VALIDATION REPORT
THE GODAVARI SUGAR MILLS LIMITED

VALIDATION OF THE 24 MW BAGASSE BASED CO-GENERATION POWER PROJECT

REPORT NO. BVQI/INDIA/8.49
REVISION NO. 01

BUREAU VERITAS QUALITY INTERNATIONAL

VALIDATION REPORT

Date of first issue: 14/08/2006	Project No.: 8.49
Approved by: Ashok Mammen	Organisational unit: BVQI Holdings
Client: The Godavari Sugar Mills Limited	Client ref.: Mr. Samir Somaiya

Summary:
Bureau Veritas Quality International (BVQI) has made a validation of the 'The Godavari Sugar Mills Ltd (TGSML)'s 24 MW Bagasse Based Co-generation Power Project at Sameerwadi' project of M/s. The Godavari Sugar Mills Limited (hereafter called "the project") located in Sameerwadi, Mudhol Taluk, Bagalkot District of Karnataka on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan (April 2006); ii) follow-up interviews with project stakeholders (April 2006); iii) resolution of outstanding issues and the issuance of the final validation report and opinion (August 2006). The overall validation, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (BMS, September 2003), which were audited by the UN CDM Accreditation Team in December 2004.

The first output of the validation process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.

In summary, it is BVQI's opinion that the project correctly applies the baseline and monitoring methodology number and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.: BVQI/INDIA/8.49	Subject Group: GHG/CDM	
Report title: The Godavari Sugar Mills Ltd (TGSML)'s 24 MW Bagasse Based Co-generation Power Project at Sameerwadi		
Work carried out by: S.V.Pendse H. B. Muralidhar V. Venkatachalam		
Work verified by: Ashok Mammen		
Date of this revision: 08/12/2006	Rev. No.: rev no 01	Number of pages: 58

Indexing terms

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Abbreviations change / add to the list as necessary

BMS	BVQI Management System
BVQI	Bureau Veritas Quality International
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CH_4	Methane
CL	Clarification Request
CO_2	Carbon Dioxide
CPP	Captive Power Plant
DIS	Draft of International Standard
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
GHG	Green House Gas(es)
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organisation for Standardization
KPTCL	Karnataka Power Transmission Corporation Limited
MoV	Means of Verification
MP	Monitoring Plan
NGO	Non Government Organisation
PDD	Project Design Document
UNFCCC	United Nations Framework Convention for Climate Change
TGSML	The Godavari Sugar Mills Limited
HESCOM	Hubli Electricity Supply Company

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1 INTRODUCTION

The Godavari Sugar Mills Limited (hereafter called "the client") has commissioned Bureau Veritas Quality International (BVQI) to validate its 24 MW Bagasse based cogeneration power plant (hereafter called "the project") at Samirvadi, Mudhol Taluk, District Bagalkot, Karnataka India.

This report summarizes the findings of the validation of the project, performed on the basis of UNFCCC criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

BVQI received the PDD on 03/10/2005 from Project participant. However it was web-hosted only in March 2006 (Period 12/03/2006 to 10/04/2006.) since PDD was revised using more appropriate approved methodology ACM 0006,version 3 which was approved in EB 23, February 2006.

1.1 Objective

The validation serves as project design verification and is a requirement of all Client projects. The validation is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. BVQI has, based on the recommendations in the Validation and Verification Manual (IETA/PCF, v. 3.3, 2004), employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

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.

1.3 GHG Project Description

The 24 MW cogeneration project of TGSML consists of a double extraction cum condensing machine. The plant is designed to operate with boiler outlet steam parameters of 65 kg/cm^2 and 490±5ºC using bagasse as a main fuel. The boiler is designed with a travelling grate and electric drive to burn bagasse. The inlet feed water is at 126^{o}C. The cogeneration turbine is a double extraction cum condensing machine. A 130 tons per hour (TPH) nominal capacity boiler with the super heater outlet steam parameters of 65 kg/cm^2 and 490 ± 5^{0}C and a high efficiency extraction cum condensing (EC) type of turbo-generator set of 24 MW nominal capacity has been implemented for higher power output. As per the requirements of sugar mill, the steam and power is supplied and surplus power is being exported to KPTCL (now HESCOM) after meeting cogeneration plant auxiliary requirements. The total captive power consumption for the sugar plant, colony and the auxiliary power consumption of the cogeneration unit works out to be 8 MW leaving about 24 MW + 1.5 MW (from existing backpressure turbine) – 8 MW (captive consumption) i.e. 17.5 MW of excess power export to KPTCL (now HESCOM) at 110 kV level for sale, during the crushing season of 8 months per annum.

The purpose of the project activity is to utilize available mill generated bagasse effectively for generation of steam and electricity for both in-house consumption and to export surplus electricity to the grid.

At the time of implementation of the project activity in April 2002, TGSML had a sugar plant capacity of 6500 tons cane crushed per day (TCD) and was generating steam and power through seven boilers with aggregate steaming capacity of 180 ton per our (TPH) at 22.5 bar, 340 deg C and four (4) backpressure turbines with a total installed capacity of 8.5 MW respectively. The existing configuration of boiler and turbine was satisfying the captive steam and power requirements of the sugar mill.

TGSML has subsequently increased the average crushing capacity of the sugar plant to 6,800 TCD during early 2002 and also proposes to increase the capacity to 9,800 TCD in year 2008. The project activity is exporting surplus power presently to Karnataka Power Transmission Corporation Limited (KPTCL) grid (now HESCOM), a part of the southern regional grid, after meeting the captive power and steam requirements of the sugar plant, distillery and the auxiliary power and steam requirements of the project activity, using bagasse as fuel.

As per the requirements of sugar mill, the steam and power is supplied and surplus power is being exported to KPTCL (now HESCOM) after meeting cogeneration plant auxiliary requirements. The total captive power consumption for the sugar plant, colony and the auxiliary power consumption of the cogeneration unit works out to be 8 MW leaving about 24 MW + 1.5 MW (from existing backpressure turbine) – 8 MW (captive consumption) i.e. 17.5 MW of excess power export to KPTCL (now HESCOM) at 110 kV level for sale, during the crushing season of 8 months per annum.

During non-crushing period, 42-TPH bagasse is fired to produce 96.5 TPH steam to yield 24 MW of power of which 21 MW is exported to the KPTCL State grid(now HESCOM).

1.4 Validation team

The validation team consists of the following personnel:

Mr.	S.V.Pendse	BVQI India	Team Leader, GHG Validator
Mr.	H. B. Muralidhar	BVQI India	GHG Validator
Mr.	V. Venkatachalam	BVQI India	Financial Expert
Dr.	Ashok Mammen	BVQI India	Internal Reviewer

2 METHODOLOGY

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (BMS, September 2003) which were audited by the CDM Accreditation Team in December 2004.

In order to ensure transparency, a validation protocol was customized for the project, according to the Validation and Verification Manual (IETA/PCF, v. 3.3, 2004). The protocol shows, in a transparent manner, criteria (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 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 five tables. The different columns in these tables are described in Figure 1.

The completed validation protocol is enclosed in Appendix A to this report.

Validation Protocol Table 1: Mandatory Requirements			
Requirement	**Reference**	**Conclusion**	**Cross reference**
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (**OK**), a **Corrective Action Request (CAR)** or a **Clarification Request (CR)** of risk or non-compliance with stated requirements. The CAR's and CR's are numbered and presented to the client in the Validation Report.	Used to refer to the relevant protocol questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent validation process.

Validation Protocol Table 2: Requirements checklist				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organised in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	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.	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.	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). **Clarification Request (CL)** is used when the validation team has identified a need for further clarification.

Validation Protocol Table 3: Baseline and Monitoring Methodologies				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The various requirements of baseline and monitoring methodologies should be met. The checklist is organised in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	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.	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.	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). **Clarification Request (CL)** is used when the validation team has identified a need for further clarification.

Validation Protocol Table 4: Legal requirements				
Checklist Question	**Reference**	**Means of verification (MoV)**	**Comment**	**Draft and/or Final Conclusion**
The national legal requirements the project must meet.	Gives reference to documents where the answer to the checklist question or item is found.	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.	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.	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). **Clarification Request (CL)** is used when the validation team has identified a need for further clarification.

Validation Protocol Table 5 : Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	**Ref. to checklist question in tables 2/3**	**Summary of project owner response**	**Validation conclusion**
If the conclusions from the Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2 or 3 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Tables 2/3, under "Final Conclusion".

Figure 1 Validation protocol tables

2.1 Review of Documents

The Project Design Document (PDD) submitted by The Godavari Sugar Mills Limited and additional background documents related to the project design and baseline, i.e. Indian Law , Guidelines for Completing the Project Design Document (CDM-PDD), the Proposed New Methodology: Baseline (CDM-NMB) and the Proposed New Methodology: Monitoring (CDM-NMM) ,Approved methodology ACM 0006, Version 3, 19 May 2006 and ACM 0002, Version 6, 19 May 2006. Kyoto Protocol , Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

The following documents were used as references to the validation work, in addition to internal BVQI procedures: IETA/PCF – Validation and Verification Manual (v. 3.3, Mar 2004) ; ISO DIS 14064-3 - Greenhouse gases — Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions ; ISO DIS 14064-2 - Greenhouse gases — Part 2: Specification

with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements

To address BVQI corrective action and clarification requests The Godavari Sugar Mills Limited revised the PDD and resubmitted it on July 2006.

Subsequent to review request from CDM-EB, project participant revised PD, which is latest revision (Revision 3, dated 5 December 2006).The validation findings presented in this report relate to the project as described in the PDD on 05 December 2006.

2.2 Follow-up Interviews

On 10/04/2006, 11/04/2006 & 17/04/2006 BVQI performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of The Godavari Sugar Mills Limited were interviewed (see References). The main topics of the interviews are summarised in Table 1.

Table 1 Interview topics

Interviewed organisation	Interview topics
The Godavari Sugar Mills Limited	Mr. Samir Somaiya – Executive Director - CDM Consideration, additionality, overall Project View Mr. Naresh Khetan - General Manager (Finance & Accounts) – Investment details & Barriers Mr. V.V.Iyer - Dy. General Manager – Investment details, barriers and correspondence with KPTCL for payment dues Mr. Prakash Tiwari -Assistant Manager – Projects – Overall Project view, co-ordination from Head Office Mr. V.Sivaprakasam - Chief Executive Officer – Factory operation & Project Monitoring at works Mr. G. Gangadhara Gouda - Dy. General Manager (Co-gen.) Project execution, monitoring of various parameters ,Technological barriers, compliance to various legal requirements applicable to project, Mr. K.G. Aithal - Manager – Power Business Division – Electrical Monitoring & coordination with regulatory body Mr. T. Shriram-Manager – Electrical – Day to day monitoring for generation. Mr. G. Suresh - Water treatment Plant Chemist – Effluent treatment plant operation and monitoring.
Local Stakeholder	Mr. Shankar Gouda Patil – Vice President – Cane Growers' Association – views on project with respect to its social aspects. Mr. Rajshekhar Chandrakant Salve – Basaveshwar Roadlines – His views on Project, care taken during bagasse transport and places from where bagasse is transported.
Ernst & Yong Limited	Ms. Chitra Srinivasan – Consultant – Project Design Document, Application of Methodology, baseline, monitoring plan Mr. Shailesh Kumar Tyagi – Consultant - Project Design Document, Application of Methodology, baseline, monitoring plan

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation was to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for BVQI positive conclusion on the project design.

To guarantee the transparency of the validation process, the concerns raised are documented in more detail in the validation protocol in Appendix A.

3 VALIDATION FINDINGS

In the following sections, the findings of the validation are stated. The validation findings for each validation subject are presented as follows:

1) The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarised. A more detailed record of these findings can be found in the Validation Protocol in Appendix A.
2) Where BVQI had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in 8 (Eight) Corrective Action Requests and 10 (Ten) Clarification Requests.
3) The conclusions for validation subject are presented.

3.1 Project Design

The 24 MW cogeneration project of TGSML consists of a double extraction cum condensing machine. The plant is designed to operate with boiler outlet steam parameters of 65 kg/cm^2 and 490±5ºC using bagasse as a main fuel. The boiler is designed with a travelling grate and electric drive to burn bagasse. The inlet feed water is at 126^{o}C. The cogeneration turbine is a double extraction cum condensing machine. A 130 tons per hour (TPH) nominal capacity boiler with the super heater outlet steam parameters of 65 kg/cm^2 and 490 ± 5^{0}C and a high efficiency extraction cum condensing (EC) type of turbo-generator set of 24 MW nominal capacity has been implemented for higher power output. As per the requirements of sugar mill, the steam and power is supplied and surplus power is being exported to KPTCL (now HESCOM) after meeting cogeneration plant auxiliary requirements. The total captive power consumption for the sugar plant, colony and the auxiliary power consumption of the cogeneration unit works out to be 8 MW leaving about 24 MW + 1.5 MW (from existing backpressure turbine) – 8 MW (captive consumption) i.e. 17.5 MW of excess power export to KPTCL (now HESCOM) at 110 kV level for sale, during the crushing season of 8 months per annum.

BVQI recognises that The Godavari Sugar Mills Limited's 24 MW Co-generation plant is helping India fulfill its goals of promoting sustainable development. Specifically, the project is in line with host-country specific CDM requirements because it -

- Export of 17.5 MW during season and 21 MW during off-season and thereby eliminating the generation of equivalent quantity of power using conventional fuel
- Conserving Coal, a non-renewable natural resource
- Making coal available for other important applications
- Reducing GHG (Carbon Dioxide)

- Contributing to a small increase in the local employment in the area of skilled & unskilled jobs for operation and maintenance of the equipment
- Capacity building of farmers in modern technology power generation and sale of power

The project design is sound and the geographical (Sameerwadi, Mudhol Taluk, District Bagalkot) and temporal (25 years) boundaries of the project are clearly defined.

3.2 Baseline

The Godavari Sugar Mills Limited Project uses the approved baseline methodology ACM 0006 (Consolidated baseline methodology for grid-connected electricity generation from biomass residues", version 3, dated 19/05/2006).

The alternatives considered for determination of the baseline scenario in the context of the project activity include alternatives for Power, biomass and heat as following –

Power

Option P4: Power would have been generated from the existing and / or new grid-connected power plants.

Option P6: Continuation of power generation in an existing power plant, fired with the same type of biomass as (co-)fired in the project activity and, at the end of the life time of the existing plant, replacement of the plant by a similar new plant.

Biomass

Option B1: The biomass would have been dumped or left to decay or burned in an uncontrolled manner without utilizing it for energy purpose.

Option B2: The biomass would have been used for heat and/ or electricity generation at the project site

Heat

Option H4: Continuation of generation of heat in boilers using the same type of biomass residues.

Option H6: Generation of heat in boilers using fossil fuels.

The baseline options considered do not include those options that:

- do not comply with legal and regulatory requirements; or
- depend on key resources such as fuels, materials or technology that are not available at the project site.

The most economically attractive alternative among the alternatives mentioned above, has been selected as the baseline scenario, since such alternative is not expected to face any prohibitive barriers that could have prevented it from being taken up as the project activity.

1. Option P6: Continuation of power generation at the existing power plant (old boiler) fired with the same type of biomass as the project activity
2. Option H4: Heat generation in boilers using the same type of biomass (i.e. bagasse)
3. Option B1 and B2: Use of most of (96%) biomass to generate heat and power at the project site as well as open storage on-site (decays or burns uncontrollably) and sometimes also used as raw material for paper manufacturing (non-energy purpose)

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Certified Emissions Reductions (CERs) under the CDM, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practice.

The Project proponent has demonstrated additionality of the project in a step wise approach as required by additionality tool and also as required by the approved methodology ACM 0006, Version 3, 19/05/2006. As explained in PDD, Project faced following barriers

- Technological Barriers
- Investment barrier
- Concerns related to Power Purchase Agreement

It has been well explained in the PDD that since The project activity has adopted a high-pressure co-generation technology, which was relatively new in Karnataka at the time when the project activity was implemented (i.e. April 2002). The project activity uses a technology, which had low market share and less penetration around the time the project was implemented.

Considering the design accuracy and expertise required to run a cogeneration plant (of a high pressure steam cycle including export of power to the grid at 110 KV voltage level), TGSML had to appoint M/S Desein Pvt Ltd as consultants for erection and commissioning and had to award the Engineering Procurement and Construction (EPC) contract to M/s BSES.

TGSML faced investment barriers and in particular from high upfront cost and it was difficult to convince financial institutions/ bank in order to obtain financial closure for the project. As TGSML had been only into sugar production business for about 29 years (at the time of project implementation) with no background in power sector economics (with respect to sale of power), financial support from bank was a difficult proposition. Term lenders for the cogen project also expressed to have exclusive charges on Sugar Assets in addition to the first charge of Cogen

Asset, after which the company had detailed negotiation with sugar lenders and cogen lenders to dilute the sugar assets from exclusive charges to *parri passu* charges. After 8 to 9 months it was finally negotiated. The completion of the project was also delayed by 18 months as the company had to approach cogen lenders from time to time for deferring the last drawal of disbursement. Till date the cogen lenders are yet to disburse about Rs 5.99 Crores for the project.

Similarly Project Proponent has demonstrated that there were some concerns about Power Purchase Agreement (PPA) with Karnataka Power Transmission company limited (KPTCL). It is well evident today from the correspondence with KPTCL And HESCOM that payment is due from these bodies.

It is also well explained in the additionality test that these barriers did not exist for the alternatives available for Power, steam and bagasse.

With the data available from recognized source it is further explained that only 13 out of 46 Sugar mills in Karnataka (Approximately 28%) have cogeneration plants and only 3 of these (Approximately 7% of total till April 2002) are having similar or better configuration that plant at Project Proponent site. This data clearly indicates this type of plant was and is not a common practice in the state of Karnataka.

BVQI assessed all the claims of additionality with supporting documentation provided by Project participants. These included correspondence and contract with Desein Pvt Ltd as consultants for erection and commissioning and Engineering Procurement and Construction (EPC) contract to M/s BSES, correspondence with KPTCL for payment dues, correspondence with funding agencies, minutes of meeting indicating progress and delay of the project. Relevant set of documents is included in the list of documents attached with this report.

If the project activity is registered as CDM Project, then it would help project participant to mitigate the various risks associated with the project like financial and PPA related. It would also motivate many more sugar manufacturing industries in India to take up similar initiatives under CDM by overcoming the barriers to project activity implementation resulting in higher quantum of anthropogenic greenhouse gas emissions reductions.

3.3 Monitoring Plan

The Project uses the approved consolidated monitoring methodology ACM 0006, Version 3, dated 19/05/2006. This methodology also refers to another approved methodology ACM 0002, version 6, dated 19/05/2006
The adopted monitoring methodology has been chosen based on the following reasons:

- The project activity is bagasse (biomass) based renewable energy power project
- Surplus power is fed to the KPTCL grid .

3.4 Calculation of GHG Emissions

As per ACM 0006, Version 3, dated 19/05/2006, the baseline emission sources considered are fossil fuel fired power plants connected to the relevant electricity system (grid). The relevant grid considered for the calculation of baseline emissions is the Southern region grid and not the state or the National grid.

As required under ACM 0002, Version 6, dated 19/05/2006, the baseline emissions are calculated as per combined margin approach, both in terms of relevant grid definitions and the emission factors. The operating margin in the baseline emissions is calculated using equation (1) described in ACM 0002, Version 6, dated 19/05/2006. For calculating the operating & build margin, data vintage of 3-year average (based on the most recent publicly available statistics from Central Electricity Authority available at the time of PDD submission) has been used. The detailed algorithms are described later under sections D.2.1.3 and D.2.1.4 of the PDD.

As described in ACM 0006, Version 3, dated 19/05/2006 , the project emissions (CO_2) result due to transport of biomass from various places, on-site consumption of fossil fuel, as well as Methane emissions due to uncontrolled burning of bagasse. With reference to ACM 0006, leakage. has been accounted for use of bagasse for paper board industry. For both Project emissions and leakage calculations are transparent and conservative. Provisions in the monitoring plan are also found to be adequate.

3.5 Sustainable Development Impacts

As required by host country, the detailed environmental impact analysis has been done. According to the various environmental aspects have been identified for their impact on air, water land and noise. These impacts are considered for both construction and operational phase of the project. Transboundry impacts (during transportation) are also taken in to consideration. Where impacts were found to be significant, environmental management programmes were undertaken. To maintain good environmental management practices, Various measures are taken and those were verified for their actual implementation during site visit.

Further project also contributes towards sustainable developments as –

It is uses and proposes to use renewable fuel – biomass – bagasse in this case.
It also exporting electrical energy to southern gird.

It has also created opportunities for employment for local population.

In view of above and contribution towards the country's goal of sustainable development and improvement in quality of life of local population, the development and implementation of systems for The Godavari Sugar Mills Ltd (TGSML)'s 24 MW Bagasse Based Co-generation Power Project at Sameerwadi were recommended by the The Godavari Sugar Mills Limited management. The clearance of this CDM initiative by The Godavari Sugar Mills Limited would facilitate the process of sustainable energy production.

3.6 Comments by Local Stakeholders

Local stakeholder consultation meeting to discuss stakeholder concerns on the proposed Clean Development Mechanism (CDM) project – The Godavari Sugar Mills Ltd (TGSML)'s 24 MW Bagasse Based Co-generation Power Project at Sameerwadi at The Godavari Sugar Mills Limited grid-connected Bagasse based power plant in Mudhol Taluk, Bagalkot District, Karnataka state of India, was held at time on 29/01/1999 at The Godavari Sugar Mills' premises, India.

The list of participants, notice inviting participation to interested stakeholders, photographic record of the stakeholder meeting proceedings is maintained by the project participants.

The stakeholders viewed the The Godavari Sugar Mills' Limited project as contributing to local environmental benefits and socio-economy. Overall, there was agreement that the project activity was a beneficial project from the local sustainable development. These views were endorsed by the local stakeholders interviewed during the site visit of the validation activity.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Validation of CDM projects, the validator shall make publicly available the project design document and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organisations and make them publicly available.

BVQI published the project documents on the UNFCCC CDM website (http://cdm.unfccc.int) on and invited comments within 12/03/2006 to 10/04/2006 by Parties, stakeholders and non-governmental organisations.

No Comments were received during the commenting period.

5 VALIDATION OPINION

BVQI has performed a validation of the ' The Godavari Sugar Mills Ltd (TGSML)'s 24 MW Bagasse Based Co-generation Power Project at Sameerwadi' in India. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan (April 2006); ii) follow-up interviews with project stakeholders (April 2006); iii) the resolution of outstanding issues and the issuance of the final validation report and opinion (August 2006).

By generating electricity & steam from bagasse, the project is likely to result in reductions of GHG emissions partially displacing electricity that would have otherwise been purchased from the grid. An analysis of the investment and technological barriers 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. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the project design documentation (April 2006, version 1 & July 2006, version 02) and the subsequent follow-up interviews have provided BVQI with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

The validation is based on the information made available to us and the engagement conditions detailed in this report.

6 REFERENCES

Category 1 Documents:
Documents provided by The Godavari Sugar Mills Limited that relate directly to the GHG components of the project.

/1/ Host country Approval dated 2 June 2006

/2/ PDD – Version 1, dated 10/03/2006

/3/ PDD – Version 2, dated 26/07/2006

/4/ PDD – Version 3, dated 05/12/2006

/5/ Purchase order dated 3/10/2005 along with PDD as an evidence of submitting PDD to DOE before 31/12/2005

/6/ Evidence of CDM Consideration – Board resolution dated 17/02/2000 referring to Mr. Samir Somaiya attending Seattle Conference of World Trade Organisation (WTO) in November – December 1999 and resolution stating ‘ benefits though CDM to be considered’ in implementation of bagasse based cogeneration power plant.

/7/ Evidences of starting date as follows -

Letter ND/99-2000/EPC-GSML/12.3A/137 from BSES Limited EPC Business group dated May 1, 2000 to M/s. Desein Private limited, the owners’ consultant requesting approval for the ‘Field quality plan for civil works’ for the 24 MW co-generation project of TGSML.

Letter ND/99-2000/EPC-GSML/12.3A/140 from BSES Limited EPC Business group dated May 4, 2000 to M/s. Desein Private limited, the owners’ consultant requesting approval for the ‘Plant layout drawing for civil works’ for the 24 MW co-generation project of TGSML

Letter ND/99-2000/EPC-GSML/12.3A/137 from BSES Limited EPC Business group dated May 25, 2000 to M/s. Desein Private limited, the owners’ consultant requesting approval for ‘Revised plant layout drawing for civil work’ for the 24 MW

co-generation project of TGSML
Letter from Desein Private Limited, dated 29 May 2000 to BSES, EPC Business group indicating approval for start of civil works for the 24 MW co-generation project of TGSML.

/8/ Letter No. JKD/EEE/667-76 dated 10 April 2002 from Karnataka Power Transmission Corporation Limited to Chief Engineer Electricity (Bangalore) stating commercial operation of 24 MW co-generation plant started on 9 April 2002.

/9/ Environmental Impact Assessment carried out by Desein Private Limited - March 1998

/10/ Letter from Ministry of Environment and Forest – No. J 13011/22/99-IA.II(T) dated 25 April 2000 according Environmental Clearance to the 24 MW Co-generation Project.

/11/ Consent to Operate by Karnataka State Pollution Control Board No. 17-CAT/WPC/GODAVARI/2005-06/255 dated 29/10/2005 valid up to 30/06/2006

/12/ Consent to Operate by Karnataka State Pollution Control Board No. 17-CAT/APC/GODAVARI/2005-06/255 dated 29/10/2005 valid up to 30/06/2006

/13/ Renewal application for Consent to Operate under section 25/26 of the Water (Prevention & Control of Pollution) Act, 1974 application SMR/P-37/2005-06 /5631 dated 14/03/2006

/14/ Renewal application for Consent to Operate under section 21 of the Air (Prevention & Control of Pollution) Act, 1981 application SMR/P-37/2005-06 /5632 dated 14/03/2006

/15/ Authorisation for Hazardous waste KSPCB/HWMC/AEO-2/DEC-3/SEO-1/2002-2003/924 dated 19/08/2002 which valid for five years from 25/05/2002.

/16/ Stack monitoring report dated 18 April 2006 carried out by Water & wastewater Research Center.

/17/ Ambient Air Quality report dated 18 April 2006 carried out by Water & wastewater Research Center.

/18/ Public Notice for environmental hearing by Karnataka State Pollution Control Board in news Paper -Indian Express dated 17/12/98 indicating date of this meeting to be 15/01/99

/19/ Public Notice for postponement of environmental hearing by Karnataka State Pollution Control Board in news Paper -Indian Express dated 07/01/99 indicating date of this meeting to be 29/01/99

/20/ Actual proceedings of Public hearing on 29/01/1999

/21/ Letter from TGSML – SMR/GSML/186A dated 20/02/06 to The Vice President – Sugar Cane Growers' Association, Sameerwadi inviting comments on 24 MW cogeneration Plant.

/22/ Letter from TGSML – SMR/GSML/186B dated 20/02/06 to Basveshvar Road lines 13A, Mahavir nagar inviting comments on 24 MW cogeneration Plant.

/23/ Power Purchase Agreement between Karnataka Electricity Board and The Godavari Sugar Mills Limited, Mumbai dated 8/10/99

/24/ Equipment supply Contract between The Godavari Sugar Mills Limited and BSES Limited, Mumbai dated 05/02/2001

/25/ Services Contract – No. SEP:GSML:COGEN:O&M:2002:01 dated 20 February 2002 between Desein Private Limited and The Godavari Sugar Mills Limited for Operation and Maintenance of the plant.

/26/ Sub-Grant Agreement dated 16 September 1998 between The Godavari Sugar Mills Limited & Industrial Development Bank of India (IDBI) for aspects of funding, cost, disbursement of funds etc.

/27/ Letter from IDBI – Ref.No. 2497/IDBI/MBO/CFD/LOI dated October 26, 1999 for considering and in-principle granting the company Rupee Term Loan of Rs. 4000 Lacs.

/28/ Letter from Andhra Bank (Lr. No. 051/16/327/2000) dated 24 May 2000 for sanctioning credit facilities – Term loan for Rs. 1900 Lacs.

/29/ Letter from Andhra Bank Lr.No.051/1/2584/00 dated 05/02/2001 for modification of sanction terms of term loan of Rs. 19 Crores to Cogeneration Project.

/30/ Letter from Andhra Bank Lr.No.051/1/442/2001 dated 22/06/2001 for issuance of NOC for ceding charges in favour of SBI (State Bank of India) for term loan Rs. 1500 Lacs for co-generation Power Project.

/31/ Letter of Intent from State Bank Of India PF/RK/G-29/310 dated April 9, 2001 indicating sanction of Rupee Term Loan of Rs. 15 Crores.

/32/ Fax message from USAID/NEW Delhi dated June 11, 2001 indicating release of funds – Rs. 1,66,30000 for onward transfer to IDBI on 27 April 2001.

/33/ The extract of the minutes of meeting of the Board of Directors The Godavari Sugar Mills limited held on Wednesday 13 June 2001 discussing points related to approach to various funding and status of funding received till date.

/34/ The extract of the minutes of meeting of the Board of Directors The Godavari Sugar Mills limited held on Friday 27th December 2002 discussing points related to approach to various funding and status of funding received till date.

/35/ The extract of the minutes of meeting of the Board of Directors The Godavari Sugar Mills limited held on Friday 27 June 2003 discussing progress of the Project & issues related to delay of Project.

/36/ Annual Report of The Godavari Sugar Mills Limited – 2003 -04

/37/ Annual Report of The Godavari Sugar Mills Limited – 2004 –05

/38/ Letter Ref. GSML/BLORE/COGEN/51-06 dated 13 January 2006 addressed to The Managing Director – HESCOM – For payment dues

/39/ Letter Ref. GSML/BLORE/COGEN/184 dated 23 February 2006 addressed to The Managing Director – HESCOM – a) Referring to court order for rate per unit of power and also b) payment dues.

/40/ Letter Ref. GSML/BLORE/COGEN/388 dated 18 April 2006 addressed to The Managing Director – HESCOM – For payment dues

/41/ Calibration Report of Electronic Trivector Meter – Report No. ETDC(CN)/2005/15442 dated 15/06/2005 from Electronics Test and Development Centre, Chennai

/42/ Cogeneration Plant - Yearly generation reports (2002-03, 2003-04,2004-05, 2005-06 (till Feb. 06) submitted to Management indicating power and steam generation and consumption.

/43/ Cogeneration Plant - Yearly fuel consumption reports (2002-03, 2003-04,2004-05, 2005-06 (till Feb. 06) submitted to Management indicating fuel consumption pattern.

/44/ Statements showing purchase of bagasse for year 2001-02,2002-03, 2003-04 & 2004-05 in Tons of bagasse as well as number of trips.

/45/ Performance Report – One sample indicating monitoring of performance by plant persons and management.

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

/1/ Kyoto Protocol to the United Nations Framework Convention on Climate Change, United Nations, 1997

/2/ Guidelines for completing CDM-PDD - Version 04, dated 08/07/2005

/3/ Approved Methodology –ACM 0006 - Version 2 – 03/03/2006

/4/ Approved Methodology – ACM0006 - Version 3 – 19/05/2006

/5/ Approved Methodology –ACM 0002 - Version 5 – 03/03/2006

/6/ Approved Methodology –ACM 0002 - Version 6 –19/05/2006

/7/ Tool for demonstration and Assessment of Additionality –Version 2, 28/11/2005

Persons interviewed:

List persons interviewed during the validation, or persons that contributed with other information that are not included in the documents listed above.

/1/ Mr. Sameer Somaiya – Executive Director

/2/ Mr. Naresh Khetan – General Manager – Finance and accounts

/3/ Mr. V.V. Aiyer – Dy. General Manager

/4/ Mr. Prakash Tiwari – Assistant Manager - Projects

/5/ Mr. V. Sivaprakasam – Chief Executive Officer

/6/ Mr. G. Gangadhara Gouda – D.G.M (Co-gen)

/7/ Mr. K.G. Aithal – Manager – Power Business Division

/8/ Mr. T. Shriram – Manager – Electrical

/9/ Mr. G. Suresh – Water Treatment plant Chemist

/10/ Mr. Shankar Gouda Patil – Vice President – Cane Growers' Association

/11/ Mr. Rajshekhar Chandrakant Salve – Basveshwar Roadlines

/12/ Ms. Chitra Srinivasan – Consultant - Ernst & Young

/13/ Mr. Shailesh Tyagi – Consultant – Ernst & Young

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COMPANY CDM PROJECT VALIDATION PROTOCOL

Table 1 Mandatory Requirements for Clean Development Mechanism (CDM) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art.12.2	OK	Table 2, Section E.4.1
2. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof	Kyoto Protocol Art. 12.2, Marrakesh Accords, CDM Modalities §40a	OK	Table 2, Section A.3 Host country approval dated 2 June 2006 has been received.
3. The project shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC	Kyoto Protocol Art.12.2.	OK	Table 2, Section E.4.1
4. The project shall have the written approval of voluntary participation from the designated national authorities of each party involved, including confirmation by the host party that the project activity assists it in achieving sustainable development	Kyoto Protocol Art. 12.5a, Marrakesh Accords, CDM Modalities §40a, §28, Annex 3 of the Resolução Interministerial 01/03	OK	Ministry of Environment and Forest (MOEF), DNA, India has given written approval dated 2 June 2006.
5. The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	OK	Table 2, Section E The relevant

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
			discussion are also part of the validation report.
6. Reduction in GHG emissions shall be additional to any that would occur in absence of the project activity, i.e. a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity	Kyoto Protocol Art. 12.5c, Marrakesh Accords, CDM Modalities §43 and 44	OK	Table 2, Section B.2 Assessed by DOE and transparently addressed in the validation report
7. Potential public funding for the project from Parties in Annex I shall not be a diversion of official development assistance	Marrakech Accords	OK	No public funding for the project from Annex1 parties is indicated.
8. Parties participating in the CDM shall designate a national authority for the CDM	Marrakech Accords, CDM Modalities §29	OK	Ministry of Environment and Forest has been designated national authority by the host country i.e. India.
9. The host country shall be a Party to the Kyoto Protocol	Marrakech Accords, CDM Modalities §30	OK	Host country, India is a party to the Kyoto Protocol
10. Comments by local stakeholders shall be invited, a summary of these provided and how due account was taken of any comments received	Marrakech Accords, CDM Modalities §37b	OK	Table 2, Section G
11. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, shall be	Marrakech Accords, CDM	OK	Table 2, Section F

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out.	Modalities §37c		
12. Baseline and monitoring methodology shall be previously approved by the CDM Methodology Panel	Marrakech Accords, CDM Modalities §37e	OK	Table 2, Section B.1.1 and D.1.1
13. Provisions for monitoring, verification and reporting shall be in accordance with the modalities described in the Marrakech Accords and relevant decisions of the COP/MOP	Marrakech Accords, CDM Modalities §37f	OK	Table 2, Section D
14. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	Marrakech Accords, CDM Modalities, §40	OK	PDD was made available for public comments from 12/03/2006 to 10/04/2006. No comments received during the commenting period.
15. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances	Marrakech Accords, CDM Modalities, §45 b, c, e	OK	Table 2, Section B.2
16. The baseline methodology shall exclude to earn CERs for decreases in activity levels outside the project activity or due to force majeure	Marrakech Accords, CDM Modalities, §47	OK	Table 2, Section B.2
17. The project design document shall be in conformance with the UNFCCC CDM-PDD format and fullfilled according to the	Marrakech Accords, CDM	OK	Guideline for completing CDM

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference / Comment
guidelines for completing CDM-PDD, CDM-NMB, and CDM-NMM	Modalities, Appendix B, EB Decisions		PDD – Version 4, dated July 8, 2005

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A. General Description of Project Activity *The project design is assessed.*					
A.1. Title of the project activity, version number and date of the document	1	DR	The Godavari Sugar Mills Ltd (TGSML)'s 24 MW Bagasse Based Co-generation Power Project at Sameerwadi, Version 3, December 5, 2006	OK	OK
A.2. **Description of the project activity**					
A.2.1. Is the purpose of the project activity included?	1	DR	The purpose of the project activity is to utilize available mill generated bagasse effectively for generation of steam and electricity for both in-house consumption and to export surplus electricity to the grid.	OK	OK
A.2.2. Is the view of the project participants on the contribution of the project activity to sustainable development included?	1	DR	According to project participants, the project activity contributes to sustainable development through – Export of 18 MW during season and 21 MW during off-season and thereby eliminating the generation of equivalent quantity of power using conventional fuel Conserving Coal, a non-renewable natural resource Making coal available for other important applications Reducing GHG (Carbon Dioxide) Contributing to a small increase in the local	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			employment in the area of skilled & unskilled jobs for operation and maintenance of the equipment Capacity building of farmers in modern technology power generation and sale of power		
A.3. **Contribution to Sustainable Development** *The project's contribution to sustainable development is assessed.*					
A.3.1. Is the project in line with relevant legislation and plans in the host country?	-	DRI	Yes. Indian legislation allows Power generation from Bio-mass like Bagasse	OK	OK
A.3.2. Is the project in line with host-country specific CDM requirements?	-	DRI	Approval from Ministry of Environment & Forests is awaited	CAR-1/ CL-10	OK/OK
A.3.3. Is the project in line with sustainable development policies of the host country?	-	DRI	Refer to A.3.2	-	-
A.3.4. Will the project create other environmental or social benefits than GHG emission reductions?	-	DRI	The project is reported to lead to sustainable development. Refer A.2.2.	OK	OK
A.4. **Project participants**					
A.4.1. Are Party(ies) and private and/or public entities involved in the project activity listed?	1	DR	Yes listed. Refer A.2 of PDD. However not in tabular format as required	CAR-2	OK
A.4.2. Is the contact information provided in annex 1 of the PDD?	1	DR	Yes. Refer A.4.1	-	OK
A.4.3. Is this information indicated using the tabular format?	1	DR	Yes. Information is indicated in tabular format in Annex 1	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
A.5. **Technical description of the project activity**					
A.5.1. Location of the project activity					
A.5.1.1. Host country Party(ies)	1	DR	India	OK	OK
A.5.1.2. Region/State/Province etc.	1	DR	Mudhol Taluk in Bagalkot district of Karnataka state.	OK	OK
A.5.1.3. City/Town/Community etc.	1	DR	Sameerwadi	OK	OK
A.5.1.4. Detailed description of the physical location, including information allowing the unique identification of this project activity.	1	DR	The project activity has been implemented in the premises of existing sugar mill complex at Sameerwadi, Mudhol Taluk, Bagalkot District in Karnataka State at latitude 16° 23' and longitude 75° 3'.	OK	OK
A.5.2. Category of the project activity					
A.5.2.1. Is the category of the project activity specified?	1	DR	Yes, Project activity is categorized under Category 1: Energy industries (renewable - / non-renewable sources)	OK	OK
A.5.2.2. Is it justified how the proposed project activity conforms to the project category selected?	-	DR	Yes. The project activity is a bagasse based grid connected co-generation power project, which is primarily a renewable energy project.	OK	OK
A.5.3. Technology to be employed *Validation of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The validator should ensure that environmentally safe and sound technology and know-how is used.*					
A.5.3.1. Does the project design	-	DR	Yes Refer A.4.3 Project design engineering reflects	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
engineering reflect current good practices?		I	current good practices. Entire Project was given on a turn key basis to BSES and Operation and maintenance was given to M/s . Site visit indicated current good practices.		
A.5.3.2. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	-	DR I	Refer A.5.3.1	OK	OK
A.5.3.3. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	-	DR I	Expected operational lifetime of the project activity is 20 years. Evidence of 20 years operational lifetime needs to be justified. It is not likely that the project technology will be replaced within this project time.	CL-1	OK
A.5.3.4. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	-	DR I	Yes Project required extensive initial training. This was provided by Project contractor M/s. BSES as a part of Contractual term.	OK	OK
A.5.3.5. Does the project make provisions for meeting training and maintenance needs?	-	DR I	Refer D.4 of PDD. This is explained & evident during site visit & site interactions.	OK	OK
A.5.4. Brief statement of how anthropogenic emissions of GHG by sources are to be reduced by the proposed CDM project activity					
A.5.4.1. Is it stated how anthropogenic GHG emission reductions are to be achieved?	1	DR	Yes. Refer A.4.4 of PDD. It is mentioned that The cogeneration power plant uses environmentally sustainably grown bagasse. The bagasse being a	CL-2	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			biomass renewable fuel, its combustion does not add any net carbon-dioxide to the atmosphere because of the carbon recycling during growth of cane. However higher consumption of coal in year 03-04 needs to be clarified.		
A.5.4.2. Is the estimate of total anticipated reductions of tons of CO_2 equivalent provided?	1	DR	The estimated emission reductions over the 7 year renewable crediting period would be 418, 451 tCO2.	OK	OK
A.5.4.3. Is this information indicated using the tabular format?	1	DR	Yes. Refer A.4.4.1 of PDD	OK	OK
A.5.5. Public funding of the project activity					
A.5.5.1. Is it indicated whether public funding from Parties included in Annex I is involved in the proposed project activity?	1	DR	The project will not receive any public funding from Parties included in Annex I.	OK	OK
A.5.5.2. If public funding is involved, is information on sources of public funding for the project activity provided in Annex 2, including an affirmation that such funding does not result on a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties?	1	DR	Refer 5.5.1	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B. Project Baseline *The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.*					
B.1. **Baseline Methodology** *It is assessed whether the project applies an appropriate baseline methodology.*					
B.1.1. Are the title and the reference of the baseline methodology applicable to the project activity defined?	1 UNFCCC web site	DR I	Yes. Consolidated baseline methodology for grid connected electricity generation from biomass residues ACM 0006, Version 3, dated 19/05/2006	OK	OK
B.1.2. Is the baseline methodology previously approved by the CDM Methodology Panel?	1	DR	Yes. Refer B.1.1	OK	OK
B.1.3. Does the proposed project activity meet the applicability conditions of the methodology?	1	DR	Yes. This methodology applies to project activities that generate electricity from Biomass. This is adequately explained in B.1.1 of PDD.	OK	OK
B.2. **Description of how the methodology is applied in the context of the project activity**					
B.2.1. Is the baseline methodology the one deemed most applicable for this project and is the appropriateness justified?	1 ACM 0006	DR	The approved baseline methodology is applicable to grid-connected renewable power generation project activities Refer B.1.3	-	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
B.3. **Description of how the anthropogenic GHG emissions by sources are reduced below those that would have occurred in the absence of the proposed project activity**					
B.3.1. Is the proposed project activity additional?	1	DR	As required by additionality tool , additionality has been assessed using the latest version of the "Tool for the demonstration and assessment of additionality". As per the tool, at step 3b, it is necessary to analyse the investment barriers other than those mentioned in Investment analysis under step 2. This is not evident, since PDD under step 3b mentions IRR analysis.. Other financial barriers are not analysed in detail.	CAR-3	OK
B.3.2. Are national policies and circumstances relevant to the baseline of the proposed project activity summarised?	-	I	These are not summarised in Step 1b of additionality check.	CAR-4	OK
B.4. **Description of the project boundary for the project activity**					
B.4.1. Are the project's spatial (geographical) boundaries clearly defined?	1	DR	Yes. Refer B.4 of PDD. For the project activity the project boundary encompasses the power plant at the project site, transportation of biomass by means of vehicles from offsite to project site, and all the power plants physically connected to the state grid to which the project activity exports power. The project boundary covers fuel storage and processing, boiler STG and all other power generating equipments, captive consumption units	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
			and steam consuming equipments, since along with the use of low-pressure extraction steam for the process, part of the electricity generated will be used for auxiliary consumption.		
B.4.2. Are the project's system (components and facilities used to mitigate GHGs) boundaries clearly defined?	1	DR	Yes, it includes Refer B.4.1	OK	OK
B.5. **Details of the baseline and its development**					
B.5.1. Is the date of completion provided?	1	DR	The current draft of PDD with baseline completion was completed on 14/06/ 2006. Refer B.5	OK	OK
B.5.2. Is contact information provided?	1	DR	Yes. Project participant as per Annex 1 of PDD.	OK	OK
C. Duration of the Project/ Crediting Period *It is assessed whether the temporary boundaries of the project are clearly defined.*					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	1	DR	The PDD mentions the starting date as 01/05/2000 The project activity is expected to be operational for a period of 25 years from the date of commencement of operations.	OK	OK
C.1.2. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max. two x 7 years or fixed crediting period of max. 10 years)?	1	DR	Renewable crediting period – 7 years & 0 Months	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D. Monitoring Plan *The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed.*					
D.1. **Monitoring Methodology** *It is assessed whether the project applies an appropriate baseline methodology.*					
D.1.1. Is the monitoring methodology previously approved by the CDM Methodology Panel?	1	DR	Yes . Monitoring methodology (ACM0006 version 3), for grid-connected electricity generation from biomass residues.	OK	OK
D.1.2. Is the monitoring methodology applicable for this project and is the appropriateness justified?	1	DR	The reasons for choosing this monitoring methodology are appropriately justified in the item D.2 of the PDD. Refer D.1.1	OK	OK
D.1.3. Does the monitoring methodology reflect good monitoring and reporting practices?	-	DR	Yes .Refer D.1.1.	OK	OK
D.1.4. Is the discussion and selection of the monitoring methodology transparent?	-	DR	See D.1.2, D.1.3	OK	OK
D.2. **Monitoring of Project Emissions** *It is established whether the monitoring plan provides for reliable and complete project emission data over time.*					
D.2.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas	-	DR	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
emissions within the project boundary during the crediting period?					
D.2.2. Are the choices of project GHG indicators reasonable?	-	DR	Yes	OK	OK
D.2.3. Will it be possible to monitor / measure the specified project GHG indicators?	-	DR	Yes	OK	OK
D.2.4. Will the indicators give opportunity for real measurements of achieved emission reductions?	-	DR	Yes	OK	OK
D.2.5. Will the indicators enable comparison of project data and performance over time?	-	DR	Yes	OK	OK
D.3. **Monitoring of Leakage** *It is assessed whether the monitoring plan provides for reliable and complete leakage data over time.*					
D.3.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	-	DR	Calculations for leakage are explained. However Table D.2.3 Mentions it to be not applicable.	CAR-5	OK
D.3.2. Have relevant indicators for GHG leakage been included?	-	DR	Yes	OK	OK
D.3.3. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining leakage?	-	DR	Yes	OK	OK
D.3.4. Will it be possible to monitor the specified GHG leakage indicators?	-	DR	Yes	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.4. **Monitoring of Baseline Emissions** *It is established whether the monitoring plan provides for reliable and complete project emission data over time.*					
D.4.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for determining baseline emissions during the crediting period?	-	DR	Following Variables are indicated for monitoring: - CO_2 emission factor of the grid - CO_2 operating margin emission factor of the grid - CO_2 build margin emission factor of the grid - Amount of each fossil fuel consumed by each source / plant - CO_2 emission coefficient of each fuel type - Electricity generation of each power source / plant - CO2 emission due to fossil fuel consumption on site - CO2 emission due to off-site transportation of bagasse	OK	OK
D.4.2. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	-	DR	Yes. Southern grid has been considered for baseline emissions.	OK	OK
D.4.3. Will it be possible to monitor the specified baseline indicators?	-	DR	Yes. Source in the monitoring plan indicate the source of data.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.5. **Project Management Planning** *It is checked that project implementation is properly prepared for and that critical arrangements are addressed.*					
D.5.1. Is the authority and responsibility of project management clearly described?	1	DR	Yes. It is explained in D.4 of PDD.	OK	OK
D.5.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	1	DR	Section D.4 of the PDD defines responsibilities for the collection, reporting and verification of the data. Authority and Responsibility for registration is not described.	CAR-6	OK
D.5.3. Are procedures identified for training of monitoring personnel?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.4. Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.5. Are procedures identified for calibration of monitoring equipment?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.6. Are procedures identified for maintenance of monitoring equipment and installations?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.7. Are procedures identified for monitoring, measurements and reporting?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	-	I	Specific procedure reference is not indicated.	CL-3	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
D.5.9. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.10. Are procedures identified for review of reported results/data?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.11. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.12. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	-	I	Specific procedure reference is not indicated.	CL-3	OK
D.5.13. Are procedures identified for corrective actions in order to provide for more accurate future monitoring and reporting?	-	I	Specific procedure reference is not indicated.	CL-3	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E. Calculation of GHG Emissions by Source *It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.*					
E.1. **Predicted Project GHG Emissions** *The validation of predicted project GHG emissions focuses on transparency and completeness of calculations.*					
E.1.1. Are all aspects related to direct and indirect GHG emissions, including leakage, captured in the project design?	-	DR	Yes	OK	OK
E.1.2. Are the GHG calculations documented in a complete and transparent manner?	-	DR	Yes. Calculations are documented in complete and transparent manner	OK	OK
E.1.3. Have conservative assumptions been used to calculate project GHG emissions?	-	DR	Yes.	OK	OK
E.1.4. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	-	DR	No. uncertainties due to high consumption of coal are not properly addressed in PDD.	CAR- 7	OK
E.1.5. Have all relevant greenhouse gases and source categories listed in Kyoto Protocol Annex A been evaluated?	-	DR	Yes. Co2 and CH4	OK	OK
E.1.6. Are uncertainties of external data sources for emissions reduction estimated?	-	DR	Refer E.1.4	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
E.2. **Leakage** *It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed.*					
E.2.1. Are potential leakage effects beyond the chosen project boundaries properly identified?	-	DR	Yes. Leakage due to use of bagasse has been identified.	OK	OK
E.2.2. Have these leakage effects been properly accounted for in calculations?	-	DR	Yes. Refer E.2.1	OK	OK
E.2.3. Does the methodology for calculating leakage comply with existing good practice?	-	DR	Yes. Calculations are based on type of fuel, no. of trips etc.	OK	OK
E.2.4. Are the calculations documented in a complete and transparent manner?	-	DR	Yes.	OK	OK
E.2.5. Have conservative assumptions been used when calculating leakage?	-	DR	Yes.	OK	OK
E.2.6. Are uncertainties in the leakage estimates properly addressed?	-	DR	Yes.	OK	OK
E.3. **Baseline Emissions** *The validation of predicted baseline GHG emissions focuses on transparency and completeness of calculations.*					
E.3.1. Are the baseline boundaries clearly defined and do they sufficiently cover sources and sinks for baseline	-	DR	The baseline boundaries are clearly defined.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
emissions?					
E.3.2. Are the GHG calculations documented in a complete and transparent manner?	-	DR	The GHG calculations are documented in a complete and transparent manner.	OK	OK
E.3.3. Have conservative assumptions been used when calculating baseline emissions?	-	DR	Refer E.3.2,	OK	OK
E.3.4. Are uncertainties in the GHG emission estimates properly addressed in the documentation?	-	DR	Refer E.3.2,	OK	OK
E.3.5. Have the project baseline(s) and the project emissions been determined using the same appropriate methodology and conservative assumptions?	-	DR	The project baseline(s) and the project emissions been determined using the same appropriate methodology.	OK	OK
E.4. **Emission Reductions** Validation of baseline GHG emissions will focus on methodology transparency and completeness in emission estimations.					
E.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	-	DR	The total estimated emission reduction during 2003 – 2009 would be 418, 451 tCO2.	OK	OK
F. Environmental and Social Impacts *Documentation on the analysis of the environmental and social impacts will be assessed, and if deemed significant, an EIA should be provided to the validator.*					
F.1.1. Has an analysis of the environmental and social impacts of the project activity been sufficiently described?	PDD	I	Yes. Refer Enclosure 1 of PDD. However emissions in transportation are limited to vehicular emissions and does not consider dust.	CL-4	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
F.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	-	I	Yes. Indian Government requires EIA. MOEF has given clearance for the Project	OK	OK
F.1.3. Will the project create any adverse environmental or social effects?	-	I	No project is not create any adverse environmental and social impacts	OK	OK
F.1.4. Are transboundary environmental and social impacts considered in the analysis?	-	I	These are addressed in A.2 as well as enclosure 1 of PDD.	OK	OK
F.1.5. Have identified environmental and social impacts been addressed in the project design?	-	I	These are addressed in A.2 as well as enclosure 1 of PDD.	OK	OK
F.1.6. Does the project comply with environmental legislation in the host country?	-	I	Yes. Project was found to be complying with various requirements of Indian environmental legislation	OK	OK
G. Stakeholder Comments *The validator should ensure that a stakeholder comments have been invited and that due account has been taken of any comments received.*					
G.1.1. Have relevant stakeholders been consulted?	-	DR	This is evident in the letter (certificate) from relevant stake holders.	OK	OK
G.1.2. Have appropriate media been used to invite comments by local stakeholders?	-	DR	Evidence of appropriate media to invite comments is not available	CL-5	OK
G.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation	-	I	Yes. To obtain environmental clearance such consultation is required. The process was carried and evidence is available.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
process been carried out in accordance with such regulations/laws?					
G.1.4. Is a summary of the stakeholder comments received provided?	-	DR	According to PDD, no adverse comments received .	OK	OK
G.1.5. Has due account been taken of any stakeholder comments received?	-	DR	Refer G.1.4, hence not applicable	OK	OK

Table 3 Baseline and Monitoring Methodologies : ACM0006 version 3 dated 19/05/2006 & ACM 0002, version 6 dated 19/05/2006

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Baseline Methodology					
1.1. Applicability					
1.1.1. Does the project activity generate electricity from a biomass residue ?	3	DR I	The project activity involves generation of electricity from biomass	OK	OK
1.1.2. Is the power connected to the grid?		DR I	Yes, the power is exported to the grid	OK	OK
1.1.3 Is the baseline methodology used in conjunction with the approved monitoring methodology ACM0006	3	DR	Yes baseline methodology is used in conjunction with approved monitoring methodology	OK	OK
1.1.4. Does the project activity relate to electricity capacity additions from renewable sources?	3	DR I	Yes, it relates to capacity additions from Biomass.	OK	OK
1.1.5. Does proposed project activity falls in either of the categories – Green filed Power Project, Power capacity expansion, Energy efficiency Improvement / Fuel Switch	3	DR I	Yes Project activity falls under ' Power capacity Expnasion' Project. Project activity is 'Cogeneration from Bagasse generated from own sugar mill as well Purchase from outside'	OK	OK
1.1.6. Can the geographic and system boundaries for the relevant electricity grid be clearly identified?	3	DR Internet	Yes, relevant electricity grid indicated is Southern grid.	OK	OK
1.1.7. Is the information on the characteristics of the grid available?	3	DR Internet	Yes, the characteritics of the grid are available.	OK	OK
1.1.8. Will Project activity consume in-house biomass or will it be purchased from outside ?	3	DR	Biomass for use in Project will be partly from inhouse generation and partly purchased from outside.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1.1. 9 Will implementation of Project result in increase in processing capacity of raw input ?	3	DR I	This is not explained in PDD	CL-6	
1.10 Will biomass to be used by Project activity be stored for more than one year ?	3	DR I	PDD clarified that Biomass will not be stored for more than one year.	OK	OK
1.11 Will biomass require significant energies (like Processing) other than transportation ?	3	DR I	No apart from transportaion, no processing is involved for processing of biomass	OK	OK
1. 2. Project boundary					
1.2.1. Did the project participant account for the CO_2 emission from electricity generation in fossil fuel fired power that is displaced due to project activity?	3	DR	Yes	OK	OK
1.2.2 Did the project participant account for the CO_2 emission from Heat generation in fossil fuel based power that is displaced due to project activity?	3	DR	Yes.	OK	OK
1.2.2. Does the spatial extent of the project boundary include the power plant at project site, means of transportation of biomass and all power plants connected physically to the electricity system that the CDM project power plant is connected to?	3	DR	The spatial extent of the project boundary as defined at section B.4 of the PDD includes all power plants connected physically to the electricity system that the CDM project power plant is connected to. Refer B.4.1 of check list	OK	OK
1.2.3 Is 'Biomass dumped or left to decay or burned in uncontrolled manner without utilising for energy purposes' most likely scenario ?'	3	DR I	It is explained in PDD that around 2-3% of bagasse is likely to be diverted to activity other than project activity and therefore considered to be dumped to burned in uncontrolled manner.	OK	OK
1.2.4 If answer to Question 1.2.3 is Yes, then are CH4 emissions in the project boundary are included ?	3	DR	Yes	OK	OK
1.2.5 If answer to Question 1.2.3 is Yes, then are CH4 emissions calculated in a conservative manner using emission factors for uncontrolled burning of biomass ?	3	DR	Yes.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1.2.6 Whether choice of inclusion/exclusion CH4 emissions in project and baseline are documented in PDD ?	3	DR	The choice is not documented in PDD	CAR-8	OK
1.2.7. Is the regional project electricity system identified by the spatial extent of the power plants that can be dispatched without significant transmission constraints?	3	DR	Yes identified.	OK	OK
1.2.8. Are the assumptions made in determining the project electricity system defined and justified?	3	DR	There are no assumptions made in defining the project electricity system,	OK	OK
1.2.9. Does the application of this methodology result in a clear grid boundary?	3	DR	Yes	OK	OK
1.2.10. Does the application of this methodology result in a given country specific variations in grid management policies?	3	DR	No	OK	OK
1.2.11. If answer to question is yes then whether DNA of the host country provides the delineation of grid boundaries.	3	DR	Yes	OK	OK
1.2.12. If answer to question is no whether DNA guidance is available for defining the boundary.	3	DR	Yes	OK	OK
1.2.13. If answer to question is no whether the layered dispatch system (e.g. state/provincial/regional/national) the regional grid is used?	3	DR	Yes, Southern Region grid is considered.	OK	OK
1.2.14. If the regional grid is not used whether	3	DR	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
the national grid is used.					
1.3. Identification of alternative baseline scenarios					
1.3.1. Are Realistic and credible alternatives separately determined for power , biomass and Heat ?	3	DR	Yes. Refer Section B.3 of PDD.	OK	OK
1.3.2. Are the various options for alternatives explained in PDD ?	3	DR	Yes	OK	OK
1.3.3. Is the explanation of these options transparent and complete	3	DR	No. Why option no 16 is most suitable over any other option is not explained.	CL-7	OK
1.3.4 Are the calculations for baseline are as per latest version of ACM 0002 as required by this methodology ?	2	DR	Yes	OK	OK
1.3.5 Are transmission & Distribution losses neglected as required by the methodology ?	2	DR	Yes	OK	OK
1.3.6 Is quantity of electricity required for operation of plant subtracted ?	2	DR	PDD Indicated the same. However it is not clear from monitoring plan	CL -8	OK
1.3.7. Where EG-historical is the average of historical electricity delivered by the existing facility to the Grid, whether spanning all data from the most recent available year (or month, week or other time period) to the time at which the facility was constructed, retrofit, or modified in a manner that significantly affected output (i.e., by 5% or more), expressed in MWh per year. A minimum of 5 years (120 months) (excluding abnormal years) of historical generation data is required in the case of hydro facilities.	2		Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1.3.6. Whether a minimum of three years data is referred and used in case the project is non-hydro?	2		Yes	OK	OK
1.3.7. Is it required to estimate the point in time when the existing equipment would need to be replaced in the absence of project activity?	2		No.	OK	OK
1.3.8. If the answer to question is Yes Whether project participants have taken any of the two approaches, indicated in the ACM0002 into account?	2		Not applicable	OK	OK
1.3.9. Whether the typical average technical lifetime of the type equipment is determined and documented taking into account common practices in the sector and country e.g. based on industry surveys, statistics, and technical literature?	2	DR	Not applicable	OK	OK
1.3.10. Whether the common practices of the responsible practices of the responsible company regarding the replacement schedules is evaluated and documented, e.g. based on historical replacement records for such equipment?	2	DR	Not Applicable	OK	OK
1.3.11. Whether the baseline emission factor is calculated as a combined margin consisting of the combination of operating margin (OM) and build margin factors according to three steps indicated in the methodology ACM0002?	2	DR	Yes. However registered CDM Projects in the region are not excluded from calculations	CL-9	OK
1.3.12. Whether the weighted average applied by project participant is fixed for a crediting period.	2	DR	Yes. 7 years renewable crediting period.	OK	OK
1.3.13. Whether operating margin emission factors calculations are based on one of the four methods described in the methodology ACM 0002?	2	DR	Yes	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1.3.14. Is the most likely baseline scenario 'electricity production from other sources feeding into the grid ?	2	DR	Yes	OK	OK
1.3.15 Did the project participant provide evidence and supporting documents to exclude baseline options that do not comply with legal and regulatory requirements; or depend on key resources such as fuels, materials or technology that are not available at the project site?	2	I	Yes, the information is evident in A.4.4 of PDD	OK	OK
1.3.16 If the project activity modifies or retrofits an existing electricity generation facility, is the guidance by EB08 taken into account ?	2	DR I	Not applicable.	OK	OK
1.4. Additionality					
1.4.1. Was the additionality of the project activity demonstrated and assessed using the latest version of the "Tool for demonstration and assessment of addiotionality"?	2	DR	Refer B.3.1	OK	OK
1.5 Project Emissions					
1.5.1. Are the project emissions considered as CO_2 emissions from on-site fuel consumption of fossil fuels, co-fired in the biomass power plant; and CO_2 emissions from off-site transportation of biomass that is combusted in the project plant.	3	DR	Yes	OK	OK
1.6. Baseline Emissions					
1.6.1. Are the baseline emissions determined according to the formula $BE_y = EG_y \times EF_y$?	2	DR	Yes	OK	OK
1.6.2. Were the Emissions Factor for displaced electricity calculated as in ACM0002?	2	DR	Simple OM approach is selected and justification for the same is given in PDD.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1.7. Leakage					
1.7.1. Are the leakage considered ?	2	DR	leakage is considered as bagasse used outside the project boundary for use other than energy generation. Refer D.3.1 of Table 2	-	
1.7.2. Have any credits been claimed for the project on account of reducing the emissions due to power plant construction, fuel handling and land inundation below the level of the baseline scenario ?	2	DR I	No credits claimed on any pre-project activity.	OK	OK
1.8. Emission Reduction					
1.8.1. Did the emissions reductions were determined according to the formula ERy = ERheaty + ER electricity y + BE biomassy –PE y – Ly	2	DR	Yes, this is explained in section E.4 of the PDD	OK	OK
1.8.2. Were all values chosen in a conservative manner and was the choice justified?	2	DR I	Yes. Values are evidently conservative and choice has been appropriately justified.	OK	OK
1.8.3. Whether an estimate of likely project emission reductions for the proposed crediting period is prepared as part of the PDD?	2	DR I	Yes.	OK	OK
1.8.4. Whether the estimate in principle employs the same methodology ACM0006?	2	DR I	Yes	OK	OK
1.8.5. Whether the emission factor is determined ex-post during monitoring?	2	DR I	No ex-ant option is chosen.	OK	OK
1.8.6. If yes whether project participants have used models or other tools to estimate the emission reductions prior to validation?	2	DR I	Not applicable	OK	OK
2. Monitoring Methodology					
2.1. Applicability					
2.1.1. Does the project activity generate electricity	2	DR	Yes. Renewable source- Biomass – Bagasse in	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
from a renewable source?		I	this case.		
2.1.2. Is the power connected to the grid ?	2	DR I	Yes, the power is connected to a Southern grid.	OK	OK
2.1.3. Does the project activity relate to electricity capacity additions from renewable sources ?	2	DR I	Yes, the project relates to capacity additions from Biomass energy source.	OK	OK
2.1.4. Is fuel switch done in the process?	2	DR	No.	OK	OK
2.1.5. Can the geographic and system boundaries for the relevant electricity grid be clearly identified ?	2	DR I	Yes, the geographic and system boundaries for the relevant electricity grid can be clearly identified.	OK	OK
2.1.6. Is the information on the characteristics of the grid available?	2	DR I	The information on the characteristics of the grid is available	OK	OK
2.2. Monitoring Methodology					
2.2.1. Does the monitoring plan require monitoring of increased electricity generation from the proposed project activity?	3	DR	Yes.	OK	OK
2.2.2 Does monitoring takes in to account the lower value between (a) the net quantity of electricity generated in the new power unit that is installed as part of the project activity and (b) the difference between the total net electricity generation from firing the same type(s) of biomass at the project site (EG total,y) and the historical generation of the existing power unit(s), (EG historic, 3yr) based on the three most recent years.	3	DR	Yes	OK	OK
2.2.3. Does the methodology requires monitoring of Data needed to recalculate the operating margin emission factor, if needed, based on the choice of the method to determine the operating margin (OM), consistent with ACM0002 ?	2	DR	Not applicable as the option of 3-year average, based on the most recent statistics available is chosen	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
2.2.4. Does the monitoring plan require monitoring of Data needed to recalculate the build margin emission factor, if needed, consistent with ACM0002 ?	2	DR	Not applicable as the option of ex ante is chosen.	OK	OK
2.2.5. Does the monitoring plan require monitoring of data needed to calculate fugitive carbon dioxide and methane emissions and carbon dioxide emissions from combustion of fossil fuels required to operate the geothermal power plant ?	2	DR	Not applicable.	OK	OK
2.3. Quality Control (QC) and Quality Assunrance (QA) Procedures					
2.3.1. Did all measurements use calibrated measurement equipment that is regularly checked for its functioning?	3	I	Yes.	OK	OK
2.3.2. Are the data double checked against commercial data ?	3	DR I	Yes.	OK	OK

Table 4 Legal Requirements

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
1. Legal requirements					
1.1. Is the project activity environmentally licensed by the competent authority?	2	DR	Yes. Environmental clearance from MOEF is evident. Similarly consents under Air and Water act as well as Authorisation for Hazardous waste were evident.	OK	OK
1.2. Are the conditions of the environmental license being met?	2	DR	Yes. Various conditions as mentioned in consents are being monitored are met.	OK	OK
1.3 Are the conditions of the Designated National Authority being met?	2	DR	Refer A.3.2	OK	OK

Table 5 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2/3	Summary of project owner response	Validation team conclusion
Approval from Ministry of Environment & Forests is awaited	A.3.2 CAR-1 Also CL-10 below	Host country Approval – dated 2 June 2006 has been received. Copy of the same is enclosed.	Reviewed host country approval and raised clarification as below CL-10
Yes listed. Refer A.2 of PDD. However not in tabular format as required	A.4.1 CAR-2	Corrected in section A.2 in version 2, dated 26/07/2006 of PDD.	Reviewed the change. Found satisfactory and therefore Corrective action Request stands closed
As required in ACM 0006, additionality has been assessed using the latest version of the *"Tool for the demonstration and assessment of additionality"*. As per the tool, at step 3b, it is necessary to analyse the investment barriers other than those mentioned in Investment analysis under step 2. This is not evident, since PDD under step 3b mentions IRR analysis.. Other financial barriers are not analysed in detail.	B.3.1 CAR-3	Documentary evidence of financial barriers (financial closure and PPA related) have been provided to BVQI and in PDD, Section B.3 has been appropriately elaborated on this aspect. Revised version (Version 2 of PDD) does not include IRR analysis since additionality test has been argued through Step 3.	Verified revised PDD version 2. Investment analysis now does not include analysis of IRR. Other investment barriers are analysed and are found to be satisfactory. Corrective action request therefore is closed.
These are not summarised in Step 1b of additionality check.	B.3.2 CAR-4	Step 1b now included in revised version of PDD.	It has been verified and explanation is found to be adequate. Corrective action therefore is closed.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2/3	Summary of project owner response	Validation team conclusion
Calculations for leakage are explained. However Table D.2.3 Mentions it to be not applicable.	D.3.1 CAR-5	Section D.2.3 of PDD version 2, dated 26/07/2006 now includes monitoring of leakage.	Section D.2.3 has been re-verified for inclusion of leakage. Corrective action is therefore closed.
Section D.4 of the PDD defines responsibilities for the collection, reporting and verification of the data. Authority and Responsibility for registration is not described.	D.5.2 CAR-6	Section D.4 of PDD, Version 2, dated 26/07/2006 now defines authority and responsibility for registration.	Section D.4 has been verified and found adequate. Corrective action Request therefore is closed.
No. uncertainties due to high consumption of coal are not properly addressed in PDD.	E.1.4 CAR-7	In Table D.2.1.1, item 7 (Ffprojectplant) measures quantity of fossil fuels co-fired in co-gen plant. Further the use of coal is reflected in the project emissions. A coal use estimate of 5000 tons per year has been used in the estimation of emission reductions. Considering the future plans of the company, it is unlikely that coal would be required as fuel in future as sufficient bagasse would be available with the sugar plant for use in the project activity	Verified D.2.1.1 for monitoring of project emissions. Consideration on likely consumption of 5000 t of coal is found to be adequate. Further explanation of no use of coal due to availability of bagasse in future is also found to be satisfactory. Corrective action Request therefore is closed.
The choice is not documented in PDD	Table 3, 1.2.6 CAR-8	Choice is now documented in Section B.4 of revised version of PDD – dated 26/07/2006.	Verified section B.4 of inclusion of choice of Methane. Corrective action request therefore is closed.
Expected operational lifetime of the project	A.5.3.3	Evidence of operational life time is	Verified the declaration given by Desein

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2/3	Summary of project owner response	Validation team conclusion
activity is 25 years. Evidence of 25 years operational lifetime needs to be justified. It is not likely that the project technology will be replaced within this project time	CL-1	obtained from Desein Pvt Ltd. and provided to BVQI.	Pvt. Ltd. Consulting Engineers & found to be adequate. Clarification request therefore is closed.
Refer A.4.4 of PDD. It is mentioned that The cogeneration power plant uses environmentally sustainably grown bagasse. The bagasse being a biomass renewable fuel, its combustion does not add any net carbon-dioxide to the atmosphere because of the carbon recycling during growth of cane. However higher consumption of coal in year 03-04 needs to be clarified	A.5.4.1 CL-2	Higher consumption of coal during year 2005-06 is because of un-avoidable circumstances due to shortage of bagasse. The situation is not expected to aggravate in future. Godavari proposes to expand its sugar plant to 12000 TCD during 2007-08 and also proposes to add a 30 MW cogen plant. The expansion activity would make available bagasse in sufficient quantities to run the 24 MW cogen project	Based on the expansion plans of the Project participant and explanation provided for exceptional high consumption of coal in year 2003-04, it is unlikely that such high quantity of coal would be required in future. This is also part of CAR- as above. Explanation provided above and for this clarification is found to be adequate. Clarification request is therefore closed.
Specific procedure reference is to be indicated.	D.5.3 to D.5.13 CL-3	Various documented procedures have now been prepared and released for implementation with immediate effect.	Documented procedures TGSL, Sameerwadi 1 to 10 are verified and are found to be adequate. Common clarification request CL-3 for all such procedures is therefore closed.
Refer Enclosure 1 of PDD. However emissions in transportation are limited to vehicular emissions and does not consider dust	F.1.1 CL-4	Vehicular emissions including dust related aspects are included in Enclosure 1 of the PDD	Verified enclosure 1 of PDD. Aspects related to dust are found to be included. Clarification request therefore is closed.
Evidence of appropriate media to invite	G.1.2	Letter inviting stakeholder comments	Evidences of inviting stake holders

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2/3	Summary of project owner response	Validation team conclusion
comments is not available	CL-5	has been provided to BVQI .	comments. There are two types of evidences. One – Comments as invited by Legislation before the start-up of the Project. This is available as newspaper invitation & other one more invitation by project participants – before the validation – Letters dated 20 February 2006. Both are verified and clarification request therefore is closed.
This is not explained in PDD	Table 3, 1.19 CL-6	Section B.1.1 of PDD now explains that implementation of project will not result in processing of raw input (sugar)	Section B.1.1 for applicability condition of methodology is verified and explanation is found to be satisfactory. Clarification request therefore is closed.
No. Why option no 16 is most suitable over any other option is not explained	Table 3, 1.3.3 CL-7	Section B.1.1 and Section B.2 now clearly explains why option no. 16 is most suitable specifically in relation to option 14.	Satisfactory explanation is provided why option 16 is most suitable. Clarification request therefore is closed.
PDD Indicated the same. However it is not clear from monitoring plan	Table 3, 1.3.6 CL-8	Have included the parameter in Section D.2.1.3 of revised version of PDD, dated 26/07/2006.	Verified Section D.2.1.3 for inclusion of this parameter. Clarification request therefore is closed.
Yes. However registered CDM Projects in the region are not excluded from calculations	Table 3, 1.1.11 CL-9	Ugar Sugars being a registered CDM project has been excluded from the calculations of Southern electricity grid coefficient in the revised calculations.	Calculations are verified for exclusion of registered CDM Projects while calculating Southern grid coefficient. Clarification request therefore is closed.

Reviewed the Host Country Approval dated 2nd June 2006. Title of the Project in Host country Approval dated 2 June 2006 is " Bagasse based power generation Activity at The Godavari Sugar Mills Limited (TGSML) " and the one in Web-hosted PDD is " The Godavari Sugar Mills Ltd (TGSML)'s 24 MW Bagasse Based Co-generation Power Project at Sameerwadi". The titles are not matching as capacity of plant as 24 MW and co-generation are not reflected in Host country approval. Therefore whether Host country approval is for the same Project or not is not clear	A.3.2 CL-10	The following documents are enclosed for reference (a) Application by TGSML on 9 Feb 2005 to Secretary, MoEF requesting host country approval for the 24 MW bagasse based cogeneration project of TGSML (b) Fax from MoEF on July 18 '05 - Host country meeting schedule/ invitation for meeting on 27 July 2005. The above documents are evidences demonstrating that host country approval was sought for the 24 MW cogen project of TGSML which was granted in June 2006	Both evidences are verified. It is evidently clear that Project participants applied for Host country approval for 24 MW. Clarification request on reviewing response on CAR –1 is therefore closed.

1- GUIDELINES FOR COMPLETING CDM-PDD, CDM-NMB and CDM-NMM – Version 04 – July 8th, 2005
2- APPROVED CONSOLIDATED METHODOLOGY ACM0002 – Version 5 – 3 March 2006
3- APPROVED CONSOLIDATED METHODOLOGY ACM0002 – Version 6 – 19 May 2006
4- APPROVED CONSOLIDATED METHODOLOGY ACM0006 – Version 2 – 3 March 2006
5- APPROVED CONSOLIDATED METHODOLOGY ACM0006 – Version 3 – 19 May 2006