: Services

The acid plant takes sulphur dioxide gas and converts it into sulphuric acid. Managing the amount of air added to the process is critical to process performance. A project was implemented to automate the dilution air control, and therefore reduce the amount of excess air treated by the acid plant. Implementation of the project has resulted in an annual energy use reduction of 23 TJ.

Replacement of skid mounted metal halide lighting with LED lighting – Hunter Valley Energy Coal

Status: Implemented

Area: Mining

Portable lighting is required at mining operations. Prior to the implementation of this opportunity, skid-mounted lighting at various locations around the operation utilised metal halide lighting technology. The opportunity to purchase more efficient LED lighting technology has resulted in an annual energy use reduction of 5.4 TJ.



Part 3 - Voluntary Contextual Information

Voluntary Information is not available for the reporting period.

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*.

Marius Klopers
Chief Executive Officer

Date 30.11.12