


F-CDM-REG

 <p><b>CDM Project Activity Registration and Validation Report Form</b> <i>(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)</i></p>	
<b>Section 1: Request for registration</b>	
<b>Name of the designated operational entity (DOE) submitting this form</b>	SGS United Kingdom Ltd.
<b>Title of the proposed CDM project activity (Section A.2 of the attached CDM-PDD) submitted for registration</b>	Methane recovery and power generation in a distillery plant by GMR Industries Ltd. [GIDL]
<b>Project participants (Name(s))</b>	GMR Industries Ltd. [GIDL]
<b>Sector in which project activity falls</b>	1. Energy Industries (renewable-/non-renewable sources). 13. Waste handling and disposal 15. Agriculture
<b>Is the proposed project activity a small-scale activity?</b>	<u>Yes</u> / <del>No</del> (underline as applicable)
<b>Section 2: Validation report</b>	
<b>List of documents to be attached to this validation report (please check mark):</b>	
<input checked="" type="checkbox"/> The CDM-PDD of the project activity <input checked="" type="checkbox"/> 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; <input checked="" type="checkbox"/> 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: <input type="checkbox"/> (Attach a list of all Parties involved and attach the approval (in alphabetical order)) <input checked="" type="checkbox"/> Other documents, including any validation protocol used in the validation <input checked="" type="checkbox"/> (comprehensive list of documents attached clearly referenced) <input checked="" type="checkbox"/> List of persons interviewed by DOE validation team during the validation process <input type="checkbox"/> Any other documents (list attached)  <input type="checkbox"/> Information on when and how the above validation report is made publicly available. <input type="checkbox"/> Banking information on the payment of the non-reimbursable registration fee <input checked="" type="checkbox"/> 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	

### 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

The proposed CDM project activity is a Methane recovery and power generation in a distillery plant by GMR Industries Ltd. [GIDL]. The power is being generated by using Methane as a fuel. The starting date of project activity was 16-12-2003 and the project is already in operation.

#### Baseline Scenario:

The electricity generated by project activity would have otherwise been generated by Southern Regional grid which is predominantly fossil fuel based.

#### With Project Scenario:

The project activity is generating electricity using Methane captured by treatment of waste spent wash from the distillery along with Rice husk and some amount of coal as fuel. There is some associated anthropogenic emission of green house gases as the project activity uses some amount of coal. The project displaces the power that would have otherwise been generated by Southern Regional grid which consists of power plants operating on a mix of hydro, nuclear and fossil fuels but are primarily fossil fuel based.

#### Leakage:

This was the new installation and the energy generating equipment was not transferred from another activity or the existing equipment was not transferred to another activity. So, no leakage is considered.

#### Environmental & Social Impacts:

According to project developer, there is no negative environmental and social impact expected from project activity. It was also checked through local stake holder consultation by the validator that there were no negative impacts of the project activity. Please refer to Annex 1.

#### **Scope**

The scope of validation is the independent and objective review of the project design document, baseline study and monitoring plan and other relevant document of the Methane recovery and power generation in a distillery plant project. The information in this document 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 2

#### **DOE Validation Team**

<b>Name</b>	<b>Role</b>
Shivananda Shetty	Team Leader and Lead Assessor
Sanjeev Kumar	Assessor

Pankaj Mohan  
Irma Lubrecht / Marco van der Linden

Local Assessor  
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 is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol. In general, a site visit might be required to verify assumptions in the baseline. Sometimes additional information is required to complete the validation, which may be obtained through telephone and face-to-face interviews with key stakeholders (including the project developers and Government and NGO representatives in the host country). These may be undertaken by the local SGS affiliate. In case of this project, a site visit and interviews have been conducted and the results are summarized in Annex 7 to this report.

### Assessment against CDM requirements

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- It organises, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document 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 <b>Corrective Action Request (CAR)</b> due to non-compliance with the checklist question (See below). <b>New Information Request (NIR)</b> 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 5 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.

In general, 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 the Assessor shall raise a **Corrective Action Request (CAR)**. A CAR is issued, where:

- I. mistakes have been made with a direct influence on project results;
- II. validation protocol requirements have not been met; or
- III. there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a NIR may result in a CAR. Information or clarifications provided as a result of an NIR may also lead to a CAR.

**Observations** may 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 6). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

**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

The host Party for this project is India. India has ratified the Kyoto protocol on 26 August 2002. Initially, no Letter of Approval was provided and a CAR1 was raised. A Letter of Approval (F.No. 4/12/2006-CCC) dated 14<sup>th</sup> June 2006, issued by the Indian DNA was provided subsequently.

The approval of the project was also verified from the Ministry of Environment & Forest, Government of India's website. Hence CAR1 was closed out.

No Annex 1 Party has been identified in the PDD and therefore no further 'Letter of Approval' from an Annex I party was obtained. As registration of a CDM project activity can take place without an Annex 1 Party being involved at the stage of registration, this is not a mandatory requirement at this stage. However, it should be noted that before CER's can be transferred to an Annex I Party, a Letter of Approval should be submitted.

### Baseline and monitoring methodology

The project has applied the small scale methodology for Grid connected Renewable Electricity Generation AMS – ID and Methane recovery in waste water treatment AMS-IIIIH as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

The project is replacing equivalent amount of electricity from southern regional grid and also reducing Methane in the process. The baseline was calculated based on regional grid and reduction of methane and the baseline emissions were calculated as per the approved methodologies. The database for the information regarding baseline calculations has been desk reviewed by the assessor.

To confirm whether the emission reductions have been determined in accordance with the methodology described and there are project emission related to usage of coal in the project activity. The client clarified that some coal will be used in the project activity. This was checked during validation stage and records were available to verify them.

The emission factor is calculated ex-ante and is fixed for entire crediting period as 0.845 for electricity generation using AMS 1D version 8.

### Additionality

Investment barrier is used to demonstrate the additionality.

The project was installed in December 2003 and the project activity faced "Investment barrier". The project proponent got the loan from different sources i.e. from Andhra bank and also from sugar development fund (SDF). The financial analysis shows IRR of 6.37% without CERs which is less than weighted average cost of capital (WACC) i.e. 14.72%. The project is not financially viable without CDM benefits. The IRR with CDM benefits rises to 19.07% and the project becomes financially viable as WACC is less than IRR with CDM benefits. The CA certificate is provided by the project proponent and is seen by the validator and received the copy of the same. The average generation cost of electricity is high and the power is purchased by the grid is at lower price. Though the project is not

financially viable still the project proponent has gone ahead with the project activity considering sale of CERs will make it financially viable. The option of coal based power plant was also considered as generation cost of coal based power plant is low as compared to project activity, but the coal based plant emits GHG emissions so this was not taken up by the project proponent.

A CAR6 was raised to clarify about investment barrier, technological barrier and common practice analysis. The project proponent replied by providing excel sheet for investment analysis which was reviewed and found OK. The technological barrier was not clear so the project proponent clarified to the validator by explaining the difference from the normal CSTR technology and also provided the documents for the same. PDD was rephrased. In common practice analysis the project proponent replied that the documented verifiable information is not available so it is not being referred and PDD is rephrased. These were accepted and CAR6 was closed out.

Based on the evidences, calculations and the findings above, it was concluded that the project activity was not a likely baseline scenario and hence additional to any which would have been used in the absence of project activity.

### **Monitoring plan**

The data to be collected in order to monitor emissions from the project activity is detailed in the project design document and the desk review showed that the monitoring plan is OK. The industry is an ISO 9001-2000 company and certificate is also provided by the project developer along with the written down procedures booklet for QA and QC.

### **Environmental Impacts**

In order to ascertain whether the project activity results in any adverse environmental impacts, it was confirmed that project activity is having the consent to operate from Andhra Pradesh Pollution Control Board (APPCB). EIA is not required as per law.

EIA was carried out by project proponent and the monitored values were within the limits prescribed by APPCB.

### **Comments by local stakeholders**

There was no information available on list of stakeholders consulted. NIR2 was raised seeking clarification on the issue. Responding to NIR2, client informed that the representatives of the village community were contacted on one to one basis and through newspaper advertisement. A letter dated 5-5-2005 was written to village panchayat for seeking NOC for the said project activity. In reply the village panchayat provided their NOC to establish the plant. This was verified by the local assessor through meetings with some representatives during site visit. No adverse comment was received. NOC from all the stakeholders were provided by the client and hence NIR 2 was closed.

An NIR3 was raised to clarify the summary of comments received during local stake holder consultation meeting. The project proponent provided the document which was reviewed and found to be OK and PDD was rephrased so NIR3 was closed.

NIR4 was raised to know how comments were accounted for. The project proponent replied by providing the document of stake holder consultation which was reviewed and found to be in order so NIR4 was closed.

Stakeholder consultation process is not required by regulations/laws in the host country. The client obtained "Consent to establish and operate" from State Pollution Control Board which is an indication of regulatory acceptance. The host country approval has been accorded to project activity by Ministry

of Environment and Forests, the host country approval confirms that the project leads to sustainable development in India (annex4). These documents were desk reviewed and found to be OK.

### **Other requirements**

The project was listed for comments on the UNFCCC website from 31/03/2006 till 29/04/2006. No comment was received during the subsequent period of web hosting.

The PDD was not mentioning the project starting date; and CAR5 was raised for the same. The project proponent provided the document for starting date of the project activity and the PDD has been rephrased so CAR 5 was closed.

CAR7 was raised for the increase of CERs in the revised PDD. The project proponent replied that the IPCC default value of methane conversion factor (MCF) for Asia is 0.9 and taking into consideration the uncertainty of 50 to 100% it has been further corrected to 0.738 as detailed out in AM0013. The value of MCF taken as 0.5 earlier is for discharge to the environment, which is not the case in the said project activity. The projections are based on IPCC default values. This was accepted and hence CAR7 was closed.

### **Final comments and validation opinion**


SGS has performed a validation of the project "Methane recovery and power generation in a distillery plant by GMR industries Ltd. [GIDL]". The validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

Using a risk based approach, the review of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by SGS for registration with the UNFCCC.

SGS has received confirmation by the host Party that the project activity assists it in achieving sustainable development.

By utilizing methane, rice husk for generation of electricity, the project results in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change. A review of the investment analysis, demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. If the project is implemented as designed the project is likely to achieve the estimated amount of emission reductions.

The validation is based on the information made available to SGS and the engagement conditions detailed in the report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence SGS can not be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

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.  Name of authorized officer signing for the DOE	Marco van der Linden	
Date and signature for the DOE	7 <sup>th</sup> July 2006  	
<b>Section below to be filled by UNFCCC secretariat</b>		
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