Australian Government
Department of Resources, Energy and Tourism

Energy Efficiency Opportunities

PUBLIC REPORT 2010

Controlling Corporation

Baiada Pty Limited

Period to which this report relates

Start 1 July 2007 **End** 30 June 2010

(eg. for a Corporate Group with the trigger-year 2005-06, the report will cover the period 1.7.2006-30.6.2010)

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

During the 2009-10 Financial Year, the Baiada Group has carried out a further two (2) assessments in the same manner as those conducted in the previous reporting period. These have been performed on the following operations as intended in compliance with the Assessment and Reporting Schedule and are summarised in Part 2A of this Report:

- BPL Adelaide Pty Limited (primary processing plant with distribution centre)
- Valley Feeds Pty Limited (protein recovery plant)

Over the Group, production levels have generally continued to soar and energy use for last financial year has remained static. A lot of the old processing equipment is gradually being upgraded to much more modern standards and in doing so, the energy use is becoming much more efficient.

The largest protein recovery plant at BPL Melbourne is one example of how this has been accomplished, and in doing so has managed to reduce energy KPIs by 6% (for natural gas) and 0.5% (electricity) even though production levels have decreased last financial year. (Lower production volumes normally increase the KPI per unit of energy used.)

Laverton Processing Plant has increased overall energy use by 16% but at the same time increased production by 31%. Processing numbers increased due to the devastating fire at the Inghams' Sommerville Plant which was unable to process any chickens for several months. During this period, Laverton accommodated a high proportion of the Inghams' production.

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

Table 1.2 – Energy use assessed		
Group member and/or business unit and/or key activity and/or site (or part thereof) that has had an assessment completed by 30 June 2010 (Include all assessments completed to date for the current 5 year cycle).	**Period over which assessment was undertaken[1]**	**Energy use for the period 1.7.2009 to 30 June 2010 of the assessed entity (or part thereof) expressed in GJ[2]**
BPL Adelaide Pty Limited	1 July 2009 – 30 June 2010	50,573 GJ
Valley Feeds Pty Limited	1 July 2009 – 30 June 2010	73,706 GJ
BPL Melbourne Pty Limited	1 July 2008 – 30 June 2009	559,282 GJ
Oakburn Protein Recovery Plant	1 July 2008 – 30 June 2009	110,015 GJ
Laverton Processing Plant	1 July 2008 – 30 June 2009	89,854 GJ
Gawler Hatchery	1 July 2008 – 30 June 2009	17,838 GJ
Tangaratta Stockfeeds Pty Limited	1 July 2009 – 30 June 2010	57,068 GJ
Total energy use of assessed entities (or part thereof)		**958,336 GJ**
Total energy use of the whole corporate group in the period 1.7.2009 to 30 June 2010		**2,190,781 GJ**
Total energy use of assessed entities (or part thereof) for the period 1.7.2009 to 30.6.2010 expressed as a percentage of total energy use for the period 1.7.2009 to 30.6.2010		**43.74%**

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.

Table 1.3 – Accuracy of energy use assessed data		
Entity	**% achieved**	**Reasons for not achieving data accuracy to within ±5%**
		Leave the table blank if accuracy is ±5%.

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

Part 2A - New assessments completed or not reported since your last Public Report

Name of Group member or business unit or key activity or site: **BPL ADELAIDE PROCESSING PLANT & DISTRIBUTION CENTRE**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).	50,573	GJ

Table 2.1 – Opportunities assessed to an accuracy of better than or equal to (<=) ±30%

Status of opportunities identified		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	Under Investigation	5	2	1,940	2	5,418	1	504	7862
	To be Implemented	4	3	209	nil	nil	1	108	317
	Implementation Commenced	nil	nil	nil	nil	nil	nil	nil	nil
	Implemented	1	nil	nil	nil	Nil	1	13	13
	Not to be Implemented	4	2	565	2	716	nil	Nil	1281
Outcomes of assessment	Total Identified	14	7	2,714	4	6,134	3	625	9,473

Part 2A - New assessments completed during the reporting period (continued)

Name of Group member or business unit or key activity or site: **VALLEY FEEDS PTY LIMITED**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).	73,706	GJ

Table 2.2 – Opportunities assessed to an accuracy of worse than (>) ±30%

Status of opportunities identified		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	Under Investigation	4	nil	Nil	3	4,478.8	1	98.6	4,577.4
	To be Implemented	nil	nil	nil	nil	nil	nil	nil	nil
	Implementation Commenced	1	1	7,240	nil	nil	nil	nil	7,240
	Implemented	1	1	2,000	nil	nil	nil	nil	2,000
	Not to be Implemented	nil	nil	nil	nil	nil	nil	nil	nil
Outcomes of assessment	Total Identified	7	2	9,240	3	4,478.8	1	98.6	13,817.4

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

Part 2B - Update of assessments reported in previous Public Reports

Name of Group member or business unit or key activity or site: **BPL MELBOURNE PTY LIMITED** (Baiada Proteins)

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).	559,282	GJ

Table 2.3 – Opportunities assessed to an accuracy of better than or equal to (<=) ±30%

Status of opportunities identified		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	Under Investigation	nil	nil	nil	nil	nil	nil	nil	Nil
	To be Implemented	nil	nil	nil	nil	nil	nil	nil	nil
	Implementation Commenced	1	1	1,550	nil	nil	nil	Nil	1,550
	Implemented	2	nil	nil	nil	nil	2	122,302	122,302
	Not to be Implemented	1	1	2,480	nil	nil	nil	nil	2,480
Outcomes of assessment	Total Identified	4	2	4,030	nil	nil	2	122,302	126,332

Part 2B - Update of assessments originally reported in previous Public Reports (continued)

Name of Group member or business unit or key activity or site: **TANGARATTA STOCKFEEDS PTY LIMITED**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).	57,068	GJ

Table 2.4 – Opportunities assessed to an accuracy of better than (>) ±30%

Status of opportunities identified		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	Under Investigation	1	nil	nil	1	785	nil	nil	785
	To be Implemented	1	nil	nil	1	1434	nil	nil	1434
	Implementation Commenced	nil	nil	nil	nil	nil	nil	nil	nil
	Implemented	*5	2	9731	nil	nil	nil	nil	9731
	Not to be Implemented	1	nil	nil	nil	nil	8600	nil	8600
Outcomes of assessment	Total Identified	7	2	9731	2	2219	nil	nil	20,550

*3 OF THESE OPPORTUNITIES UNABLE TO BE QUANTIFIED – ARE IN THE PROCESS OF DOING SO

Part 2B - Update of assessments originally reported in previous Public Reports (continued)

Name of Group member or business unit or key activity or site: **LAVERTON PROCESSING PLANT**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).	89,854	GJ

Table 2.4 – Opportunities assessed to an accuracy of better than (>) ±30%

Status of opportunities identified		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	Under Investigation	3	1	3,967	1	5,283	1	14,696	23,946
	To be Implemented	1	nil	nil	1	9,797	nil	nil	9,797
	Implementation Commenced	1	nil	nil	1	9,500	nil	nil	9,500
	Implemented	nil	nil	nil	nil	nil	nil	nil	nil
	Not to be Implemented	nil	nil	nil	nil	nil	nil	nil	nil
Outcomes of assessment	Total Identified	5	1	3,967	3	24,580	1	14,696	43,243

Part 2B - Update of assessments originally reported in previous Public Reports (continued)

Name of Group member or business unit or key activity or site: **OAKBURN PROTEIN RECOVERY PLANT**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).	110,015	GJ

Table 2.4 – Opportunities assessed to an accuracy of better than (>) ±30%

Status of opportunities identified		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	Under Investigation	1	1	1646	nil	nil	nil	nil	1646
	To be Implemented	3	nil	nil	1	8975	2	11604	20579
	Implementation Commenced	nil	nil	nil	nil	nil	nil	nil	nil
	Implemented	4	3	17846	1	146	nil	nil	17992
	Not to be Implemented	nil	nil	nil	nil	nil	nil	nil	nil
Outcomes of assessment	Total Identified	8	4	19492	2	9121	2	11604	40217

Part 2B - Update of assessments originally reported in previous Public Reports (continued)

Name of Group member or business unit or key activity or site: **GAWLER HATCHERY**

Total energy use for the period 1.7.2009 to 30.6.2010 of the assessed entity (or part thereof) from which the opportunities identified below were generated (and is reported in Table 1.2).	17,838	GJ

Table 2.4 – Opportunities assessed to an accuracy of better than (>) ±30%

Status of opportunities identified		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	Under Investigation	1	1	65	nil	nil	nil	nil	65
	To be Implemented	1	1	226	nil	nil	nil	nil	226
	Implementation Commenced	nil	nil	nil	nil	nil	nil	nil	nil
	Implemented	nil	nil	nil	nil	nil	nil	nil	nil
	Not to be Implemented	1	nil	nil	1	7200	nil	nil	7200
Outcomes of assessment	Total Identified	3	2	291	1	7200	nil	nil	7491

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 – BPL ADELAIDE PTY LIMITED
At our Adelaide Poultry site, some of the hot water pipes are uninsulated, so the amount of energy lost is estimated at 60/kW or 240 MJ/hr, which is equal to 1900 GJ per annum at a cost of $12,000 per annum on today's electricity prices. The capital cost of fitting insulation is estimated at $12,000 so the payback period is exactly one year.
Opportunity 2 – BPL ADELAIDE PTY LIMITED
Most of the lighting is on 24 hours a day, 7 days a week, employees do not appear to know the location of light switches. The plant runs approximately 24 hours 5 days a week with killing taking approximately 12 hours, processing 12 hours and partially overlapping by 6 hours giving 18 hours combined and cleaning taking 3 of the remaining 6 hours. Assuming that 40 kW of lighting could be switched off for 3 hours a weeknight and all weekend, the savings are : 40 kW x 3,000 hrs = 120 MWh or $12,000 per annum At the Distribution Centre, employees would like to switch off lighting. They have no information on where switches are located and what areas they control. They are understandably reluctant to experiment because they are worried they could trip refrigeration plant. They are confident that they could turn off freezer lighting for 23 hours per day and cool room for 2 days a week. This would save at least: 11 x 0.425 kW x 8000 hours = 37 MWh or 37 TCO_2-e or $3,700 per annum An electrician will be commissioned to locate the switches and determine the areas they cover. There might be an opportunity to rewire switches and the areas they serve to better match their requirements. For relatively low cost, significant savings can be achieved.
Opportunity 3 – VALLEY FEEDS PTY LIMITED
Major waste in a steam boiler occurs due to excess air used in the boiler burner. When more air is fed than necessary into the boiler, valuable heat generated from combustion is used up to heat the excess air that does not contribute to combustion of natural gas. Burners need to be tuned regularly to maintain the optimum air/gas ratio with optimum oxygen levels in the exhaust gases. Boiler combustion efficiency could be improved by further tuning the burner on high fire to improve the oxygen level to 3% or lower and on low fire to 7% or lower. It is expected the following savings could be achieved if burner excess oxygen levels are maintained at the correct level: • Energy saving: 2000 GJ • Cost saving: $12,400 • Greenhouse gas saving: 116 tonnes of CO_2 equivalent The cost of boiler tuning is estimated to be $1000. The simple payback time of boiler tuning is about 1 month.

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 _____ to _____

Name of group member/ business unit/ key activity/site	Energy use pa (GJ)	Energy use pa (GGE)	Energy use as an indicator*
Total			

Table 3.3 - Opportunities assessed to an accuracy of better than or equal to (<=) ±30% ($ value)

Status of opportunities identified		Number of opportunities	Estimated energy savings per annum by payback period ($)			Total estimated energy savings per annum ($)
			0 – < 2 years	2 – ≤ 4 years	> 4 years	
Business Response*	Under Investigation					
	To be Implemented					
	Implementation Commenced					
	Implemented					
	Not to be Implemented					
Outcomes of assessment*	Total Identified					

Part 3 - Voluntary Contextual Information (continued)

Table 3.4 – Changes in energy use as an indicator			
Name of group member/ business unit/ key activity/site	**Current energy use as an indicator**	**Previous energy use as an indicator**	**Reasons for change**
Total			

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 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.*	
	JOHN CAMILLERI – MANAGING DIRECTOR
	Date 8 December 2010