



LION NATHAN
AUSTRALIA

**First Public Report under the Energy
Efficiency Opportunities Act (2006)**

December, 2008

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.

Lion Nathan Limited (LN) is a major alcoholic beverage company with operations in Australia and New Zealand. It employs over 1800 Australians and 1400 New Zealanders, and is ASX100 certified. Lion Nathan has around 90 per cent of its assets in two core brewing businesses in Australia and New Zealand. It also has a small premium wine business, distillery and spirits operation. Beer and wine are exported to more than 20 countries. Refer www.lion-nathan.com.au

In Australia, Lion Nathan has been a member of Greenhouse Challenge Plus since 1996 and has won eight awards under the program for outstanding achievement in greenhouse abatement. Lion Nathan Australia also became a Greenhouse Challenge Plus Leader in 2006.

In November 2007, Lion Nathan was awarded "Greenhouse Friendly™" certification for one of its new beer brands, "Barefoot Radler" which is manufactured at the South Australian Brewery site in Adelaide. Barefoot Radler was launched into the market in January 2008 and was Australia's first certified carbon neutral beer.

As a participant in the Carbon Disclosure Project (CDP) and in large part due to our CDP reporting, Lion Nathan was recognized in 2008 by the Goldman Sachs JBWere Climate Leadership Index for carbon risk management within the Food, Beverage & Tobacco sector.

Lion Nathan is strongly committed to environmental programs which form part of the company's overall strategy for continually improving its environmental performance and sustainability. Many of these programs focus on energy and waste reduction and are therefore either core objectives or complement the EEO Program. Programs include the following:-

- Greenhouse Challenge Plus since 1996
- AS/NZS ISO 9001:2000 certification at all sites
- Environmental Management Systems based on the AS/NZS ISO 14001:2004 framework
- Signatory to the National Packaging Covenant since 2001
- Founding member (1979) of the Beverage Industry Environment Council, now known as the Australian Food & Grocery Council's "Packaging Stewardship Forum".
- Participant in the National Pollutant Inventory since its inception in 1999
- Participant in various State water and energy efficiency management programs including the DEUS Energy Savings Program at Tooheys Brewery
- Signatory to the National Greenhouse & Energy Reporting scheme

Involvement in these programs has resulted in significant improvements in Lion Nathan's environmental performance and our existing practices have been further enhanced by including the requirements of the EEO program.

Tooheys completed the NSW Government's DEUS Energy Saving Action plan in June 2006 and this audit report was used as the basis of the data analysis for the site.

In addition, Lion Nathan had its Australian breweries assessed by an international consulting company prior to embarking on a major capital upgrade program in 2006 aimed at improving efficiency and environmental performance. The total capital works for the group is over \$150million and implementation is due to be completed in mid 2009.

This capital works upgrade program is aimed at providing energy savings of approximately 25% for the group. This will reduce energy for the group by 33% compared to energy usage 10 years ago. It is estimated that our two largest breweries, accounting for approx. 70% of our total energy usage will be at world best energy practice when the program is completed.

Under the EEO Program, Lion Nathan has so far identified 16 projects with an estimated saving of 64,811GJ. Details of the assessment results are shown in Table 1.3

In addition, a new energy management group was formed at Lion Nathan and site Energy Champion nominated. This group regularly meets to ensure that energy efficiency objectives and the EEO program are achieved and new opportunities are identified, shared and implemented.

A new Sharepoint website was implemented for Lion Nathan's EEO program where energy data, KPI's, meetings, procedures, documents, records and other information are stored and shared across the Group.

The data obtained has been collated and reported to the Department (DRET). Following approval by the DRET, this public report has been published on our website.

The work described above indicates that Lion Nathan is proactively demonstrating leadership in energy efficiency and meeting the intent of the EEO program.

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
Lion Nathan Pty Limited	363,338 GJ (Oct 07 to Sept 08)
Total	363,338
Total as a percentage of total energy use of the group covered by this report	35%

Part 2 - Outcomes of and business response to opportunities that have been identified and evaluated for each group member, business unit, key activity or site assessed

(See paragraphs 3-6 of Schedule 4 and Schedule 6 of the Regulations)

Group member/business unit/key activity/site >0.5 PJ name: **Lion Nathan**

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	> 4 years		
Outcomes of assessment	Identified (accuracy ≤ ±30%)	16	500	6000	58,311	64,811	± 30%
	Identified (accuracy > ±30%)	0	0	0	0	0	N/A
	Total Identified	16	500	6000	58,311	64,811	± 30%
Business Response	Under Investigation	8	0	0	27,436	27,436	± 30%
	To be Implemented	1	0	0	-7,622	-7,622*	± 15%
	Implementation Commenced	3	0	6,000	5,120	11,120	± 15%
	Implemented	4	500	0	33,377	33,877	± 15%
	Not to be Implemented	0	0	0	0	0	N/A


* This project is a 2MW co-generation plant with an absorption chiller. Although there will be significant electricity and CO2 reduction there is a net energy increase due to increased gas consumption

Examples of significant opportunities found through EEO assessments

Table 1.4
<p>Opportunity 1</p> <p>Compressed Air Upgrade</p> <p>The original compressed air system consisted of up to 4 operating fixed speed screw air compressors, local compressor controls and a drying system that used the -8°C refrigeration system. This has been completely upgraded with the installation of a modern energy efficient plant. It now includes a base loaded centrifugal air compressor, a trim variable speed screw air compressor, a new automatic controller and an energy efficient drier. The total energy savings is expected to be in excess of 935 MWh or 3,365 GJ/yr. Greenhouse Gas savings are estimated to be 1,000 tonnes CO₂e/year.</p>
<p>Opportunity 2</p> <p>Refrigeration upgrade</p> <p>Upgrade to the -2 deg. C refrigeration plant included installation of new condensers (large surface area and relatively small fans); automatic controls for minimising total compressor and condenser energy use; overhaul of screw compressors and variable speed drive fans and pumps. The annual energy savings are expected to be 1,422 MWh of electricity or 5,120 GJ. Greenhouse Gas savings are estimated to be 1,522 tonnes CO₂e/year.</p>
<p>Opportunity 3</p> <p>Upgrade of boiler plant</p> <p>Replacement of approximately 25 year old steam boilers with state of the art new ones, providing operational, maintenance and energy savings. The new system includes: energy efficient boilers with oxy trim burner control, variable speed burner fans, efficient de-aerated water system, and a waste heat recovery boiler (economiser).</p> <p>The boilers are installed and have just been commissioned. The expected annual energy savings are 250,000 kWh or 900 GJ of electricity from the improved boiler fans and 23,550 GJ of gas savings from improved thermal efficiency. Greenhouse Gas savings are estimated to be 1,810 tonnes CO₂e/year.</p>

DECLARATION

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

<p>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 <i>Energy Efficiency Opportunities Act 2006</i> and <i>Energy Efficiency Opportunities Regulations 2006</i>.</p>	 Rob Murray
	Rob Murray, Chief Executive Officer