

## SECOND PUBLIC REPORT

Food Investments Pty Ltd – FIN 000

### Controlling Corporation

### Period to which this report relates

(See sub-section 22(2) of the Act and Regulation 7.1 of the *Energy Efficiency Opportunities Regulations (the Regulations) 2006*)

Start 1 July 2008

End

30 June 2009

### 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.**

Food Investments Pty Ltd, the controlling entity of George Weston Foods Limited (GWF) and the AB Mauri Group of Companies, is committed to compliance with the Energy Efficiency Opportunities (EEO) requirements and is supportive of the objective of identifying and implementing energy savings opportunities. The trigger year for participation to EEO was 2005-06 financial year and therefore assessment of at least 80% of total energy consumption should be completed by end of June 2011.

The annual energy consumption for the period of 1 July 2008 to 30 June 2009 was 2.6PJ, whereby 28 manufacturing sites from the Baking (1.5PJ), Cereal (0.18PJ) and Don KR (0.50PJ) divisions would be assessed to cover approximately 85% of the total energy consumption. To date, Food Investments has assessed 10% of its total energy use. During 2009, assessment at Don Castlemaine was discontinued for reasons detailed below. In 2010, Food Investments has scheduled assessments to cover another 35% of the total energy use.

One site from each division was selected for initial assessments commencing in February 2008. A site from the baking division (Tip Top Dandenong) and a site from the cereals division (Weston Milling Enfield) were reported in 2008. The assessment of the Don Altona site in the meat division was discontinued after 60% completion due to the recent acquisition of the KR business and integration of meat and dairy operations under the Don KR division. The assessment was recommenced at Castlemaine from October 2008. However due to the site being heavily upgraded it was decided to cease the assessment until the site had been completely redeveloped. It is expected the site will be online and at 100% capacity in April 2011. This situation has been addressed and acknowledged by the Department of Resources, Energy and Tourism (DRET).

Energy assessments were completed in the 2009 reporting year for Weston Animal Nutrition, Enfield and are underway at Cararra and Springwood Bakeries. Food Investments has engaged energy consultants to perform comprehensive energy assessments which comply with the intent and key requirements of the EEO program. In broad terms, the assessments involve analysis of production and energy data, site visits/discussions with the site technical crews and mass/energy balance evaluation based on equipment ratings and specifications, typical efficiencies and load factors, and duty factors relating to operating hours and protocols. Recommendations to improve management of energy were derived from the analyses which in

turn lead to identification of energy efficiency opportunities.

The initiative to improve energy and other resource efficiency has been informally practiced in most Food Investments operations even prior to participation to EEO program. Weston Animal Nutrition has supported the state environmental schemes such as the NSW Energy Saving Action Plans (ESAP).

The EEO assessment at Weston Animal Nutrition identified four opportunities which have the potential to save up to 12.7% of the total energy used at the facility. The accurate determination of the energy savings resulting from these opportunities requires installation of sub-metering. Food Investments is committed to implement sufficient sub-metering at process or equipment level to enable accurate assessment of the opportunities identified. Conservative estimates of savings suggest that at least 5810 GJ in energy reduction is available.

| 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 (GJ) * | Energy data accuracy (if not within ±5%) **           | Reasons for not achieving data accuracy to within ±5% ** |
|--|---|---|--|
| (see paragraph 1(a) of Schedule 4 of the Regulations)                                | (see paragraph 2 of Schedule 4 of the Regulations)                  | (see paragraph 5(a) of Schedule 4 of the Regulations) | (see paragraph 5(b) of Schedule 4 of the Regulations)    |
| Weston Animal Nutrition, Enfield   | 58955   |   |  |
| <b>Total</b>   |   |   |  |
| <b>Total as a percentage of total energy use of the group covered by this report</b> | 2.2%*   |   |  |

\* Energy Bandwidth may only be used if approved in the Assessment and Reporting Schedule  
 \*\* Data accuracy not within ± 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 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: Food Investments Pty Ltd

| Table 1.3<br>Outcomes of assessment | 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 |   |                      |
| ***Business Response                | Identified (accuracy ≤ ±30%) | 4 <sup>(a)</sup>        | 150   | 5660          | 5810  | ±30%                 |
|                                     | Identified (accuracy > ±30%) | 3                       |   |               |   |                      |
|                                     | **Total Identified           | 7                       |   |               |   |                      |
|                                     | Under Investigation          | 7                       |   |               |   |                      |
|                                     | To be Implemented            |                         |   |               |   |                      |
|                                     | Implementation Commenced     |                         |   |               |   |                      |
| Implemented                         |                              |                         |   |               |   |                      |
| Not to be Implemented               |                              |                         |   |               |   |                      |

Whilst 4 opportunities have been developed and 3 opportunities that require additional investigation have been identified the accurate determination of the energy savings resulting from these requires installation of sub-metering. Priority has been given to this task.

Nevertheless, conservative estimates of savings based on limited short-term logging of consumption and calculations based on equipment ratings, assumed motor efficiencies, and typical load factors suggests savings of at least 5810 GJ are available.

\*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:

<sup>(a)</sup> An additional opportunity was identified which relates to optimising the consumption profile between gas and electricity. While this opportunity will not reduce overall energy consumption per tonne of product it is likely that energy costs and greenhouse gas emissions could be lowered. Quantification of the exact benefit of this option requires production trials.

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

(See paragraph 7 of Schedule 4 of the Regulations)

Details must include a brief description of the opportunity and may optionally include details of the costs of implementation, energy/dollar savings and any other benefits (such as greenhouse reductions).

**Table 1.4**

### **Opportunity 1 – Replace the transformer starter on the 250 kW grinder motor with Valuable Speed Drive.**

Currently the 250kW raw materials grinder operates on idle for at least 25% of the time and when working the load varies considerably depending on the characteristics of the raw materials being processed. The existing operating transformer starter does not allow easy stopping and starting of the motor which results in the motor operating 25% of the time without processing grain. In addition, the motor, while processing grain, operates, on many occasions, at less than 85% of full load suggesting the energy efficiencies may be less than 60% overall. Replacement of the transformer starter with a variable speed drive will address both these issues and result in energy savings of at least 150 MWh/a with greenhouse savings of approximately 134 t CO<sub>2</sub>-e/a. This could be achieved with a simple payback estimated at around 3 years.

### **Opportunity 2 - Undertake a major overhaul of the Tomlinson boiler to enable its use as the duty boiler rather than the currently used Maxitherm boiler.**

Currently two boilers are available for steam production on site. The duty boiler is a Maxitherm D type water tube boiler with a rated steam capacity of 4,200 Kg/hr @ 900Kpa. The standby boiler is the Tomlinson D type water tube boiler with a rated steam capacity of 2,100 Kg/hr @ 900Kpa. Studies indicated that the actual steam requirement averages around 1,000 Kg/op hr with peak demands lower than the rated capacity of the Tomlinson boiler. Operation of the Tomlinson boiler however as the duty boiler results in insufficient steam production rates at specification would allow its specifications and requires overhauling. Overhauling of the Tomlinson boiler to produce steam production rates at specification would allow its substitution for the larger Maxitherm boiler as the duty boiler. The resulting increase in efficiencies would result in gas savings of 5,000 GJ/a and 257t CO<sub>2</sub>-e/a in greenhouse gas emissions. While the cost of the boiler overhaul is substantial the simple payback resulting from energy savings is estimated at less than 3 years.

**Opportunity 3 – Undertake a detailed inspection of all the components of the steam distribution system.**

The recent energy assessment highlighted a steam trap which has failed in the open portion and this alone wasted steam estimated at 510GJ/a representing 26tCO<sub>2</sub>-e/a in greenhouse gas production. The steam trap has evidently been malfunctioning for some time and this ongoing fault suggests that a thorough inspection of all steam traps and valves would be worthwhile.

**Opportunity 4 - Install voltage reduction controllers in all lighting circuits.**

Currently, background lighting is achieved by 360 T8 36W fluorescent tubes generally in twin arrays. Those consume approximately 120 MWh/a. Electricity consumption can be substantially reduced by installing voltage reduction devices in the lighting circuit. These devices take advantage of the ability to reduce the voltage supplying the lamp after it is alight without affecting the light output.

These devices can typically deliver 30% savings in energy consumption. They operate by switching to economy mode once all lamps on the circuit have 'struck' and by monitoring the current, allow a temporary switch out of the economy mode when additional lamps are switched on. The purchase and installation cost of installing six of these units on the complete lighting system would result in electricity saving of 41.6 MWh (149.8GJ) and 37tCO<sub>2</sub>-e/a with an estimated simple payback of less than 2 years.

\*If there are less than three significant opportunities, provide details of those identified.

\*\*If no significant opportunities have been identified in the assessment, a statement to this effect.

**Part 3 - Voluntary Contextual Information**


Reporting corporations may supply additional information that provides more context to the public report. Such information may include:

- Energy use and energy saved by energy type, as greenhouse gas emissions, as an indicator, or as an index;
- Energy savings achieved in the period 2000-2005;
- Opportunities with a greater than four year payback and the business response;
- Changes in total energy use/energy use indicator broken down to include causes of increase or decrease;

- Energy use and energy efficiency opportunities presented in dollars; and
- Other contextual information about the corporation's energy use and management.

**Part 4 - 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> |  <p>John Kavanagh<br/>Chief Executive<br/>Food Investments Pty Ltd</p> |
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