



FIRST PUBLIC REPORT TEMPLATE

Controlling Corporation

Kalari Pty Ltd

Period to which this report relates

Start Jan 07

End Dec 08

Part 1 - Summary of assessments conducted thus far

Table 1.1 - Description of the way in which the corporation has carried out its assessments and over what period was each assessment taken. A statement saying that the intent and key requirements of the Energy Efficiency Opportunities legislation have been met must be made.

Kalari's parent 'The Swire Group' takes its environmental responsibilities very seriously. As a major diversified business group, it is very conscious of the impact its activities may have on the environment.

As a responsible corporate citizen, Swire and its Group of companies, recognise that they have a duty to customers, employees and to the communities in which they do business and continually strive to lessen that effect.

The Swire Group is committed to ensuring its businesses surpass legal requirements for environmental best practice in the countries where they operate. However, it recognises that simply measuring its performance against legislation is not enough and finding new ways to 'do better' has become a priority for all Swire companies.

The Swire Group sees Global Warming as the most significant problem, in part because it exacerbates all the other problems and will likely lead to legislative responses that will affect its traditional business models.

As a subsidiary of the Swire Group, Kalari subscribes to these philosophies and is striving to be the "Best-in-Class" within its field of operations in regards to reducing CO₂ emissions, maximising fuel efficiency and seeking innovative transport solutions to reduce its carbon footprint.

Our approach to improving our energy efficiency is currently being tackled on 3 fronts i.e.:-

- Technology (engine technology and alternative fuels)
- People (training and information)
- Innovative transport solutions (including new trailer designs)

That is, we have asked ourselves the questions: what emerging engine technology and alternative fuels would be suitable for our business? How can we work with our people to promote fuel efficient attitudes, behaviour and practices? And how can we be innovative in the way we transport client's

products and how can we change the traditional way in which we operate?

Thus, our existing environmental policy, sustainability and environmental plans and their associated action plans was complimented well by the Energy Efficiency Opportunities legislation. Many of the processes, activities and intentions of the EEO legislation were already embedded in our sustainability strategy, and several of the key requirements of EEO – such as communication flows and data collation and analysis – strengthened our approach to energy efficiency.

As a national transport network, our EEO assessment conducted through 2008 spanned all operations, and the intent and key requirements have been met across the business. Moving forward, Kalari will continue to identify research, implement and report on our energy efficiency initiatives and strive to be environmentally ‘best- in-class’ within the Australian Transport Industry.

Table 1.2 - Group member/business unit/key activity/site that have been assessed	Energy use per annum in the year the assessment is completed *	Energy data accuracy (if not within $\pm 5\%$) **	Reasons for not achieving data accuracy to within $\pm 5\%$ **
Kalari Pty Ltd	1,183,119	$\pm 5\%$	
Total	1,183,119		
Total as a percentage of total energy use of the group covered by this report	(see paragraph 1(b) of Schedule 4 of the Regulations)		

* Energy Bandwidth may only be used if approved in the Assessment and Reporting Schedule

** Data accuracy not within $\pm 5\%$ can only be included if approved in the Assessment and Reporting Schedule

Part 2 - Outcomes of and business response to opportunities that have been identified and evaluated

Table 1.3 Status of Opportunities		Number of Opportunities	Estimated energy savings per annum by payback period (GJ)		Total estimated energy savings per annum (GJ)	*Accuracy range (%)
			0 – < 2 years	2 – ≤4 years		
Outcomes of assessment	Identified (accuracy $\leq \pm 30\%$)	10	75899.42	-7200	68699.42	$\pm 5\%$
	**Total Identified	10	75899.42	-7200	68699.42	$\pm 5\%$
***Business Response	Under Investigation	4	44542.5	-7000	37542.5	$\pm 5\%$
	To be Implemented	2	11580	-200	11380	$\pm 5\%$
	Implementation Commenced	1	508.709		508.709	$\pm 5\%$
	Implemented					
	Not to be Implemented	3	19268.21		19268.21	$\pm 5\%$

*The accuracy range for projected or actual costs, benefits and energy savings.

**You must ensure that this row is the sum of the two rows above it.

*** The data contained in each row of the business response area must total to the data contained in the 'Total Identified' row.

Note: An opportunity is any potential change to a system, activity or piece of equipment that:

- is identified during an EEO assessment;
- is consistent with legal requirements such as OHS, and
- may result in energy savings projects with payback periods of 4 years or less.

Details of at least three significant opportunities found through EEO assessments

Opportunity 1

Kalari has purchased one of the first (PACCAR) Kenworth Australia, designed, engineered and manufactured LNG powered vehicles. Kalari will take delivery of the 'LNG Prime Mover' in the first quarter of 2009 and the vehicle will be trialled throughout the remainder 2009. The prime mover will be powered by a 'Cummins Westport' engine that injects diesel just prior to natural gas to provide energy for auto-ignition. Natural gas is then injected at high pressure at the end of compression stroke (no pre-mixed air/fuel). This is able to be achieved by replacing the traditional injector with a common rail type injector. The engine maintains the same torque curve and power outputs. The engine produces approx 170tonnes of CO₂-e less emissions per year than similar engines powered by diesel. If the trial proves successful and there is a reliable supply of LNG, Kalari will consider ordering a number of LNG Prime Movers to operate on the east coast.

Opportunity 2

Kalari in consultation with International Energy Services have been trialling LPGas1 Coldfuel system in 2 prime movers one in Adelaide and the other in Melbourne since January 2008. LPGas1 Coldfuel system fumigates LPG with diesel and AET adds gas in a controlled manner into the engine air intake system just prior to the turbocharger. Diesel is still the main fuel with substitution rates typically of around 10%. LPG, having a higher flash point than diesel, increases the burn rate of the diesel which in turn provides a more complete combustion of the fuel i.e., by combining the two fuels

96-97%, of the diesel fuel is burnt, resulting in increased power and improved fuel consumption. Other benefits of using the LPG and Diesel blend include a reduction of NOx emissions by up to 12% and reduction of CO₂ emissions by approximately 8%. Whilst there have been some setbacks with the trials i.e. there has been 2 engine failures which have required the engines to be re-built under warranty. Kalari will continue the trial until 2009 before considering converting any more of its fleet.

Opportunity 3

Kalari has long recognised that the first step to improve the fuel efficiency and fuel economy of its fleet is through driver training. Fuel economy can be improved by as much as 10 - 20% through driver training and is one of the reasons why Kalari enrolls all of its drivers in the Certificate 111 training course. To assist with further and ongoing training and to help monitor driver fuel efficiency performance, Kalari is investing in a new state of the art Driving Simulator. The simulator is fully portable to enable it to be relocated between depots Australia Wide and will eliminate the need for drivers to attend regular external training courses. The simulator addresses gear shifting techniques, speed management, space management, adverse conditions, emergency manoeuvres and equally as important, Fuel Efficient Driving Techniques.

The training module also imparts to drivers the critical importance of route planning, control of engine torque and preventative maintenance related to engine wear. The scenarios contained in the training module challenge drivers to apply themselves to the concepts and demonstrate efficient gear shifting techniques and speed management to see the affects on fuel consumption. The driver is also challenged with a variety of terrain and distractive events which are designed to influence the decisions made by the driver in relation to correct choice of gear, speed, space buffer and torque control on grades.

Part 3 - Voluntary Contextual Information

Strengths

As mentioned previously, Kalari subscribes to the environmental philosophies held by the Swire group, and has strived to be the “Best-in-Class” within its field of operations in regards to reducing CO₂ emissions, maximising fuel efficiency and seeking innovative transport solutions to reduce its carbon footprint. Participating in the EEO program was a natural extension to how Kalari does business.

Challenges

One of the key challenges of our EEO program has been the development of meaningful KPI's, as there are multiple factors that affect energy consumption. These include, but are not limited to:

- Route
- Engine type
- Load (weight or volume limitations)
- Driver behaviour
- Number of “dry runs”
- Weather

Thus, in addressing the key requirement of information data analysis, Kalari has experienced a number of difficulties in gathering the required data from a number of sources and combining them into one report. Of particular concern is sub-contractors data which is difficult to obtain when the fuel they use is not purchased through the Kalari outlets. Another difficulty is estimating the weight of cubic freight which is not weighed over certified weighbridges.

The other key challenge that affects the implementation of initiatives is the management of risk. While there are exciting new engine technologies and alternative fuels now emerging, Kalari will not compromise our commitment to safety and meeting customer's expectations. As a consequence, new innovation is first trialled extensively to ensure that initiatives are safe and reliable. The benefit being that when we move forward and implement, we do so with relatively high levels of confidence.

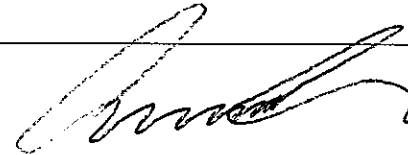
Lessons

The process of exploring the costs, benefits and risks of initiatives and quantifying their energy and financial savings was an empowering process for those participating in the program. Doing so through the EEO framework added strength and validity to proposals, and gave confidence to those involved in identifying and researching initiatives.

Part 4 - Declaration

(See paragraph 8 of Schedule 4 of the Regulations and paragraph 22(4)(c) of the Act)

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*.



M.D.

Chair of the Board of Directors/CEO/Managing
Director/equivalent officer (state position)