



CDM Project Activity Registration and Validation Report Form

(By submitting this form, designated operational entity confirms that the proposed CDM project activity meets all validation and registration requirements and thereby requests its registration)

Section 1: Request for registration

Name of the designated operational entity (DOE) submitting this form	SGS United Kingdom Ltd.
Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration	Bunge Guar biomass project.
Project participants (Name(s))	Bunge Fertilizantes S.A. Ecoinvest Carbon Assessoria Ltda.
Sector in which project activity falls	1- Energy industries (renewable / non-renewable sources)
Is the proposed project activity a small-scale activity?	<u>Yes</u> / No

Section 2: Validation report

List of documents to be attached to this validation report (please check mark):	
☒ The CDM-PDD of the project activity ☒ An explanation by the submitting designated operational entity of how it has taken due account of comments on validation requirements received, in accordance with the CDM modalities and procedures, from Parties, stakeholders and UNFCCC accredited non-governmental organizations; ☐ The written approval of voluntary participation from the designated national authority of each Party involved, including confirmation by the host Party that the project activity assists it in achieving sustainable development: ☐ (Attach a list of all Parties involved and attach the approval (in alphabetical order)) N/A Host Party: ☒ Brazil ☒ Other documents, including any validation protocol used in the validation ☒ comprehensive list of documents attached clearly referenced ☒ List of persons interviewed by DOE validation team during the validation process ☒ Any other documents. Please refer to list of documents attached. ☒ Information on when and how the above validation report is made publicly available. ☐ Banking information on the payment of the non-reimbursable registration fee ☐ A statement signed by all project participants stipulating the modalities of communicating with the Executive Board and the secretariat in particular with regard to instructions regarding	

allocations of CERs at issuance allocations of CERs at issuance.

Executive Summary and Introduction, including

- **Description of the proposed CDM project activity**
- **Scope of validation process (include all documentation that has been reviewed and name persons that have been interviewed as part of the validation, as applicable)**
- **DOE Validation team (list of all persons involved in the validation, describing functions assumed in the validation)**

Description of the proposed CDM project activity

Bunge corporation is in Brazil since 1905. The company is the world's largest oilseed processor and largest seller of bottled oils to consumer. Bunge is the leader in South America in the fertilizer and nutritional ingredients for animal food industry.

Bunge Fertilizantes S.A. is the owner of Guará plant that produces simple and compound fertilizer for agriculture. The plant started operation in 1981.

The project consist in the retrofitting of 2 furnaces that used to burn LPG by 2 fixed grating furnaces that burn renewable biomass (Eucalyptus firewood from renewable energetic forests), for granulation and drying fertilizers process, at Guará plant, located in the state of São Paulo, Brazil. The total installed capacity of the 2 fixed grating furnaces is 11.63 MW.

Guará project applies the fixed grating technology; the biomass fixed grating furnaces were developed, manufactured and installed by Bunge.

Total amount of emission reductions for the first crediting period is 98,707 tCO₂e

Baseline Scenario:

The use of LPG in the operation of the two furnaces.

With-project scenario:

The use of renewable wood in the two furnaces, a fuel with lower carbon emission factor than the fossil fuel (LPG), previously used (LPG).

Leakage:

Once energy generating equipment was dismantled and converted to biomass grating furnace, leakage was not considered.

Environmental and social impacts:

It was verified that the project contribute to the use of sustainable renewable energy sources instead of non renewable ones.

This cleaner source of thermal energy has an important contribution to environmental sustainability by reducing carbon dioxide emissions, by avoiding the combustion of fossil fuel LPG. Biomass used in the project also emits CO₂, however its net emissions are considered zero, once it consumes CO₂ during photosynthesis.

Guará Project takes an advantage of the ash generated by the biomass combustion, utilizing it to enrich the fertilizers produced and reducing waste generation. The project includes pollution control systems for atmospheric emissions and complies with Brazilian environmental regulations. The environmental licenses were verified during the validation process (CETESB/SP, LI no. 15-0008-07, issued on 27h July, 1988 and a renovation letter no. 1580/2004/CMg-FR, issued on 27th December, 2004).

Regarding the social impacts, the plant has more than 240 employees, including the 8 workers hired specifically for the project activity.

Scope

The scope of the validation is the independent and objective review of the project design document, the baseline study and monitoring plan and other relevant documents of the Bunge Guará biomass project. The information in these documents is reviewed against the criteria defined in the Marrakech Accords (Decision 17) and the Kyoto Protocol (Article 12) and subsequent guidance from the CDM Executive Board.

The validation is not meant to provide any consulting towards the Client. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

Overview of documentation that has been reviewed and names of persons that have been interviewed as part of the validation

Please refer to Annex 3.

DOE Validation team

Name	Role
Áurea Nardelli	Lead assessor
Fabian Gonçalves	Local assessor
John Miles	Technical reviewer

Description of methodology for carrying out validation

- Review of CDM-PDD and additional documentation attached to it
- Assessment against CDM requirements (e.g. by use of a validation protocol)
- Report of findings by the DOE, e.g. by use of type of findings (e.g. corrective action requests, clarifications or observations). Please explain the way findings are "labelled" during validation.
- Include statements or assessments in the section "Conclusions, final comments and validation opinion" below.

Review of CDM-PDD and additional documentation

The validation was performed primarily as a document review of the publicly available project documents (see Annex 2 for the list of documents). The assessment was carried out by trained assessors using a customised validation protocol.

A site visit was required to verify assumptions in the baseline. Additional information was required to complete the validation, which was obtained through telephone, e-mail and face-to-face interviews

with the project developers and their consultants. These were performed by local assessors from the SGS do Brazil. The results of the site visit carried out on 7th November, 2005 are summarized in Annex 6 to this report.

Assessment against CDM requirements

In order to ensure transparency, a validation protocol was customised for the project. The protocol shows requirements, means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

- § it organises, details and clarifies the requirements the project is expected to meet; and
- § it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

<i>Checklist Question</i>	<i>Means of verification (MoV)</i>	<i>Comment</i>	<i>Draft and/or Final Conclusion</i>
<i>The various requirements are linked to checklist questions the project should meet.</i>	<i>Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.</i>	<i>The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.</i>	<i>This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.</i>

The completed validation protocol for this project is attached as Annex 4 to this report.

Report of findings and use of type of findings.

As an outcome of the validation process, the team can raise different types of findings.

Where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises that requires the Project Developer to do something (for example correct something in the PDD) the Assessor shall raise a **Corrective Action Request (CAR)**.

Observations may also be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex 5). In this form, the Project Developer is given the opportunity to “close” outstanding CARs and respond to NIRs and Observations.

For this project, the *Corrective Action Requests (CAR)* and *New Information Request (NIR)* were

closed out through communication between validation team and Bunge Fertilizantes staff and its consultants. Changes to the project design were necessary to clarify the issues raised.

Explanation by the submitting designated operational entity of how it has taken due account of comments on validation requirements received, in accordance with the CDM modalities and procedures, from Parties, stakeholders and UNFCCC accredited non-governmental organizations;

- Description of how and when the PDD was made publicly available
- Description of how comments were received and made publicly available
- Explanation of how due account has been taken of comments received
- Compilation of all comments received (Identify the submitter)

In accordance with the CDM modalities and procedures, the project design document of this proposed CDM project activity has been made publicly available and comments have been invited from Parties, stakeholders and UNFCCC accredited non-governmental organizations. This process is described in Annex 1 to this report, which is available as a separate document.

Conclusions, final comments and validation opinion

- Provide conclusions on each requirement under paragraph 37 of the CDM modalities and procedures, describing how these requirements have been met. This shall include assessments and findings (e.g. corrective action requests, clarifications or observations) in relation to each requirement, including a confirmation that all issues raised have been addressed to the satisfaction of the DOE.
- Final comments and validation opinion

Participation requirements

Host Party: Brazil is listed as the host Party. Brazil has ratified the Kyoto Protocol on 23rd August 2002 (http://unfccc.int/files/essential_background/kyoto_protocol/application/pdf/kpstats.pdf).

At time of the draft validation, no Letter of Approval from the host country had been provided. Consequently CAR 1 was raised. The Letter of Approval will be signed when the DNA of Brazil has received and analysed the validation report.

Eligibility as a small scale project activity

Guará Project is a small scale project activity and falls under the category I.C - "Thermal energy for the user", that comprises renewable energy technologies that supply individual households or users with thermal energy that displaces fossil fuels or non-renewable sources of biomass.

To qualify as a small-scale project as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM, the project activity must meet the following criteria:

- (i) Renewable energy project activities with a maximum output capacity equivalent of up to 15 megawatts (or an appropriate equivalent);
- (ii) Energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 15 gigawatt/hours per year;
- (iii) Other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kilotonnes of carbon dioxide equivalent annually;

The total installed capacity of the 2 fixed grating furnaces is 11,63 MW and is therefore fully eligible as a small-scale project (lower than 15 MW).

Project participant does not have any other CDM project activity in the same site and category. The project boundary is limited to the physical, geographical site of the renewable energy generation. The UNFCCC website does not show another registered project with the same characteristics. Therefore, this project is not considered a debundled component of a larger activity.

Baseline and monitoring methodology

The methodology applied to this Small Scale Project activity is *Type 1: Renewable energy projects. Category , I.C.: Thermal energy for the user.*

For renewable energy technologies that displace technologies using fossil fuels, the simplified baseline is the fuel consumption of the technologies that would have been used in the absence of the project activity times an emission coefficient for the fossil fuel displaced.

The choice of the applicable baseline calculation for the project category is justified on the PDD, section B2. The project complies with the applicability conditions.

Additionality

According to simplified methodologies, project participants shall provide an explanation to show that the project activity would not have occurred anyway due to at least one pre-defined barrier.

The additionality of the project activity is assessed and demonstrated through Attachment A to Appendix B of the Simplified Modalities and Procedures for small-scale CDM project activities.

As described in the PDD and verified during the validation, the project faced investment barrier (installation of new equipment and investment), technological barrier (biomass furnaces are more laborious than LPG furnaces and required hiring and training of new workers) and barrier due to prevailing practice (the operation with LPG was well established in Guará plant and the change to biomass incurred in higher maintenance and operational cost). In addition, other barrier related with secure of biomass (from forests) supplying was identified.

Despite the barriers associated with the project, Bunge Fertilizantes S.A. decided to implement it. The fact that the project would be able to benefit from carbon credits was one of the key factors in the decision making. Documented evidences that CDM was taken in account in the decision making was verified during the validation.

NIR 2 was raised asking for more information related to the investment barrier.

The PDD was revised and the investment barrier was updated with more details. NIR 2 has been closed out.

NIR 3 was raised asking for more information about why the biomass furnaces are more laborious than LPG furnaces.

The PDD was revised including more details. NIR 3 has been closed out.

Monitoring plan

For renewable energy technologies that displace fossil fuels, the consumption of biomass is the only parameter that needs to be monitored.

Monitoring variable is the consumption of biomass, in volume or mass units, that is controlled by the plant through purchasing receipts and local inspection of trucks according to the Monitoring Procedure for Biomass (Section D.5 of the PDD).

References and source of data about eucalyptus wood density and LHV used to calculate LPG were not presented in the PDD. NIR 4 was raised.

The PDD was revised to clarify the references and source of data about eucalyptus wood density and lower heating value of the biomass used to calculate the LPG. NIR 4 has been closed out.

According the PDD the biomass consumption shall be measured in cubic meters. The PDD did not present a conversion factor for stereo meter and how to obtain the volume in cubic meters from field inspections of trucks. NIR 5 was raised.

The section D.5 of the PDD was revised to include a Monitoring Procedure for Biomass that explains about biomass consumption, conversion factor and inspections of trucks. NIR 5 has been closed out.

The validation team concluded that the monitoring plan present good monitoring practice appropriate to the circumstances of the project activity.

Environmental Impacts

The project complies with the environmental regulations of the country. The plant has the required environmental license issued by the State environmental agency, CETESB. The documents were

verified during the validation assessment. The scope of the license includes the furnaces. It was verified that the project activity presents no major environmental impacts and does not request an specific Environmental Impact Assessment.

As described in the PDD and verified during the site visit, the ash generated by combustion of biomass is used to enrich the fertilizers produced and the flue gases, before going to the atmosphere, are directed to cyclones and send to the gas washers for eliminating particulate matter and other undesired emissions.

For biomass projects that consumes less than 100,000 m3 of wood yearly, which is the case of Guará Project, IBAMA - Instituto Brasileiro do Meio Ambiente e dos Recursos Naturais Renováveis (Brazilian Institute of Environment and Renewable Natural Resources) required the payment of forestry reposition tax. Evidences of payments were verified during the site visit.

Comments by local stakeholders

Local stakeholders have been invited by letters to comment on the Bunge Guará biomass project.

The invitation was sent to specific stakeholders, considered representative of the general public, as required by Resolution 1 of the Brazilian DNA. The following stakeholders were invited to comment on the project:

- Guará City Hall
- Guará City Council
- Guará Environmental Department
- CETESB – State Environmental Agency
- São Paulo State Public Attorney
- FBOMS – National NGOs representative
- Associação de Recuperação Florestal Vale do Rio Grande – Local NGO
- Associação Comercial Empresarial de Guará – Local NGO

Copies of the letters were verified during validation assessment.

No comment from local stakeholders was received.

Other requirements

The PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP8 . The project applies correctly the PDD template. No changes were observed.

The project design engineering reflects current good practices. The “Fixed grating furnace” was developed, manufactured and installed by Bunge Fertilizantes S.A.

Project’s starting date and operational lifetime are clearly defined. The project’s operational lifetime does not exceed the crediting period

Final comments and validation opinion

Steps have been taken to close out 1 CAR and 4 NIRs. One finding (CAR 1) related to the LoA is still outstanding, because Brazilian DNA only issues the letter after the conclusion of validation process (report and recommendations by the DOE).

The Validation Opinion is based on the current and emerging rules surrounding Article 12 of the

Kyoto Protocol.		
The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.		
By submitting this validation report, the DOE confirms that all validation requirements are met.	The SGS will request the registration of the Project Bunge as a CDM project activity, once the written approval by the DNA of the participating Parties and the confirmation by the DNA of Brazil that the project assists in achieving sustainable development has been received.	
Name of authorized officer signing for the DOE	Aurea Nardelli	
Date and signature for the DOE	7 th February, 2006	
Section below to be filled by UNFCCC secretariat		
Date when the form is received at UNFCCC secretariat		
Date at which the registration fee has been received		
Date at which registration shall be deemed final		
Date of request for review, if applicable		
Date and number of registration	Date	Number