



PUBLIC REPORT TEMPLATE

Controlling Corporation

Idemitsu Australia Resources Pty Ltd – (Ensham Resources Pty Ltd)

Period to which this report relates

Start 1 July 2006

End 30 June 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

Idemitsu Australia Resources Pty Ltd is the controlling corporation for the purposes of the Energy Efficiency Opportunities Act 2006. Ensham Resources Pty Ltd (Ensham) the only group member of Idemitsu that triggers the EEO threshold as such the data contained in this report pertains primarily to the activities of Ensham.

Total energy use for the Idemitsu Group during this reporting period was 2,701,820 GJ. Ensham accounted for 85 percent or 2,295,130 GJ.

During the 2009/10 reporting period, Ensham further progressed implementation of the EEO program. Key activities included completion of detailed project assessments, project implementation and activities to improve the granularity of the original Energy Mass Balance conducted for the site.

A more detailed report on Ensham's energy efficiency activities is posted on the Ensham website.

Table 1.2 – Energy use assessed

Group member and/or business unit and/or key activity and/or site that has had an assessment completed by the end of this reporting period.	Period over which assessment was undertaken¹	Energy use per annum in GJ² in the current reporting year
Ensham Resources Pty Ltd	February 09 (as approved in revised ARS)	
	August 2010 – internal assessment conducted	2,295,130
Total energy assessed		2,295,130
Total energy use of the group in the current reporting year		2,701,820
Total energy assessed expressed as a percentage of total current energy use		85%

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.

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

Table 1.3 – Accuracy of energy use data

Entity	% achieved	Reasons for not achieving data accuracy to within ±5%
Ensham Resources Pty Ltd	5%	Data is for overall site, metering of diesel and electricity is currently for whole of mine site.

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

Part 2A - New Assessments completed during the reporting period

Name of Group member or business unit or key activity or site: Ensham Resources Pty Ltd

Energy use of the entity during the current reporting period

2,295,130	GJ
-----------	----

Table 2.1 – Opportunities assessed to an accuracy of $\pm 30\%$ or better

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 – \leq 4 years	> 4 years	
Outcomes of assessment*	Total Identified	16	151,648	30,682	0	182,330
Business Response*	Under Investigation	7	109,102	15,930	0	125,032
	To be Implemented	9	42,546	14,752	0	57,298

Name of Group member or business unit or key activity or site: Ensham Resources Pty Ltd

Energy use of the entity during the current reporting period

2,295,130	GJ
-----------	----

Table 2.2 - Opportunities assessed to an accuracy of worse than $\pm 30\%$

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 – \leq 4 years	> 4 years	
Outcomes of assessment	Total Identified	31	13,722	15,552	0	29,274
Business Response	Under Investigation	28	12,600	10,800	0	23,400
	To be Implemented	3	1,122	4,752	0	5,874



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

Part 2B - Update of assessments originally reported in previous reporting periods

Name of Group member or business unit or key activity or site: Ensham Resources Pty Ltd

Energy use of the entity during the current reporting period

2,295,130

GJ

Table 2.3 - Opportunities assessed to an accuracy of $\pm 30\%$ or better

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	> 4 years	
Outcomes of assessment*	Total Identified	4	14,745			14,745
Business Response*	Under Investigation	0				
	To be Implemented					
	Implementation Commenced					
	Implemented	4	14,745	0	0	14,745
	Not to be Implemented					



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

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	> 4 years	
Outcomes of assessment*	Total Identified	30	16,674			16,674
Business Response*	Under Investigation	3				
	To be Implemented	10 ¹				
	Implementation Commenced	3	15,552			15,552
	Implemented	11	1,122			1,122
	Not to be Implemented	3				

¹ merged with other opportunities and carried forward to 2009/10

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

Transition to Solar Hot Water - Ensham provides onsite accommodation for most of its staff. Hot water provided to the accommodation units has historically been supplied through energy intensive electric systems. The site had in excess of 600 electric hot water systems in use.

A trial was conducted measuring the energy performance of solar hot water systems versus heat pump systems. Following the results of the trial, a full costing and investigation of installing solar powered hot water systems has been undertaken.

Ensham has chosen to implement a staged transition from electric to solar hot water heating. All new accommodation units are being provisioned with solar hot water and existing electric units will be gradually replaced. Installation of the solar systems has the potential to save 4,752 GJ of energy per annum.

Opportunity 2

Efficient lighting for Draglines – Ensham’s mine site has 224kW of lights installed on its four draglines, with the lighting configuration resulting in the bulbs running 24 hours a day, 7 days a week, consuming approximately 1.96 GWh per annum.

Investigations identified alternative options that improved the lumens by 25% per watt compared to the existing lighting delivering significant safety advantages as well as providing suitable switching to enable dawn to dusk switch off so as to save 50% of energy consumed. Installation of the new lighting requires the use of a 130 tonne crane, so the retrofits are being timed to coincide with planned dragline maintenance shutdowns.

Opportunity 3

Fuel Metering System - The installation of a fuel metering system has increased the ability to analyse diesel consumption and usage at the Ensham site. With the ability to monitor fuel consumption to an individual vehicles level this data will be used to improve the energy mass balance at an activity level across the operations and to establish more meaningful KPI's.

The data from the fuel metering system is also being used to improve the site EMB and assist in assessing and validating many of the EEO projects energy savings.



Part 3 - Voluntary Contextual Information

Table 3.1 – Contextual Information

--

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

Period of energy use 1 July 2009 to 30 June 2010

Name of group member/ business unit/ key activity/site	Energy use pa (GJ)	Energy use pa (GGE)	Energy use as an indicator*
Ensham Resources Pty Ltd	2,295,130	251 kt	
Total	2,295,130	251 kt	

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 Joint Venture Management Committee 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*.


Chief Executive Officer, Ensham Resources Pty Ltd