

XSTRATA NICKEL AUSTRALASIA

ENERGY EFFICIENCY OPPORTUNITIES

PUBLIC REPORT 2011

COSMOS AND SINCLAIR MINES



Introduction

Xstrata is responding proactively to the environmental, social and economic challenges posed by climate change. It is one of the principal risks facing our business. Mining industry activities contribute to climate change through the direct release of greenhouse gases (GHGs), in particular methane and carbon dioxide (CO₂), and through the intensive use of energy from fossil fuels.

All Xstrata commodity businesses strive to reduce their operations' greenhouse gas emissions, with each site following our Group Sustainable Development Framework to improve its energy efficiency and where relevant, capture emissions. http://www.xstrata.com/assets/pdf/x_sustainability_2009.pdf. As part of these standards Xstrata requires that:

“Each operation and project at every stage of development should be considering the sustainable use of resources as a fundamental element of the way we do business”

Xstrata operations are recognised as intensive users of energy and contribute to global greenhouse gas emissions. To meet these challenges the following priorities have been determined by assessing the primary environmental impacts of our operations, assessing feedback from stakeholders on our environmental performance and their key concerns, reviewing topics selected and prioritised by industry bodies such as the International Council on Mining and Metals, and reviewing leading scientific opinion and research into the potential impacts of mining and metallurgical activities:

- Making mining and metallurgical operations more energy efficient
- Reducing direct greenhouse gas emissions
- Sourcing reliable and affordable energy
- Contributing to the development of low emissions technologies to significantly reduce carbon emissions from coal as an energy source
- Assessing and managing the potential physical impact of climate change on our operations and projects

Xstrata Nickel Australasia's commitment to mitigating the effects of climate change has resulted in the formulation of a long term energy management and climate change strategy and climate change and energy targets have been committed to.



PUBLIC REPORT TEMPLATE 2011

Please note that this template has been updated based on feedback from a number of Corporations during the recent review of regulations. It is not compulsory for you to use this Public Report template. You may wish to continue to use the previous template, or you may report in another format of your choice. Either is acceptable provided you report all the information required by the EEO Act and Regulations.

There is an explanatory document at pages 5-14 of this template that fully explains how to complete it. There is also some targeted guidance on the template itself.

Part 1 - Corporation Details

Controlling Corporation

Period to which this report relates

Insert the name of the Controlling Corporation exactly as it is registered with the EEO Program. The period to which the report relates is the total period of participation up to 30 June prior to when the report is due.

Xstrata Nickel Holdings Pty Limited From 1 July 2008 To 30 June 2011

Table 1.1 - Major Changes to Corporate Group Structure or Operations

Table 1.1 – Major Changes to Corporate Group Structure or Operations

The Sinclair Nickel mine and concentrator were restarted during this time. The decline began in July 2010, and concentrator started August 2010.

Table 1.2 – Aggregate energy assessed covered in this report

Total energy use covered by all assessments in this report	1,237,589	GJ
Total energy assessed as percentage of total energy use of the corporate group*#	99.9	%

* If this report covers only part of the corporate group, than the percentage should be computed on the total energy use for that part of the group covered in this report

Please note that corporations are required to assess 80% or more of their energy use in the first five-year assessment cycle and 90% or more in subsequent five-year assessment cycles. Accordingly, for those corporations with a 2005-06 trigger year (i.e. those corporations at the end of their first-five year assessment cycle), the value in "Percentage of corporation's energy use assessed" above, must be more than 80%.



Declaration

Declaration of accuracy and compliance

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*.

Al Coutts – Executive General Manager, XNA

Date

Part 2 - Assessment Outcomes

Table 2.1 – Assessment Details

It is compulsory to complete a separate table for each group member, business unit, or key activity that has been assessed

Name of group member or business unit or key activity

Cosmos

Total energy use in the last financial year

925,663

GJ

Energy use assessed in this entity as a percentage of total entity energy use*

74.7

%

Energy use assessed in this entity as a percentage of total corporate energy use

74.7

%

Accuracy of above estimates related to energy use assessed - only required if not ±5% or better

%

Period over which assessment was undertaken

1 July 2009

30 June 2010

Description of the way in which the entity carried out its assessment

This Report is the second public report as a part of its obligations to the Federal Government under the under the Energy Efficiency Opportunities (EEO) Act.

The EEO assessment for the Cosmos facility was completed during the financial year ending on 30 June 2010. It was completed using Energetics as the external workshop facilitator. An energy mass balance tool was created as part of the EEO assessment both to address Key Requirement 3.2 and to provide a tool for Xstrata Nickel to use for ongoing energy management.

Xstrata Nickel Australasia is committed to the continual improvement of EEO through its Sustainable Development Standards. Our unique Sustainable Development (SD) Framework guides Xstrata's commodity businesses and provides assurance for the Board that standards are being upheld. It addresses all SD-related topics and is backed by a detailed set of SD Performance Standards. Our SD Framework is aligned with international standards including the International Council on Mining and Minerals principles and guidelines, the Precautionary Principle, the UN Global Compact, Voluntary Principles on Security and Human Rights, ISO 31000, ISO 14001 and OHSAS 18001.

The Framework comprises:

1. **Business Principles:** Provides an ethical framework for how we conduct our business.
2. **Sustainable Development Policy:** Sets out the principles we apply to our management of health, safety, people, communities and the environment.
3. **Sustainable Development Standards:** Set clear expectations for all managed operations, projects and commodity businesses on a comprehensive range of SD-related topics.



4. Independent Assurance Programme: The key mechanism through which the Xstrata Board and management gain assurance that the Group's policies and standards are being met and that material risks are being managed at every site. It also plays an integral role in enabling management to rapidly assess acquired operations and brings them into line with our standards.

Our SD Framework assist in meeting EEO requirements and we have incorporated them into Xstrata Nickel Australia's EEO process.

The EEO Process has been supported by:

- EEO Steering Committee Meetings – Comprising Energy champions from each section (Mining, Processing & Environment)
- Daily Reports – A detailed & comprehensive database on key production metrics
- Monthly Energy and Mass Balance tool and energy Management Report – A detailed breakdown of Energy & Mass Flows across the site updated monthly. This tool includes a monthly energy report that reports on energy KPIs and variances.
- Internal Business Improvement Process – The EEO program & Projects were incorporated into this process
- External Consultants – Energetics (EEO assessment) and Greenbase (NGER reporting)

* Please note that, for individual sites that use more that 0.5PJ of energy, all energy use must be assessed (less a small proportion for non integral energy use).

Table 2.2 - Energy efficiency opportunities identified in the assessment

It is compulsory to complete a separate table for each group member, business unit, or key activity that has been assessed

Table 2.2 – Energy efficiency opportunities identified in the assessment									
Status of opportunities identified to an accuracy of better than or equal to ±30%		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	Implemented	1	0	0	0	0	1	37	37
	Implementation Commenced	4	4	47,715	0	0	0	0	47,715
	To be Implemented	0	0	0	0	0	0	0	0
	Under Investigation	9	6	12,159	1	457	2	689	13,305
	Not to be Implemented	2	2	4,081	0	0	0	0	4,081
Outcomes of assessment	Total Identified	16	12	63,955	1	457	3	726	65,138
Status of opportunities identified to an accuracy of worse than ±30%									
Business Response	Implemented	1	1	3,072	0	0	0	0	3,072
	Implementation Commenced	2	1	333	0	0	1	352	685
	To be Implemented	0	0	0	0	0	0	0	0
	Under Investigation	3	2	806	0	0	1	0	806
	Not to be Implemented	6	3	28,305	0	0	3	0	28,305
Outcomes of assessment	Total Identified	12	7	32,516	0	0	5	352	32,868

Please note that Corporate Groups **are not required** to report opportunities with a payback greater than 4 years. Reporting this data is voluntary.

Table 2.1 – Assessment Details

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Name of group member or business unit or key activity

Sinclair

Total energy use in the last financial year

311,926

GJ

Energy use assessed in this entity as a percentage of total entity energy use*

25.2

%

Energy use assessed in this entity as a percentage of total corporate energy use

25.2

%

Accuracy of above estimates related to energy use assessed - only required if not ±5% or better

%

Period over which assessment was undertaken

1 July 2010

30 June 2011

Description of the way in which the entity carried out its assessment

This Report is the second public report as a part of its obligations to the Federal Government under the Energy Efficiency Opportunities (EEO) Act. During the 2010/2011 financial year, Xstrata Nickel Australasia (XNA) reopened the Sinclair Nickel Mine, beginning development of the underground and opening the concentrator. The ARS originally had the Sinclair assessment scheduled for FY 2012/13 but this was brought forward so that some energy projects could be identified and implemented during the remaining mine life.

The EEO assessment was an externally facilitated workshop, using Energetics as the facilitators. Projects identified were assigned to project owners within XNA and high level energy and cost savings calculations for each completed.

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Table 2.2 - Energy efficiency opportunities identified in the assessment

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Table 2.2 – Energy efficiency opportunities identified in the assessment									
Status of opportunities identified to an accuracy of better than or equal to $\pm 30\%$		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	Implemented	2	1	348	0	0	1	28	376
	Implementation Commenced	2	2	6,850	0	0	0	0	6,850
	To be Implemented	3	3	4,852	0	0	0	0	4,852
	Under Investigation	11	10	24,398	0	0	1	23	24,421
	Not to be Implemented	2	1	20,100	0	0	1	289	20,389
Outcomes of assessment	Total Identified	20	17	56,548	0	0	3	340	56,888
Business Response	Implemented	1	1	0	0	0	0	0	0
	Implementation Commenced	0	0	0	0	0	0	0	0
	To be Implemented	1	1	0	0	0	0	0	0
	Under Investigation	2	2	1,374	0	0	0	0	1,374
	Not to be Implemented	0	0	0	0	0	0	0	0
Outcomes of assessment	Total Identified	4	4	1,374	0	0	0	0	1,374

Please note that Corporate Groups **are not required** to report opportunities with a payback greater than 4 years. Reporting this data is voluntary.

Table 2.3 - Details of significant opportunities identified in the assessment

Corporate Groups are required to provide at least 3 examples of significant opportunities for improving the energy efficiency of the group that have been identified in assessments.

Description of Opportunity	Voluntary Information	
<p>Spinning Reserve Reduction: An opportunity has been identified to reduce the amount of spinning reserve in the on site power station. This will be done by implementing set point changes for the point at which another generator is activated when the active generators in the power station are reaching their capacity.</p>	Business Response	
	Energy saved (GJ)	
	Greenhouse gas abated (CO2-e)	
	\$s saved	
	Payback period	

Description of Opportunity	Voluntary Information	
<p>Fuel additives and filtration: An opportunity has been identified to improve the fuel efficiency of mobile fleet on both sites through implementing fuel filtration as well as using a new fuel additive (a catalyst) to help the diesel burn more efficiently in the engines.</p>	Business Response	
	Energy saved (GJ)	
	Greenhouse gas abated (CO2-e)	
	\$s saved	
	Payback period	

Description of Opportunity	Voluntary Information	
<p>Backfill transport: This opportunity involves stockpiling waste in empty stopes, replacing aggregate with waste, reducing cement requirements in stopes, and in-pit stockpiling of waste. All of these actions have reduced the haulage requirements of cement and crushed aggregate with energy savings occurring as a result.</p>	Business Response	
	Energy saved (GJ)	
	Greenhouse gas abated (CO2-e)	
	\$s saved	
	Payback period	

Please note that the "Description of the Opportunity" above should include information on the specific nature and type of opportunity, as well as information on the type of equipment and/or process involved.