

NEW ENTRANT/CHP VERIFICATION REPORT		NE2-007/CHP2-002	
New Entrant/CHP Register Number		Verified CHPSA Priority	Verified NESA Priority
NE2-007/CHP2-002		2	7
Date: 15 December 2010			
RE: Application for a free allocation of EU allowances from Ireland's CHP Set Aside 2008-2012			

Application Details	
Installation name:	Bailieboro Foods Limited and Bailie Foods Ireland Limited
Installation address:	Lear, Bailieborough, County Cavan
GHG permit Register number:	IE-GHG015-06
Class of activity:	Combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations)
NESA application received:	11 and 15 June 2009
Letters and emails (Request for Further Information) issued:	29 July 2009, 18 August 2009, 18 September 2009, 5 October 2009, 11 January 2010, 18 February 2010, 5 October 2010.
Further information received:	20 October 2009, 18 February 2010, 7 October 2010, 28 October 2010
Site Visit:	4 August 2009 and 27 October 2010
New Entrant proposed start date (in application):	1 November 2009

Description of the development/increase in capacity:

A total thermal input of 26.8 MW has been installed at the Bailieborough installation. The new plant consists of a 16.3 MW Centrax CBX501-KB7 gas turbine which is connected to a 10.50 MW WULFF heat recovery steam generator. The gas turbine drives a generator rated to produce a nominal output of 5.0 MW electrical.

This CHP new entrant application is for a free allocation from the CHP Set Aside for the emissions arising from the generation of 5MWe on-site. An application to the New Entrant Set-Aside (NESA) for the emissions arising from the increased thermal capacity was received by the EPA but it is not covered by this report. The NSEA application was superseded by an application for Rationalisation under Appendix 2 (Closures and

Rationalisations), of Ireland's National Allocation Plan 2008-2012, Final Allocation Decision.

Consents submitted:

- **Planning permission:** Planning permission 05/711 was granted on 29 July 2005 by Cavan County Council to extend an existing boiler building including an associated control building and a 24 m high exhaust stack.
- **Major User Connection Agreement:** The Connection Agreement No: 6001529719 between ESB Networks and Bailie Foods Limited as signed on 14 April 2008 was supplied in the application.
- **Grant of Authorisation to Construct:** A grant of authorisation to construct a generating station under Section 16(3A) of The Electricity Regulation Act 1999 (Auth 2009/02-01) was granted by the Commission for Energy Regulation on 5 June 2009.

Site Inspections:

Two site inspections were carried out as part of the assessment of the application; this note is a summary of both inspections.

Date of Site Inspections: 4 August 2009 and 27 October 2010

Application Representatives: P.J. Barry, Rory Farrell, Michelle Hill, Colin Finnegan and Dermot Costelloe (Fingleton White & Co. Ltd)

EPA Representatives: Marc Kierans

Basis for Priority on CHP New Entrant Application Register: All necessary consents were in place on the date of application.

Site Tour Observations: During the site visit of 27 October the CHP was observed to be in place, connected to the natural gas supply and in full operation.

Documentation Examined:

(i) Substantiated Valid Business Reason: Contract between Lakeland Dairies Co-Operative Society Limited and Fingleton White & Co Limited for the design, construction, operation and financing of the CHP facility.

(ii) Substantiated New Entrant Start Date: 21 December 2009. Plant and works taking over certificate (Ref CC: 8555 PGS: 3758) between Centrax Limited (CHP supplier) and Fingleton White & Co Limited (CHP contracted operator), agreeing that the plant works are complete.

(iv) Confirmation that the plant satisfies the definition of high-efficiency CHP: Report from Fingleton White and Co. Limited, Engineers and Project Managers dated 1 October 2010 concludes, that the CHP facility at Bailieboro Foods Limited and Bailie Foods Ireland Limited meets the efficiency standard that will be required to be classified as "high efficiency". The report notes that the Primary Energy Savings (PES) exceed 10% as required under Directive 2004/8/EC of the European Parliament and of the Council of 11 February 2004 on the promotion of cogeneration based on a useful heat demand in the internal energy market and amending Directive 92/42/EC.

Detailed Calculation of Projected Emissions

Applicant methodology for calculation of projected emissions:

A series of projected emissions arising from the CHP plant have been proposed by Lakeland Dairies Co-Operative Society Limited over the period of the application. The latest version submitted on 7 October 2010, is based on the emissions displaced at a conventional power station by the power generated by the CHP. The Operator proposes that each kWh displaced is equal to 0.5818 kg CO₂. The Operator has further determined that for a full nine month period that 21,103,700 kWh would be produced, and has reported this as equating to 19,314 tCO₂ for the year. The figures are taken from the SEAI Energy in Ireland Key Statistics 2009.

Based on the applicant's information the CHP plant will displace of 19,314 tCO₂ per year.

Projected tonnes CO₂/annum using applicant's figures:

2009 (21 to 31 December)	2010	2011	2012
529	19,314	19,314	19,314

EPA Projected tonnes CO₂/annum:

The following approach is as recommended in Ireland's National Allocation Plan 2008-2012, Final Allocation Decision and is based on a "Best New Entrant "(BNE) CCGT power plant (CER 2007) and is therefore appropriate for this application. The basis for the projections has been determined as follows:

(Net electrical output MW/ BNE efficiency for CCGT plant of 54.7%)*(Number of hours per year 8760)*(CER recommended capacity utilisation factor 90.87%)*(2010 Emission factor for natural gas, 56.873/ 277.778 tonnes CO₂/MWh (NCV))

$$= (5.0 / 0.547) * 8760 * (0.9087) * (56.873 / 277.778)$$

$$= 14,898 \text{ tCO}_2 \text{ for each year of 2010, 2011 and 2012.}$$

The 2009 figure is determined from the 10 days of operation in 2009 (14,898/365*10) giving a figure of 408 tCO₂.

EPA Projected tonnes CO₂/annum:

2009	2010	2011	2012
408	14,898	14,898	14,898

Recommendation

The CHP new entrant set aside application has the necessary consents in place and a substantiated start date and valid business reason as detailed above. It is recommended

that the new entrant set aside allocation be taken from CHPSA and be based on the following Relevant Emission (tonnes CO₂/annum):

2009	2010	2011	2012
408	14,898	14,898	14,898

Signed: _____ Date: 15 December 2010

Marc Kierans

Inspector

Reviewed: _____ Date: 15 December 2010

Dr Maria Martin

Senior Manager