



Ministry for the
Environment
Manatū Mō Te Taiao

Supplementary Industrial Allocation Guide to Data Collection

Bottoming cycle co-generation plant

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Section 1: Introduction

On 26 March 2010, the Ministry for the Environment published *Industrial Allocation Guide to Data Collection* (the Guide). This was to help firms comply with the requirements of various Gazette Notices, issued under section 161D of the Climate Change Response Act 2002 (the Act) calling for data in relation to industrial allocation. The Notice requires information about activities to be submitted for the purposes of determining eligibility for allocation and the baselines for subsequent allocations. The Guide applies to all activities.

On 7 April 2010, the Ministry for the Environment published *Industrial Allocation Guide to Data Collection: Multiple products* (the Supplementary Guide I) to provide extra guidance in relation to activities for which more than one product (basis of allocation) is specified in the Gazette Notice.

This supplementary guide (the Supplementary Guide II) provides extra guidance in relation to how emissions from bottoming plant co-generation plants should be estimated and provided in the Data Form. The Ministry for the Environment anticipates that Supplementary Guide II will only be relevant to the activity of iron and steel manufacturing from iron sand. Firms should use the Supplementary Guide II in conjunction with the Guide and where appropriate the Supplementary Guide I when completing their Data Form, Bases of Preparation and Declaration. All the terms used in the Supplementary Guide II are consistent with the terms defined and used in the Guide.

Supplementary Guide II is designed to help firms that use bottoming cycle co-generation plants comply with the requirements of the Gazette Notice when completing the documents required by that Notice. It does not take precedence over the Notice itself, or any other associated legislation.

Section 2: Bottoming cycle co-generation plant

A ‘bottoming cycle’ co-generation plant is a type of generation plant in which waste heat and partially combusted waste gases from an industrial process are used to generate electricity. The main difference from other types of generation or co-generation plant, is that the input fuel is not used directly to generate electricity and process heat; instead it is used as a direct input to the process, as a chemical reactant as well as providing heat. Waste heat from the process, which is ultimately derived from the fuel, is then used to generate electricity.

To reflect these differences, a different Emissions Rule 5 applies for activities that involve firms using bottoming cycle co-generation plant. Where firms use bottoming cycle co-generation plant, they are required to use the Emissions Rule 5 set out below, and which has been included in the Gazette Notice for that activity. It is anticipated that this will only be relevant to the activity of iron and steel manufacturing from iron sand.

Section 3: Emissions data

Emissions Rule 5

When electricity is generated from a bottoming cycle co-generation plant, no emissions are to be attributed to electricity generation.

The above Emissions Rule 5 will be included in the Gazette Notice for an activity where a firm or firms involved in that activity use a bottoming cycle co-generation plant. In such cases, firms must comply with Emissions Rule 5 above when providing their data in response to the Gazette Notice. By way of example, if coal is oxidised as part of the activity, producing waste gases which are used to generate electricity in a bottoming cycle co-generation plant then Emissions Rule 5 means the emissions should be attributed to the oxidation of coal rather than the electricity generation.

If supplementary firing is used, ie, if fuel is combusted in the bottoming cycle co-generation plant, that is additional to the waste gases, the emissions associated with this fuel are excluded emissions as listed in Schedule 3 of the Gazette Notice.

Section 4: Emissions data – data entry

The guidance provided below relates specifically to the data entry requirements for the Data Form where a firm uses a bottoming cycle co-generation plant. Firms should also refer to the general guidance provided in the Guide and the Supplementary Guide I for completing the data entry boxes in the *Emissions* tabs of the Data Form.

Boxes 19–53: Fuel combustion emissions

Enter into Boxes 19 to 53 the quantity of fuel used or combusted associated with each product (basis of allocation). This includes fuel used as part of the activity by the relevant product (basis of allocation) from which waste gases were produced and used to generate electricity by the bottoming cycle co-generation plant. Where more than one product (basis of allocation) is specified in the Gazette notice, firms are required to apportion fuel combustion emissions between each product (basis of allocation). Please refer to page 2 of Supplementary Guide I for further information.

Boxes 54–55: Electricity emissions

Enter into Box 54 the amount of electricity used as part of the activity by the relevant product (basis of allocation).

Where the electricity used as part of the activity by the relevant product (basis of allocation) cannot be clearly measured on the basis of electricity consumption of the processes that result in each product, firms must apply reasonable estimates and transparent assumptions. The approach used to apportion electricity generated between each product (basis of allocation) must be clearly disclosed in the Bases of Preparation (in Section 4.2.1, under the first question).