Australian Government
Department of Resources, Energy and Tourism

Energy Efficiency Opportunities

PUBLIC REPORT 2011

Part 1 - Corporation Details

Controlling Corporation

QMAG Limited

Period to which this report relates

From 1 July 2010 To 30 June 2011

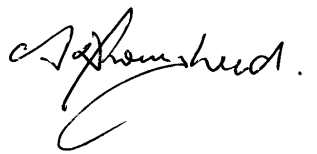
Table 1.1 - Major Changes to Corporate Group Structure or Operations

Table 1.1 – Major Changes to Corporate Group Structure or Operations

Table 1.2 – Aggregate energy assessed covered in this report

Total energy use covered by all assessments in this report	**2587222**	**GJ**
Total energy assessed as percentage of total energy use of the corporate group*#	**100**	**%**

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*.	
	Alan Roughead Chief Executive Officer
	Date: 19th December 2011

Part 2 - Assessment Outcomes

Table 2.1 – Assessment Details

Name of group member or business unit or key activity	QMAG Limited

Total energy use in the last financial year	**2587222**	GJ
Energy use assessed in this entity as a percentage of total entity energy use*		%
Energy use assessed in this entity as a percentage of total corporate energy use	100	%
Accuracy of above estimates related to energy use assessed - <u>only required if not ±5% or better</u>		%

Period over which assessment was undertaken		07/2010		06/2011

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

<u>Summary of QMAG reporting and results</u>

This report is intended to be aligned with reporting timeframes under the National Energy and Greenhouse Reporting (NGER) legislation and other financial year reporting. The reporting period is from July 2006 to June 2011 however energy usage has been reviewed only for July 2010 – June 2011. Energy use at the Kunwarara Magnesite mine and Parkhurst Magnesia production facilities was measured and opportunities for Energy Efficiency improvements were identified. These opportunities were assessed in accordance with the ARS produced in 2007.

<u>QMAG Limited EEO reporting entities</u>

Figure 1 illustrates the QMAG Limited group structure and participation status under the Energy Efficiency Opportunities (EEO) regulations. Discrete locations are referred to as corporate groups and sites. The shaded entities indicate what was assessed during the assessment.

Figure 1. QMAG Limited Structure for FY2011 EEO Reporting.

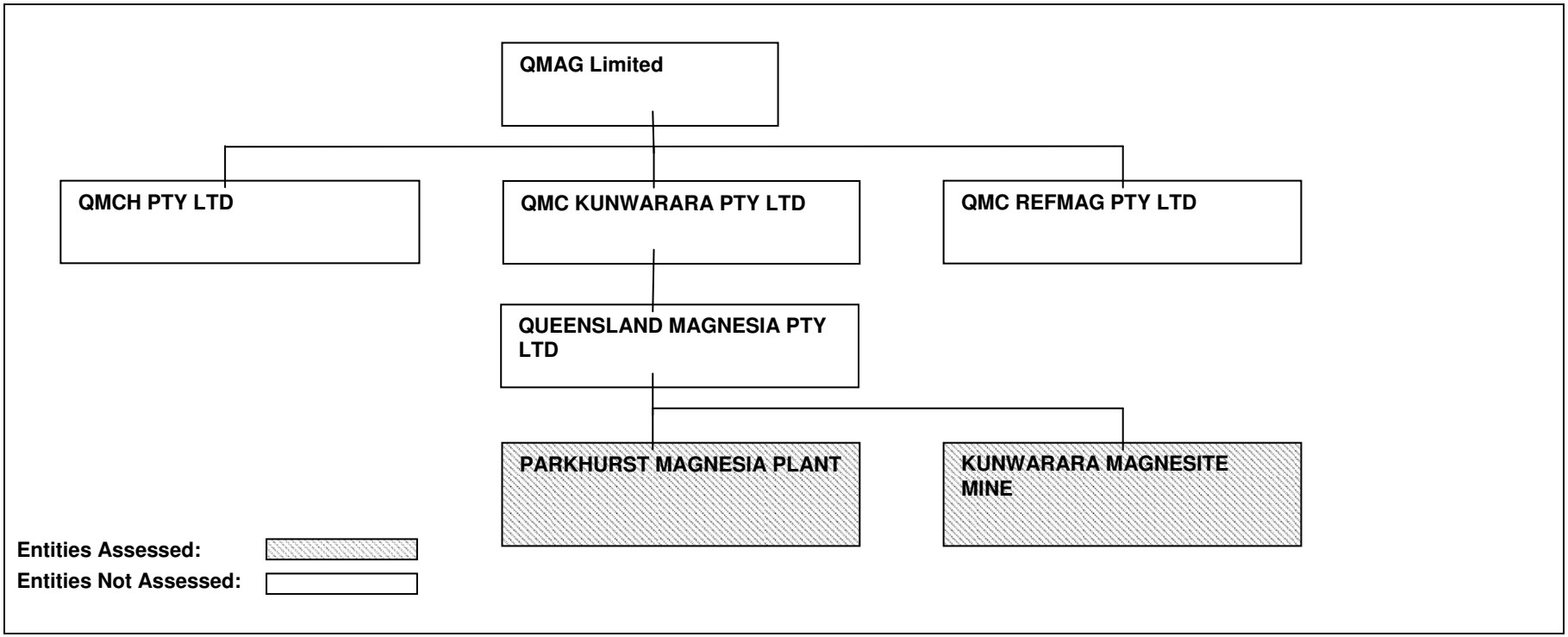

QMAG Limited
QMCH PTY LTD
QMC KUNWARARA PTY LTD
QMC REFMAG PTY LTD
QUEENSLAND MAGNESIA PTY LTD
PARKHURST MAGNESIA PLANT
KUNWARARA MAGNESITE MINE
Entities Assessed:
Entities Not Assessed:

Table 2.2 - Energy efficiency opportunities identified in the assessment

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	12	2	241	3	133	7	1000	623
	Implementation Commenced	3					3	1000	250
	To be Implemented	3	2	1			1	1	1
	Under Investigation (2006-2011)	15	4	170	11	3755			3926
	(2010-2011)	16	1	95092	1	131207	14	6122	232421
	Not to be Implemented	59					59	2248	562
Outcomes of assessment	Total Identified	108	9	95504	15	135095	84	10371	237783
Status of opportunities identified to an accuracy of worse than ±30%									
Business Response	Implemented								
	Implementation Commenced								
	To be Implemented								
	Under Investigation								
	Not to be Implemented								
Outcomes of assessment	Total Identified								

Please note that Corporate Groups **<u>are not required</u>** 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	
Power Factor Correction – QMAG Limited Parkhurst Facility Feasibility studies are being carried out at Parkhurst for a Power factor correction unit. This unit will improve the efficiency of electricity usage by reducing magnetization losses.	Business Response	Under Investigation
	Energy saved (GJ)	95092 GJ / yr
	Greenhouse gas abated (CO2-e)	
	$s saved	~1,570,000.00 / yr
	Payback period	2 years

Description of Opportunity	Voluntary Information	
DC Arc Furnace – QMAG Limited Parkhurst Facility Feasibility studies are being carried out for the installation of a DC electric arc furnace for the Electrofusion process at the Parkhurst facility. This installation will supplement the existing furnaces improving energy efficiency by an estimated 7 percent and halving electrode consumption.	Business Response	Under Investigation
	Energy saved (GJ)	6122 GJ / yr
	Greenhouse gas abated (CO2-e)	
	$s saved	~100,000.00 / yr
	Payback period	>4 years

Description of Opportunity	Voluntary Information	
Furnace Transformer Power Regulation Device Utilisation – QMAG Limited Parkhurst Facility Utilisation of a current smoothing device is currently being trialled to determine whether energy efficiency can be optimised by smoothing current fluctuations during the fusion process.	Business Response	Under Investigation
	Energy saved (GJ)	131207 GJ / yr
	Greenhouse gas abated (CO2-e)	
	$s saved	~1,000,000.00 / yr
	Payback period	3 years

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.