

<b>PROPOSED NEW ENTRANT CHP VERIFICATION REPORT</b>	<b>CHP2-006-R1</b>
<b>NEW ENTRANT REGISTER NUMBER</b>	<b>Verified CHPSA Priority</b>
<b>CHP2-006</b>	<b>6</b>
<b>Date: 30 January 2013</b>	
<b>Application for a free allocation of EU allowances from Ireland's CHP Set Aside 2008-12</b>	

<b>Application Details</b>	
Operator Name:	Janssen Pharmaceutical
Installation name:	Janssen Pharmaceutical
Installation address:	Little Island, Co. Cork
GHG permit Register number:	GHG126-04
Class of activity:	Combustion installations with a rated thermal input exceeding 20 MW (except hazardous or municipal waste installations)
CHPSA application received:	18 December 2012
Correspondence (Request for Further Information) issued:	18/12/2012, 20/12/2012
Further information received:	19/12/2012, 25 January 2013
New Entrant proposed start date:	20 January 2012

**Description of the development and increase in capacity:**

The application from Janssen Pharmaceutical to the CHP Set-Aside relates to the installation of a CHP plant and waste heat boiler.

The CHP plant has been confirmed as a "high efficiency" gas fired combined heat and power plant according to the definition in Directive 2004/8/EC. The CHP plant has a 2.5 MW thermal input capacity and 1 MW electrical output capacity. The thermal output from the CHP plant is displacing energy plant previously in receipt of an allocation and therefore is not eligible for CHPSA allowances.



**Consents submitted:**

- **Planning permission:** Register Reference 12/04521 ABP Ref. No. PL 04.240891 decision issued by An Bord Pleanála on the 26 November 2012. Proposed development consists of retention of a combined heating and power plant (CHP).
- **Commission for Energy Regulation (CER):**  
The CER Decision Paper CER/08/161 clarifies that generators with a capacity not exceeding 1 MW will be subject to specific terms and conditions set out in Orders issued pursuant to Section 14 (1A) and 16 (3A) of the Electricity Regulation Act 1999, but will not be required to notify the Commission to stand duly authorised.
- **Connection to the Grid Agreement:**  
This is not required as the CHP supplies site HT only.

**Site Inspection:**

**Date of site inspection:** 16 January 2013.

**Application representatives:** Mr Liam Barry.

**EPA representatives:** Annette Prendergast.

**Basis for priority on CHP New Entrant Application Register:** All the necessary permissions were granted and in place at the time of the complete application to the CHPSA was made on 18 December 2012. Therefore 18 December 2012 is the basis for the Priority on CHP New Entrant Application Register.

**Site tour observations: Documentation examined:****(i) Substantiated valid business reason:**

The Capital Appropriation Request for the CHP project dated 08 June 2010 was examined. The run record for the CHP over the last 2 weeks to the 16 January 2013 was examined demonstrating that the CHP had run for 300 hours in the 14 days with a load average of 891 KW output.

**(ii) Substantiated new entrant start date:**

18 July 2012 for the CHP as this is the date of the project handover as detailed on the sign off sheet for handing over the CHP project from Finning Ireland Limited to Janssen Pharmaceutical.

**(iii) Basis for Projections:**

Projections are based on "Best New Entrant" (BNE) CCGT power plant (CER 2007).

**(iv) CHP:**

A tour of the site confirmed that the CHP plant has been installed on-site. Although the CHP plant was not operational during the site tour, due to maintenance, the run record confirms that the plant is Operational.

**Detailed Calculation of Projected Emissions****Applicant methodology for calculation of projected emissions:****CHP electricity**

The electrical output of the CHP plant is 1MWe.



The monthly projections for the emissions from the CHP plant were determined by the Operator using the following format.

Electrical Output Capacity 1000 kW / 0.547 x (number of hours in the month) \* 0.9087 (capacity utilisation factor) \* 0.0000036 (Conversion kWh to TJ) \* 57.022 (tCO<sub>2</sub>/TJ).

Where for August for example:

$$(1,000/0.547) \times 744 \times 0.9087 \times 0.0000036 \times 57.022 = 253.72 \text{ t CO}_2$$

***Applicant Projected tonnes CO<sub>2</sub>/annum***

Unit	2012 t CO <sub>2</sub>
CHP Electricity	2,996

It is noted that the applicant applied a 2011 emission factor of 57.022 t CO<sub>2</sub>/TJ rather than the 2012 factor of 57.098 tCO<sub>2</sub>/TJ. In addition the applicant did not apply a capacity utilisation factor to the calculation of operational hours for July. With this factor applied the number of operation hours for July is 305.32. In addition the applicant did not total up the monthly projections correctly. Applying the 2012 country specific emission factor and the correct operational hours for July and summing monthly emissions for July to December 2012 the total tonnes CO<sub>2</sub> for 2012 is **1,369**.

***EPA methodology for calculation of projected emissions:***

**CHP electricity:**

In accordance with Appendix 3 (2) of Ireland's National Allocation Decision for Emissions Trading 2008-2012 in relation to CHP, allocations will be based on projected emissions arising from combustion of fossil fuels assuming use of state-of-the-art CCGT. The approach deemed appropriate by the EPA is based on a "Best New Entrant" (BNE) CCGT power plant (CER 2007). Furthermore, the CHP plant qualifies as a "high efficiency" plant according to the definition in Directive 2004/8/EC.

The handover date for the CHP plant is 18 July 2012. The basis for the projections has been determined as follows:

(Net electrical output MW/BNE efficiency for CCGT plant of 54.7%) x (number of hours per year) x (CER recommended capacity utilisation factor, 90.87%) x (Country Specific Emission factor for natural gas, (NCV)/ 277.778 (conversion factor MW to TJ) and rounded to the nearest whole tonne.

Where: Net electrical output = 1MWe

Calculation:

**2012:** 1 MWe /0.547 (BNE Efficiency) x 4008 (No of hours 18 July to 31 December) x 0.9087 (Capacity utilisation factor) x (57.098/277.778) (NG emission factor t CO<sub>2</sub>/MW) = 1,369tCO<sub>2</sub>.

**EPA Projected tonnes CO<sub>2</sub>/annum from the CHP Set-Aside:**

Unit	2012
CHP Electricity	1,369

**Recommendation:**

The CHP Set-Aside application was found to have the necessary consents in place and to have a substantiated start date of 18 July 2012. The assigned priority date for the CHP Set-Aside is 18 December 2012.

The determination of the Relevant Emission for the CHP plant for electrical production is in accordance with Appendix 3 (2) of Ireland's National Allocation Decision.

It is recommended that the allocation be taken the CHP Set-Aside for all emissions from the CHP plant and that it be based on the following Relevant Emission:

**EPA total projected tonnes CO<sub>2</sub>/annum for the installation:**

Unit	2008	2009	2010	2011	2012
CHP Electricity	0	0	0	0	1,369
Total	0	0	0	0	1,369

Signed:

*Maria Martin*

Date: 30 January 2013

*AP*

Annette Prendergast

Inspector

Reviewed:

*Maria Martin*

Date: 30 January 2013

Dr Maria Martin

Senior Manager