
VALIDATION REPORT

Balaji Agro Oils Ltd

**BIOMASS BASED POWER
PROJECT OF BALAJI AGRO OILS
LTD**

SGS Climate Change Programme
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Project title	Organisational Unit:
Biomass based power project of Balaji Agro Oils Ltd.	SGS Climate Change Programme
Revision Number:	Client:
2	Balaji Agro Oils Ltd.

Summary:

SGS India Pvt. Ltd., an affiliate of SGS United Kingdom Ltd. has made a validation of the CDM project activity "Biomass based power project of Balaji Agro Oils Ltd" by Balaji Agro Oils Ltd, Davuluru village, Krishna district of Andhra Pradesh state in India, 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 scope of validation is the independent and objective review of the project design document, baseline study and monitoring plan and other relevant document of the project. The information in this document is reviewed against the criteria defined in the Marrakech Accords (Decision 17) and the Kyoto Protocol (Article 12) and subsequent guidance from the CDM Executive Board.

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

The overall validation process, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (UK.PP.12 issue 2 dated 01/07/2005).

The first output of the validation process is a list of Corrective Actions Requests and New Information Requests (CAR and NIR), presented in Annex 2 of this document. Taking into account this output, the project proponent revised its project design document.

In summary, it is SGS's opinion that the proposed CDM project activity correctly applies the baseline and monitoring methodology as mentioned in approved methodology adopted for the proposed project activity and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Subject:	Indexing Terms
CDM Validation	
Validation Team Members:	
Mr Pankaj Mohan Mr Kamesh Iyer	
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Authorized Signatory:	<input type="checkbox"/> Unrestricted Distribution
Siddharth Yadav	
Date of Final Decision:	
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37	

Abbreviations

APERC	Andhra Pradesh Electricity Regulatory Commission
APPCB	Andhra Pradesh Pollution Control Board
APTRANSCO	Transmission Corporation of Andhra Pradesh Limited
ASCI	Administrative Staff College of India
BAOL	Balaji Agro Oils Limited
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CO ₂	Carbon Dioxide
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
GHG	Green House Gas(es)
I	Interview
INR	Indian Rupees
IPCC	Intergovernmental Panel on Climate Change
ISHC	International Stakeholder Consultation
kWh	Kilo watt hour
MoEF	Ministry of Environment and Forest
MoV	Means of Verification
MP	Monitoring Plan
MT	Metric Tonne
MWh	Mega watt hour
NIR	New Information Request
PDD	Project Design Document
PO	Purchase Order
PPA	Power Purchase Agreement
SHC	Stakeholder Consultation
SV	Site Visit
TPH	Tonne per Hour



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1 Introduction

1.1 Objective

Balaji Agro Oils Limited has commissioned SGS to perform the validation of the project: "Biomass based power project of Balaji Agro Oils Ltd "with regard to the relevant requirements for CDM project activities. The purpose of a validation is to have an independent third party assess 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 seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

1.2 Scope

The scope of the validation 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. SGS has 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

Balaji Agro Oils Ltd. has commissioned a biomass based power plant situated in Davuluru village, Krishna district of Andhra Pradesh state in India. The plant has an installed capacity of 6 MW steam turbine generator with a 35TPH FBC boiler. However the project activity uses rice husk, groundnut shells, coconut waste and other types of agricultural waste along with coal. In the absence of the project, power produced by BAOL would have been generated in the Southern grid of India which is predominantly a mix of Fossil fuel, Hydro and Nuclear based.

Baseline Scenario:

The electricity generated by project activity would otherwise have been generated by Southern Regional grid which is predominantly a mix of fossil fuel, hydro and nuclear based.

With Project Scenario:

The project mainly uses biomass like rice husk, Groundnut Shells, Coconut waste, cotton waste and various agricultural waste and also co-fires coal to generate electricity and thus displaces the power that would have otherwise been generated by Southern Regional grid which consists of power plants operating on a mix of hydro, nuclear and fossil fuels.

Leakage:

As per the methodology AMS 1D, no leakage is considered.

Environmental & Social Impacts:

According to project developer, there is no negative environmental and social impact expected due to the project activity.



1.4 The Names and Roles of the Validation Team Members

Name	Affiliate	Role
Mr. Pankaj Mohan	SGS India	Lead Assessor
Mr. Kamesh Iyer	SGS India	Local Assessor

Statements of Competence of team members are attached at Annex IV.

2 Methodology

2.1 Review of CDM-PDD and Additional Documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline. Additional information can be required to complete the validation, which may be obtained from public sources or through telephone and face-to-face interviews with key stakeholders (including the project developers and Government and NGO representatives in the host country). These may be undertaken by the local SGS affiliate. The results of this local assessment are summarized in Annex 1 to this report.

2.2 Use of the Validation Protocol

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

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

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

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

The completed validation protocol for this project is attached as Annex 2 to this report

2.3 Findings

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

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

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR)**. A CAR is issued, where:

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

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

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

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex 3). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

2.4 Internal Quality Control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

3 Determination Findings

3.1 Participation Requirements

The host Party for the project is India which has ratified the Kyoto protocol on 26th Aug 2002. CAR01 was raised as no letter of approval from host country was provided to the validator. A Letter of Approval dated 15th May 2007, issued by the Indian DNA (reference number 4/3/2007-CCC) was made available to the SGS. This was verified by seeing the original copy and same is attached as scanned copy. This was accepted and hence CAR01 was closed out.

No Annex I Party has been identified in the PDD; hence the Letter of Approval is not required as it is observed that the CDM EB has agreed that the registration of a CDM project activity can take place without an Annex I Party being involved at the stage of registration. Although, it should be noted that before CERs can be transferred to an Annex I Party, a Letter of Approval will have to be submitted.

3.2 Baseline Selection and Additionality

The project has applied AMS I. D.: Title – “Grid Connected Renewable Electricity Generation” Version 10 dated 23rd December 2006. The baseline selected by the project proponent was the likely baseline scenario. In the absence of the biomass project activity the power generated by BAOL would have been generated in the southern regional grid of India which is pre-dominantly a mix of fossil fuel, hydro and nuclear based generated power. The project activity produces electricity using biomass and coal and sells it to the grid. The grid electricity generation in the southern grid of India using fossil fuel is the most likely baseline scenario.

The project activity has demonstrated the other barriers (financial resource) as the basis of going ahead of this project as a CDM activity. The project start date is 19th December 2001 and is operational from 2nd June 2003.

CAR10 was raised as the fuel prices, cost of generation required adequate justification and a biomass assessment report was asked to ascertain surplus biomass in the region. IRR calculations with regard to the total principal amount considered under interest charges; indications to the amount paid as interest charges paid and complete formulae to clarify all the points were not sufficiently addressed along with documentary evidence. The benchmark considered for the IRR calculations was unclear. BAOL responded by submitting the revised IRR spreadsheet with necessary changes to elaborate interest calculations. A CA certified copy for the IRR calculations had been provided to support these calculations. The power purchase agreement was required to be submitted to assess agreement considerations between BAOL and APTRANSCO. As a response, BAOL submitted copies of the invoices dating back from 2004-05 to till date for reference. This provided justification for the price increase of biomass fuel. The cost of generation based on the fuel cost was certified by a chartered accountant and the same was submitted. The IRR calculations have been done based on the actual cost and expenditure incurred from the start date of the project activity and the estimated price increase for the years to come. The calculation sheets of the IRR considering with and without CDM funds were provided to the assessor.

Biomass assessment for the region was carried out by Administrative Staff College of India (ASCI), Hyderabad. This was part of the overall state level study. A copy of the same was provided.

PPA between BAOL and APTRANSCO was also provided. All these documents were verified and were found OK. The PDD was revised to Version 2 to incorporate IRR benchmark of 16% and their references along with necessary changes. These were verified and were found OK. Hence, CAR10 was closed after all the above relevant documentation was obtained and verified.

The equity IRR for the project activity without CDM is 13.94% and with CDM the equity IRR is 16.93 %. This benchmark for equity IRR considered for the project activity is 16% as the standard returns prescribed for the power projects by APTRANSCO Order (R.P.No.84 / 2003 in O.P.No.1075 / 2000 dated 20th March 2004 for Non Conventional Energy projects). Hence, it is reasonable to consider the project activity additional. The Other Barriers (policy related) are also used to support additionality. The policy related additionality focuses on the APERC regulation issuing the notification for the change in price rise and fluctuation which results in a two component structure which has reduced the power tariffs. These have been submitted.

CAR7 was raised for the proponent to explain why the proponent has taken considerable time in preparing the PDD along with proof for start date of the project activity. The proponent clarified that the board of directors in 2001 decided to undertake the project activity considering CDM. A copy of the certified board note was provided to the assessor. Further clarification indicated that the project proponent approached consultants in 2004, after the commissioning of the project activity in 2003, for assistance in preparation of the required documents as per the requirements of UNFCCC for a CDM project activity. However, due to financial considerations, such as payment of fee to the consultants, validators and UNFCCC for registration of the CDM activity, the company considered preparation of the required documents by itself. The project proponent has given an undertaking supported by Board resolutions dated 30th October 2003 and 30th January 2006 to the effect. The board resolutions have been verified and were found OK. Hence, CAR7 was closed.

3.3 Application of Baseline Methodology and Calculation of Emission Factors

The project activity falls under Small scale CDM project activity and uses Approved Small Scale Methodology, AMS ID, Version 10, dated 23rd December 2006, "Grid connected renewable electricity generation".

The baseline emission factor has been taken from the combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the approved methodology ACM0002. The baseline emission reductions for this project activity are the amount of electricity (kWh) produced and the associated equivalent amount electrical units displaced from the southern regional grid of India multiplied by the emission coefficient of the southern grid. Baseline emission calculations are determined by taking all relevant information and data from Central Electricity Authority published report (Version 1.1) which is publicly available at the Central Electricity Authority (CEA) government of India website. The Combined Margin emission factor for the southern grid is taken from the CEA data source as 0.86 tCO₂e/MWh.

NIR11 was raised for leakage due to transportation was calculated and considered negligible in the PDD. Documentary evidence was sought. The proponent responded by submitting the biomass assessment report and surplus availability was reflected. The biomass assessment report demonstrated surplus availability and hence the proponent did not foresee biomass transportation as a leakage source. However this would also be verified during verification from the annual biomass assessment records. Hence NIR11 was closed.

3.4 Application of Monitoring Methodology and Monitoring Plan

The project uses Small scale CDM project activity and uses Approved Small Scale Methodology, AMS ID, Version 10, dated 23rd December 2006, "Grid connected renewable electricity generation"

CAR13 was raised as the monitoring plan was not clear with respect to the monitoring data, collection and archiving. The proponent had responded by submitting the revised PDD Version2 and clarified that a Standard Plant Operating procedure which would include the monitoring actions for the project activity will be in place during verification. Hence, CAR13 was closed. CAR15 was raised as the PDD lacked clarity as there was no mention of the management structure which will be responsible for the monitoring plan implementation. This was responded by the proponent by detailing the management structure and providing the flow of information. The management structure after revision of the PDD Version 2 seemed reasonable and hence, CAR15 was closed.

CAR17 was raised as the parameters (QA/QC for Egen, Qfossil, NCVbio) in section B.7.1 during site visit was not in accordance with the PDD. The PDD was revised appropriately and inculcate right steps which would be verifiable and were satisfactory. Hence, CAR17 was closed.

3.5 Project Design

The Project Design Document (PDD) was prepared as per version 3 of guidelines laid for preparing PDD of Small Scale CDM project activity hence the format of the present PDD was checked against it. NIR4 was raised asking BAOL to clarify on the current practices with respect to the use of technology in the region and to ascertain the use of better technology. This was responded by BAOL by stating that the region used FBC or Travel grate type boiler and that BAOL considered an FBC type boiler in view of its efficiency. This was

supported by purchase order copies and boiler fitness certificates. The argument appeared reasonable and hence NIR4 was closed.

NIR5 was raised as the PDD did not point out whether there were intentions to substitute the technology by other or more efficient technologies within the crediting period. The proponent has given a letter of self undertaking dated 28th March 2007 that there will be no substitution of the project technology and also stating that the proponent has adopted a technology keeping in mind the operational lifetime and had no plans to substitute the technology. Based on the discussions and interviews on site visit and on the basis of written assurance and undertaking, NIR5 was closed.

As the PDD did not clearly describe the initial training and maintenance efforts required for the project activity, NIR6 was raised. The project proponent responded that BAOL has availability of skilled labour in the region and only qualified personnel were engaged for technical jobs. BAOL submitted boiler operator's certificate from the Boiler Inspectorate. Based on this NIR6 was closed. It was observed during the site visit by the local assessor that staffs was well trained and technical know-how was well understood.

NIR8 was raised as the proponent had not provided spreadsheets on CER calculation clearly depicting project emissions. As a response the proponent provided the excel sheet and it was found that the emission reductions calculated were in accordance with the methodology which included project emissions and calculation of CERs in a conservative manner. NIR8 was closed.

CAR12 was raised as the PDD did not indicate the project boundary in an appropriate fashion and was unclear. The project proponent responded by incorporating a schematic overview for defining the project boundary and this was in accordance to the boundary observed during site visit. Hence, CAR12 was closed.

CAR14 was raised as during the site visit it was observed that the installed capacity of the turbine was 6 MW. This was not clear in the PDD version1. BAOL clarified that the BAOL had issued a purchase order for 6 MW capacity TG. However the clearances such as NOC from APPCB and PPA with APTRANSCO was for generation of 4.5 MW and at 80% PLF. This was also indicated in the revised PDD Version2. Based on this document verification it was found that the proponent cannot operate the plant beyond 4.5 MW and at 80% PLF and the CER calculations presented in the spreadsheet is for the same. Hence on the basis that the plant will not claim CERs for more than 4.5 MW at 80% PLF, CAR14 was closed and this shall also be checked during verification period.

CAR16 was raised as during the site visit it was found that Mango wood and other mixed wood is being used which are non-permitted biomass fuel and their subsequent usage to be clarified by either getting regulatory authority approval or by totally suspending any such activity. Also, the project proponent was asked to clarify clearances and permissions required along with their contractors to ensure biomass sustainability. The proponent responded by stating that the mango wood found at the site was supplied by the local biomass suppliers considering the wood as waste along with the regular fuels i.e. rice husk and agricultural waste. The wood was from the trees which were felled as part of the excavation of a canal in the district.

The project proponent has approached the local regulatory authorities to clarify on the use of woody biomass in the power plant and a letter seeking the clarification has been sent to the regulators with a due acknowledgement of the receipt of the letter from concerned authority. The true copy of the letter was submitted to the assessor which was verified and found OK. The management of BAOL had also informed the local biomass suppliers not to send woody biomass into the plant premises and only permitted biomass such as rice husk and agricultural waste will be allowed. Letters to the effect had been dispatched and were submitted to the assessor. An undertaking has been provided by the management of BAOL has given assurance in writing that they do not intend to use woody biomass will be used in the future and there would be no further procurement of the same during the life time of the project activity. Only permitted biomass will be used. Hence, CAR16 was closed.

Overall the project design document has covered all the substantive and editorial points required reasonably as verified.

3.6 Environmental Impacts

The PDD contained necessary information pertaining to the project requirements on the environmental assessment as per the local legislative procedures. This is evident from the fact that consents by the Andhra Pradesh State pollution control board was granted to the proponent during project inception stages which was verified on site by the assessor and water and air pollution control measures were in place as stated in the

PDD. The project does not require Environmental Impact Assessment studies as per the requirement Indian Law, Ministry of Environment and Forest (MoEF), Government of India notification. NIR9 was raised asking the proponent to justify the same. The proponent replied by submitting the Environmental Impact Assessment notification, 1994. These were verified and were found OK, NIR9 was closed.

3.7 Local Stakeholder Comments

A local stakeholder consultation was held on 23rd November, 2006. A list of stakeholders consulted is available in the PDD. NIR2 was raised as the media used to invite Local Stakeholder consultation meeting was not clear. BAOL responded by stating that they had issued a formal letter of invitation. The letters of invitation and acknowledged copies were submitted to the local assessors which were verified on site. Hence NIR2 was closed.

NIR3 was raised asking the proponent to provide documentary evidence (MoM) to ascertain due account has been taken for stakeholder consultation process for CDM and for clarity of comments as reported in PDD. This was responded by the proponent by providing the attendance sheet and the documents on discussion/viewpoint and these conformed to the site visit and document reviews. Hence, NIR3 was closed. The local assessor had conducted interviews and verified document during the site visit and the finding confirm to responses and details provided in the PDD Version 3. A No-Objection certificate from the Local Village Panchayat has also been obtained by the proponent and verified.

4 Comments by Parties, Stakeholders and NGOs

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This chapter describes this process for this project.

4.1 Description of How and When the PDD was Made Publicly Available

The PDD and the monitoring plan for this project were made available on the SGS website <http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=219> and were open for comments from 27th February 2007 until 28th March 2007. Comments were invited through the UNFCCC CDM homepage

<http://cdm.unfccc.int/Projects/Validation/DB/CR5OLTZXJG8F85U3YG0YZ9T5BFRPID/view.html>

4.2 Compilation of All Comments Received

The project has not received any ISHC comments

4.3 Explanation of How Comments Have Been Taken into Account

The project has not received any ISHC comments

5 Validation Opinion

SGS India Pvt. Ltd., an affiliate of SGS United Kingdom Ltd. has made a validation of the CDM project activity “Biomass based power project of Balaji Agro Oils Ltd” by Balaji Agro Oils Ltd, Davuluru village, Krishna district of Andhra Pradesh state in India. The Validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting. Using a risk based approach, the review of the project design documentation and the subsequent follow-up interviews have provided SGS with sufficient evidence to determine the fulfilment of the stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project will hence be recommended by SGS for registration with the UNFCCC.

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

By using biomass as fuel for generation of electricity, the project results in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change. A review of the Other Barrier (Financial resource) demonstrates that the proposed project activity was 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. The project is already implemented and is likely to achieve the estimated amount of emission reductions **16963 tCO₂e per annum**.

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

The DOE declares herewith that in undertaking the validation of this proposed CDM project activity it has no financial interest related to the proposed CDM project activity and that undertaking such a validation does not constitute a conflict of interest which is incompatible with the role of a DOE under the CDM.

6 List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
2 nd April 2007	Mr Suraj Kumar	Managing Director	CDM consideration for the project activity ODA queries SHC Invitations Local Legislative policies Management structure for the proposed activity
2 nd April 2007	Mr Bhanu Prasad	Director Technical	Technical details of the project activity CDM consideration Project boundary SHC meeting and proceedings Monitoring plan and implementation Environmental impacts Desk review findings
2 nd April 2007	Mr V Chandrashekar	Manager Finance	ODA queries IRR Calculations Management structure for the proposed activity
2 nd April 2007	Mr Jayanth Chetlur	Consultant	Project Design Document Baseline Information Project Boundary Project Additionality Monitoring plan CER Calculations Verification of desk review findings
2 nd April 2007	Mr M Sreenivasa Reddy	Sarpanch (Davuluru)	SHC invitation, meeting and proceeding Welfare activities
2 nd April 2007	Ms D Bapuji	Panchayat Secretary (Davuluru)	SHC meeting and proceeding Verification of SHC comments
2 nd April 2007	Mr N Kamala Kannan	Boiler Incharge	Maintenance and Training Local Welfare
2 nd April 2007	Mr Rani Babu	Supplier	SHC and project activity view
2 nd April 2007	Mr M Bhagaya Raja	Villager	SHC and project activity view

7 Document References

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

- /1/ HCA letter by MoEF, Government of India (F-4/3/2007-CCC)
- /2/ Modalities of Communication
- /3/ Project Design Document: Version1 dated 21st February 2007
- /4/ Project Design Document Version 2 dated 20th April 2007
- /5/ Project Design Document Version 3 dated 10th July 2007

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

- /6/ CEA data Version 1.1
- /7/ Certified copy of resolution by Board of Directors (For CDM Consideration at project inception stage)
- /8/ Consents from APPCB to establish and operate.
- /9/ DPR of the project activity
- /10/ Letter to APPCB -
- /11/ MoEF EIA notification(s)
- /12/ PO copies for Turbine and Boiler
- /13/ Power Purchase Agreement between APTRANSCO and SPPPL
- /14/ SHC Attendance sheet
- /15/ SHC Invitation Letters
- /16/ SHC Questions & Comments
- /17/ Socio Economic Impact Assessment of Biomass Power Plant in India by ASCI, Hyderabad
- /18/ Staff Competency from Boiler Inspector of Andhra Pradesh

A.1 Annex: 1 Local Assessment Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Specifications mentioned in PDD for the CDM project activity.	DR	SV	Purchase orders of boiler and turbine received from the project proponent mentions the specification as described in the PDD.	OK	OK
Proof of calculation of Emission reduction mentioned in PDD	DR/I	SV	The excel sheet provided was checked and found OK. Historical data for generation has been taken for calculating of CERs.from 2002 – 2006	OK	OK
Fossil fuel co firing	DR	SV	Coal is being co-fired also mentioned in the PDD and accounted for.	OK	OK
Project boundary	SV	SV	It was found that the installed turbine is of 6 MW capacity. This is not clear in the PDD. Justification required	CAR 14	OK
ODA	DR	SV	No ODA is used.	OK	OK
Monitoring Plan	DR/I	SV	The management structure is not robust. It does not ensure comprehensive QA/QC. Clarification is required. Parameters to be monitored are not in accordance with the methodology	CAR15 CAR 17	OK
Environmental Impacts and EIA clarification	DR	SV	Proof of EIA is not required; obtained from project proponent in the form of Notification. Also, documentation on EMP obtained from SPPPL.	OK	OK
Local Legislative clearances	DR	SV	Gram Panchayat Clearance has been obtained. It was found that Mango wood and other mixed wood is being used which are non-permitted biomass fuels. The consent to operate or establish by APPCB does not have any provisions. Their subsequent usage has to be clarified by either getting regulatory authority approval or by totally suspending any such activity. The project proponent should clarify clearances and permissions required along with their contractors to ensure biomass sustainability.	CAR 16	OK
PPA	DR	SV	Copy of PPA provided by the BAOL which states that 4.5 MW will be exported to the grid.	Pending CAR 14	OK



CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
Verification of Stakeholder consultation process	I/DR	SV	Stakeholders were interviewed and the conformance to SHC process was observed..	OK	OK
Validate Project Design Engineering reflects good practice	DR	SV	The DPR and PO copies of the project activity have been reviewed and the project design engineering reflects good practice.	OK	OK
Small scale project activity is not a debundled component of a larger project	I/DR	SV	Small scale project activity is not a debundled component of a larger project.	OK	OK
Specifications mentioned in PDD for the CDM project activity.	DR	SV	Purchase orders of boiler and turbine received from the project proponent mentions the specification as described in the PDD.	OK	OK
Proof of calculation of Emission reduction mentioned in PDD	DR/I	SV	The excel sheet provided was checked and found OK. Historical data for generation has been taken for calculating of CERs.from 2002 – 2006	OK	OK

A.2 Annex 2: Validation Protocol

Table 1 Participation Requirements for Clean Development Mechanism (CDM) Project Activities (Ref PDD, Letters of Approval and UNFCCC website) All CDM project activities

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
1.1 The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	DR	PDD	The project will assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3. However, no Annex-1 participant has been identified so far.	OK	OK
1.2 The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	DR	PDD	Yes, The project activity is likely to contribute to sustainable development. Host Country Approval from Designated National Authority is to be submitted by the client.	CAR1	OK
1.3 All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	DR	UNF CCC	Yes, India has ratified the protocol on 26 th August 2002 and is allowed to participate. http://unfccc.int/parties_and_observers/parties/items/2109.php	OK	OK
1.4 The project results in reductions of GHG emissions or increases in sequestration when compared to the baseline; and the project can be reasonably shown to be different from the baseline scenario	DR	PDD	Yes, The project activity results in reduction of CO2 emissions by using Biomass (Rice Husk, Groundnut shells, Coconut waste, Cotton waste) and coal for co-firing as fuel for generation of electricity to the southern grid of India which would otherwise be from predominately fossil fuel based power plants.	OK	OK

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
1.5 Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days (45 days for AR projects), and the project design document and comments have been made publicly available	DR	UNFCCC web	<p>The project was listed on UNFCCC website from 27th February 2007 to 28th March 2007</p> <p>http://cdm.unfccc.int/Projects/Validation/DB/CR5OLTZXJG8F85U3YG0YZ9T5BFRPID/view.html</p> <p>The project was listed on SGS climate change website from 27th February 2007 to 28th March 2007</p> <p>http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=219</p>	OK	OK
1.6 The project has correctly completed a Project Design Document, using the current version and exactly following the guidance	DR	PDD	Yes, the guidelines for completing the PDD has been followed , except some pending closure of CARs and NIRs	Pending	OK
1.7 The project shall not make use of Official Development Assistance (ODA), nor result in the diversion of such ODA	DR	PDD/SV	No ODA is used as per PDD. To be checked during site visit.	TBC	OK
1.8 For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?	DR	PDD	Not Applicable	Not Applicable	OK
1.9 Does the project meet the additional requirements detailed in: Table 9 for SSC projects Table 10 for AR projects Table 11 for AR SSC projects	DR	PDD	Refer Table 9	Pending	OK
1.10 Is the current version of the PDD complete and does it clearly reflect all the information presented during the validation assessment.	DR	PDD	The version of PDD used by project proponent presents almost all information, except pending closure of some CAR/ NIR.	Pending	OK

REQUIREMENT	MoV	Ref	Comment	Draft finding	Concl
1.11 Does the PDD use accurate and reliable information that can be verified in an objective manner?	DR	PDD	Pending CAR and NIR	Pending	OK

Table 2 Baseline Methodology(ies) (Ref: PDD Section B and E and Annex 3 and AM) Normal CDM projects only

CHECKLIST QUESTION	Ref	MoV	COMMENTS	Draft Concl	Final Concl
	.	*			
7.1 Have relevant stakeholders been consulted?	DR	PD D	The brief list of local stake holders identified is provided. List of stakeholders consulted has to be checked	TBC	OK
7.2 Have appropriate media been used to invite comments by local stakeholders?	DR	PD D	The media used to invite comments for the stakeholder consultation as per PDD is not clear.	NIR2	OK
7.3 If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	DR	PD D	Stake holder consultation process is not required as per law; however Stake holder consultation was carried out as per CDM requirement. MOM to be provided	NIR3	OK
7.4 Is a summary of the stakeholder comments received provided?	DR	PD D	Summary of the stakeholder comments received is not clear. Supporting documents to be verified during site visit	TBC	OK
7.5 Has due account been taken of any stakeholder comments received?	DR	PD D	How due account has been taken on any stakeholder comment is not clear. To be checked	TBC	OK

Table 8 Other Requirements All CDM project activities

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.1 Project Design Document					
8.1.1 Editorial issues: does the project correctly apply the PDD template and has the document been completed without modifying/adding headings or logo, format or font.	DR	PDD	The PDD template is followed.	OK	OK
8.1.2 Substantive issues: does the PDD address all the specific requirements under each header. If requirements are not applicable / not relevant, this must be stated and justified	DR	PDD	To be checked	TBC	OK
8.2.1 Does the project design engineering reflect current good practices?	DR	PDD	The project design engineering does conform to better practices. To be checked	TBC	OK
8.2.2 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	PDD	The project use of technology does improve performance however few Clarifications are required	NIR4	OK
8.2.3 Is the project technology likely to be substituted by other or more efficient technologies within the project period?	DR	PDD	Not mentioned in PDD clearly.	NIR5	OK
8.2.4 Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	DR	PDD	Not mentioned in PDD clearly.	NIR6	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
8.3 Duration of the Project/ Crediting Period					
8.3.1 Are the project's starting date and operational lifetime clearly defined and reasonable?	DR	PDD	The project starting date and operational life time (20 years) are clearly defined. Clarification and proof on starting date to be provided.	CAR7	OK
8.3.2 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)?	DR	PDD	A fixed crediting period of 10 years is selected.	OK	OK
8.3.3 Does the project's operational lifetime exceed the crediting period	DR	PDD	Yes, the operational lifetime period (20 years) exceeds the crediting period (10 years)	OK	OK

Table 9 Additional Requirements for SSC project activities only

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
SSC projects use the SSC PDD and simplified baseline and monitoring methodologies as detailed in Appendix B (to the Modalities and Procedures for Small scale CDM projects, Annex II to Decision 21/CP.8) Indicative simplified baseline and monitoring methodologies for selected small scale CDM project activity categories					
9.1 Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?	DR	PDD	Yes, the project qualifies as a small scale project activity in Type (I) category.	Ok	OK
9.2 The project conforms to one of the categories listed in Appendix B to Annex II to Decision 21/CP8	DR	PDD	The Project conforms to Small Scale project activity of AMS 1D	OK	OK
9.3 The small scale project activity is not a debundled component of a larger project	DR	PDD	Small scale project activity is not a debundled component of a	TBC	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
activity?			larger project. To be checked		
9.4 PDD has been prepared in accordance with appendix A of Annex II to Decision 21/CP8	DR	PDD	PDD Template is followed.	OK	OK
9.5 The project uses a simplified baseline and monitoring methodology specified in Appendix B. If not, they may propose changes to the meths or a new SSC project category	DR	PDD	The project uses a simplified baseline and monitoring methodology specified in Appendix B.	OK	OK
9.6 Are the emission reductions determined in accordance with the methodology described	DR	PDD	Emission reductions have to be verified	NIR8	OK
9.7 Is there any bundling of SSC activities into one PDD? If so, does the monitoring plan consider sampling of activities? Refer to para 19 of Annex II. Also, note bundling provisions in SSC Briefing Note and SSC meths I C / I D and III D and Para 22e of Appendix B	DR	PDD	NO, there is no bundling of SSC activities into one PDD.	OK	OK
9.8 Is EIA required by host party? If not, none is required irrespective of SHC. If yes, has one been performed consistent with local requirements?	DR	PDD	EIA is not required by Host party, proof required.	NIR9	OK
9.9 The project results in emission reductions that are additional in accordance with the following requirements: <ul style="list-style-type: none"> (para 26) The project is additional if emissions are reduced below those in the absence of the project (Para 27) Simplified baseline can be used; if not, baseline proposed shall 	DR	PDD B.3	Other Barrier (Financial and policy barrier) is not clear	CAR10	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl	Final Concl
cover all gases, sectors and sources listed in Annex A to the KP <ul style="list-style-type: none"> Para 28) One or more barriers as detailed in attachment A to Appendix B to Annex II will be used to demonstrate that the project would not proceed without the CDM 					
9.10 Leakage is calculated according to the provisions of the SSC methodologies in Appendix B (http://cdm.unfccc.int/Projects/pac/ssclistmeth.pdf)	DR	PDD	Leakage is considered. Documentary evidence is required.	NIR11	OK
9.11 The project boundary shall be constructed in accordance with the requirements of the SSC meths in Appendix B	DR	PDD	The project boundary is not clear	CAR12	OK
9.12 The Monitoring plan shall be consistent with the requirements of the SSC methodology in Appendix B and shall provide for the collection and archiving of data needed to determine project emissions, baseline emissions and leakage.	DR	PDD	Monitoring plan appears to be consistent, however few clarifications are required	NIR 13	OK
9.13 The monitoring plan shall present good monitoring practice appropriate to the circumstances of the project activity (para 33)	DR	PDD	Pending NIR 13	Pending	OK
9.14 If project activities are bundled, separate monitoring plan shall be prepared for each of the activities or an overall plan reflecting good monitoring practice will be prepared, consistent with the above requirements	DR	PDD	No, the project is not a bundled project activity.	OK	OK

8 Annex: 3 Findings Overview

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
1	CAR	No letter of approval from Host DNA available	1.2
Date: 4th April 2007			
The DNA meeting was held on 30th March 2007 where in BAOL has presented its case. The HCA is expected by end of April 2007.			
Date: 22 nd May 2007 [Comments from local assessor] To be provided, CAR1 cannot be closed.			
Date: 8th June 2007			
The HCA letter has been provided for ready reference.			
Date: 22 nd June 2007 [Kamesh][Comments from local assessor] HCA for the project activity has been submitted. F-No 4/23/2007 - CCC. CAR1 could be closed.			
Date: 22 June 2007 [Pankaj Mohan] [Acceptance and close out] OK CAR1 closed			

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
2	NIR	Media used for the stake holder Consultation Meeting is not clear. Documentary evidence to be provided	7.2
Date: 4th April 2007			
The stakeholders were invited by issuing a formal letter of invitation by BAOL. The sample copies of the letter of invitation and acknowledge from the stakeholder is attached for ready reference.			
Date: 22 nd May 2007 [Kamesh] [Comments from local assessor] The invitation letters sent out by the project proponent has been verified. The letters are duly acknowledged by the concerned and present the same set as verified during the site visit. NIR2 could be closed.			
Date: 22 June 2007 [Pankaj Mohan] [Acceptance and close out] OK NIR2 closed			

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
3	NIR	Minutes of the Meeting to be provided to ascertain stakeholder consultation was carried out for CDM	7.3
Date: 4th April 2007			
The attendance sheet and minutes of the meeting have been recorded. The same are being submitted for your ready reference.			
Date: 22 nd May 2007 [Kamesh] [Comments from local assessor] The attendance sheet has been verified and interviews have been conducted during the site visit. Documents on discussion/viewpoint and concern have been presented as minutes and they conform to the activity undertaken as observed during site visit interviews. NIR3 could be closed.			
Date: 22 June 2007 [Pankaj Mohan] [Acceptance and close out] OK NIR3 closed			

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
4	NIR	Kindly clarify what is the trend with respect to use of technology in the region to ascertain that the project technology is better than other commonly used technologies in the region.	8.2.2

Date: 4th April 2007

The most common types of boilers used are either FBC or travel grate type. The project is installed with FBC type of boiler which is more energy efficient than travel grate type. Though travelling grate boilers are capable to handle variety of biomass fuels efficiently, FBC was chosen considering its higher efficiency and usage of few kinds of biomass materials in the plant

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] NIR4 could be closed based on the above explanation as it confirms with practices in the region.

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK NIR4 closed

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
5	NIR	Proof required that the project technology would not be substituted by other or more efficient technologies within the project period.	8.2.3

Date: 4th April 2007

BAOL is using a well established and efficient technology for their power plant. The management of BAOL does not intend to shift / change the technology of the power plant during the lifetime of the project activity and has also intimated the same through a formal letter. The copy of the same has been enclosed for ready reference.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] A self undertaking dated 28-03-2007 has been provided by the project proponent, which defines the above statement. NIR5 can be closed on the same basis.

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK NIR5 closed

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
6	NIR	The project's requirement on extensive initial training and maintenance efforts in order to work as presumed during the project is not clear. Please explain.	8.2.4

Date: 4th April 2007

Skilled manpower is available in the region. Only qualified personnel are engaged for technical jobs i.e. person with boiler operating certificate, experience in running TG and these persons are also provided on the job training. Hence, no extensive training and maintenance efforts were required to bring in the competency levels. However, initial training related to the area of work was provided to the personnel in the plant.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] Interviews conducted on-site confirm the on job training provided. However document supporting should be provided.

Date: 8th June 2007

The qualifications and the experience of the personnel working with BAOL and also the boiler operating certificates have been provided as documentary evidence.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] The certificates from the boiler Inspectorate has been provided and verified. NIR6 could be closed.

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK NIR6 closed

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
7	CAR	Project starting date proof required. It is not clear why the proponent has taken considerable time to prepare the PDD. Please explain.	8.3.1

Date: 4th April 2007

The construction of the project started during the year 2001. The PO issued for TG and Boilers is attached as proof of start date of the project activity. The plant was synchronized with APTRANSCO on 26th May 2003. The letter from APTRANSCO indicating the synchronization date is attached for reference. Commercial operation started on 2nd June 2003.

During 2001, when the board of directors of BAOL decided to formally taken up the biomass power project as a CDM project activity to avail financial benefits by registering with UNFCCC, there were no projects (neither small / large scale of any category) registered under such initiative with UNFCCC until late 2004. The first CDM project which was registered with UNFCCC from India was in March 2005 which was developed based on AM0001 methodology. The first project developed under AMS ID was registered in May 2005 which was a mustard crop residue based power project in Rajasthan. The biomass based power project registered from the Andhra Pradesh was in August 2006. As can be seen from the above, there were no projects registered under CDM with UNFCCC till March 2005 from India.

Considering the uncertainty which prevailed during the early stages of the introduction of CDM as there were no clear guidelines for undertaking the CDM project, the project proponent wanted to wait and watch the progress in the CDM activity in the country as the project was still under construction. The project proponents were also sceptic about the price offered for the CERs and if they would get payments in advance before they went ahead with the document preparation for CDM activity to cover their consultancy, validation and registration charges and various other parameters.

The project proponent first approached consultants during the year 2004, after the commissioning of the project activity in 2003, for assistance in preparation of the required documents as per the requirements of UNFCCC for a CDM project activity. However, due to financial considerations, such as payment of fee to the consultants, validators and UNFCCC for registration of the CDM activity, the pursuit was not taken forward. The letter of correspondence from the project proponent to the consultant is attached for ready reference.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor]

The PO copies and DPR of the project activity has been submitted. Reasons stated confirm with the interviews undertaken during site Visit. Correspondence between the approached consultant and proponent has been verified. However, a legible original certified copy of Board Minutes is required as the photocopy of the document is unclear.

Date: 8th June 2007

The copy of the original certified board minutes has been provided,

Date: 22nd May 2007 [Kamesh] [Comments from local assessor]

The certified copy of the Board Minutes has been submitted, CAR7 could be closed

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK CAR7 closed

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
8	NIR	Excel sheet/ worksheet required for CERs calculation to ascertain that the emission reductions determined are in accordance with the methodology described	9.6

Date: 4th April 2007

The CER calculation sheet has been enclosed for ready reference. All the calculation is as per the approved methodology.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor]

The CER calculation sheet provided have been verified and the calculations and assumptions made are reasonable. NIR8 could be closed.

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK NIR8 closed

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
9	NIR	Copy of Notification required that EIA is not required by Host party	9.8

Date: 4th April 2007

The copy of the EIA notification, 1994 is enclosed for ready reference which exempts projects like BAOLs' from submitting an EIA and obtaining clearances from MoEF. The notification was in force during the commissioning of the project activity.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] The EIA notification, 1994 has been provided by the project proponent and NIR9 can be closed as indeed as per the notification EIA is not required .

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK NIR9 closed

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
10	CAR	<u>Other Barrier (Financial Resources)</u> <ol style="list-style-type: none"> 1) Fuel Price and cost of generation to be justified. 2) IRR calculations are not clear. 3) Proof required for changes in tariff. 4) Biomass assessment report is to be provided to ascertain surplus biomass is available in the region 5) Power Purchase Agreement between APTRANSCO and Project proponent is to be provided 	9.9

Date: 4th April 2007

- 1) Sample copies of the invoices dating back from 2004-05 to till date have been enclosed for ready reference. This will provide justification for the price rise of fuel. The cost of generation based on the fuel cost other expenditure has been certified by a chartered accountant and the same is enclosed for reference.
- 2) The IRR calculations have been done based on the actual cost and expenditure incurred from the start date of the project activity and the estimated price rise over the years to come. The calculation sheets of the IRR considering the CDM funds and without CDM funds have been attached for ready reference.
- 3) The APERC regulation issuing the notification for the change in price rise has been attached for reference.

<p>4) Biomass assessment for the region was carried out by Administrative Staff College of India (ASCI), Hyderabad. This was part of the overall state level study. The copy of the same has been enclosed for reference.</p> <p>5) PPA between BAOL and APTRANSCO has been attached for reference.</p>			
<p>Date: 22nd May 2007 [Kamesh] [Comments from local assessor] The sample copies of the invoices have been submitted which provide justification for rise in fuel. The cost of generation based on fuel cost has been certified by the CA. These figures and copies were verified. The APERC regulation issuing change in notification for the change in price rise has been submitted and the verified. Biomass Assessment report affirms surplus biomass availability. PPA has also been submitted. However IRR calculation spreadsheet with formulae for clarity is required. Also, clarify on the benchmark considered with documentary evidence as the revised PDD does not indicate it.</p>			
<p>Date: 8th June 2007</p> <p>The IRR calculation spread sheet has been provided for verification. The benchmark considered for the IRR is the standard returns prescribed for the power projects by Central Electricity Authority (CEA) i.e. 16%. The references for the same have been provided in the PDD.</p>			
<p>Date: 22nd June 2007 [Kamesh] [Comments from local assessor] The IRR spreadsheet provided does not detail out the calculations properly, the interest calculations does not match with the assumption 2 detailed and the basis for the interest from the year 2011 – 2017 does not have a basis or assumption. Kindly explain.</p>			
<p>Date: 22nd June 2007</p> <p>The interest calculation for the year 2011-2017 has been calculated assuming that Balaji Agro will use the entire Rs. 100.0 Lakhs allotted to them in their OD account, by the bank, every year for the project activity, at the interest rate specified. However, during the particular year, BAOL might or might not use the entire amount and interest will be paid on the amount utilized by them. To be on the conservative side Rs. 10 lakhs for the year 2011-2017 has been considered to calculate the IRR.</p>			
<p>Date: 26th June 2007 [Kamesh] [Comments from local assessor] The following things are not clear. What is the total principal amount considered under interest charges? According to the explanation provided for the years 2003 – 2006 actual figures are considered. However it should be indicated to what amount are the interest charges paid for the following years likewise point 2 is to be justified. Please provide a spreadsheet with complete formulae to clarify all the points.</p>			
<p>Date: 27th June 2007</p> <p>The revised IRR calculation sheet has been attached with the detailed interest calculation, Depreciation calculation and CDM revenue consideration sheets.</p>			
<p>Date: 4th July 2007 [Kamesh] [Comments from local assessor] The detailed IRR calculation sheet has now been submitted and has been verified and has sufficiently addressed queries. A CA certificate for the calculations has also been submitted. CAR10 could be closed.</p>			
<p>Date: 22 June 2007 [Pankaj Mohan] [Acceptance and close out] OK CAR10 closed</p>			

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
11	NIR	Leakage due to transportation is calculated and considered negligible. however documentary evidence is required.	9.10
<p>Date: 4th April 2007</p> <p>The documentary evidence for the same has been attached for ready reference.</p>			
<p>Date: 22nd May 2007 [Kamesh] [Comments from local assessor] The biomass assessment report is</p>			

submitted and surplus availability is shown. Also, the calculations for transport emissions are verified and leakage can be considered negligible. The annual assessment of biomass shall be verified for the next monitoring period. Hence, NIR11 could be closed.

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK NIR11 closed

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
12	CAR	Project boundary is not clear.	9.11

Date: 4th April 2007

The steam turbine is an extraction type with controlled bleeds for de-aerator feed water heating and as process steam to the other unit in the project premises. The same was mentioned in the schematic diagram of the project boundary. Since the project boundary applicable to the methodology used is only from the biomass procurement till the electricity transmission, the changes have been made accordingly. The revised PDD is enclosed for reference.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] The project boundary is now clear and the justification is reasonable. CAR12 can be closed.

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK CAR12 closed

Date: 25th March 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
13	CAR	Monitoring plan is not clear; issues on collection and archiving are not adequate. Section B.7.1 monitoring QA/QC procedures lack clarity.	9.12

Date: 4th April 2007

A detailed monitoring plan has been provided in the PDD as Annex – 3. To stream line the monitoring plan and bring in QA – QC procedures, a Standard Operating Procedures (SOP) specifically for BAOL management is on the final stages of completion and will be put in place. All the logs and records already existing with BAOL will be synchronized with the SOPs.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] Annex 3 in the revised PDD is Baseline information. Justify.

Also, please provide the SOP.

Date: 8th June 2007

The SOPs will be prepared and put in place by the time of verification as per the monitoring plan is provided in Annex – 4 of the PDD.

Date: 22nd June 2007 [Kamesh] [Comments from local assessor]

There was a misquoted reply by the proponent. CAR13 could be closed based on assurance that SOPs will be checked during verification.

Date: 22 June 2007 [Pankaj Mohan]

[Acceptance and close out] OK CAR13 closed

Date: 3rd April 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
14	CAR	It was found that the installed turbine is of 6 MW capacity. This is not clear in the PDD. Justification required	SV

Date: 4th April 2007

During the construction of the project activity, BAOL issued a PO for 6 MW capacity TG anticipating the clearances from various statutory body for the proposed capacity. However, the State Pollution Control Board issued a NOC for only generation of 4.5 MW and PPA with APTRANSCO has been

signed for only generation and transmission of 4.5 MW that too at 80% PLF. Hence, from the date of commercial production, BAOL has been operating the TG at less than 4.5 MW capacity only.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] The revised PDD Version3 does have a mention of the installed capacity. The emission reductions are calculated as only for 4.5 MW running. CAR14 can be closed based on the argument and the fact that the emission reductions claimed shall be only for the 4.5 MW generation at 80% PLF.

Date: 22 June 2007 [Pankaj Mohan]
[Acceptance and close out] OK CAR14 closed

Date: 3rd April 07 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
15	CAR	The management structure is not robust. It does not ensure comprehensive QA/QC. Clarification is required	SV

Date: 4th April 2007

A detailed management structure and flow of information has been provided. Additional responsibilities have been put on those who have been identified as part of the CDM team. Please refer to the revised PDD. BAOL is also developing Standard Operating Procedure (SOP) for all the activities related to the power plant.

Date: 22nd May 2007 [Kamesh] [Comments from local assessor] The management structure has been detailed in the revised PDD Version3.

Date: 22 June 2007 [Pankaj Mohan]
[Acceptance and close out] OK CAR15 closed

Date: 3rd April 07 Raised by: Pankaj Mohan

No.	Type	Issue	Ref
16	CAR	It was found that Mango wood and other mixed wood is being used which are non-permitted biomass fuel. The consent to operate or establish by APPCB does not have any provisions. Their subsequent usage has to be clarified by either getting regulatory authority approval or by totally suspending any such activity. The project proponent should clarify clearances and permissions required along with their contractors to ensure biomass sustainability.	Site Visit

Date: 4th April 2007

The mango wood found at the site was supplied by the local biomass suppliers considering the wood as waste along with the regular fuels i.e. rice husk and agricultural waste. The wood was from the trees which were felled as part of the excavation of a canal in the district.

The project proponent has approached the local regulatory authorities to clarify on the use of woody biomass in the power plant and a letter seeking the clarification has been sent to the regulators with a due acknowledgement of the receipt of the letter from concerned authority. The true copy of the letter is attached for ready reference.

Apart from the aforementioned, the management of BAOL has also informed the local biomass suppliers not to send woody biomass into the plant premises and only permitted biomass such as rice husk and agricultural waste will be allowed. A board displaying the permitted biomass is also being put up on the main entrance of the plant and the security personnel are informed to check the load before it enters the plant premises.

The management of BAOL has given assurance in writing that they do not intend to use woody biomass will be used in the future and there would be no procurement of the same during the life of the project activity. Only permitted biomass will be used. The letter of assurance provided by the

management of BAOL is privileged and confidential.
Date: 22 nd May 2007 [Kamesh] [Comments from local assessor] The acknowledged letter addressed to the local environmental agency has been provided. The letter of assurance from BAOL management has been obtained. During verification this activity shall be checked and confirmed. However, copy of instructions issued to biomass suppliers is required.
Date: 8th June 2007
The copy of the letter issued to the biomass suppliers instructing them not to supply woody biomass has been provided for reference.
Date: 22 nd May 2007 [Kamesh] [Comments from local assessor] The letter addressed to biomass supplier has been submitted and verified and looks reasonable. CAR16 could be closed.
Date: 22 June 2007 [Pankaj Mohan] [Acceptance and close out] OK CAR16 closed

Date: 3rd April 07

Raised by: Pankaj Mohan

No.	Type	Issue	Ref
17	CAR	It was found that Section B.7.1 on parameters to be monitored were not in accordance to the PDD	Site Visit
Date: 4th April 2007			
The PDD has been modified accordingly and the revised PDD is attached for reference.			
Date: 22 nd May 2007 [Kamesh] [Comments from local assessor] Revised PDD has incorporated the parameters. CAR17 could be closed.			
Date: 22 June 2007 [Pankaj Mohan] [Acceptance and close out] OK CAR17 closed			

A.4 Annex 4: Validation Members Statements of Competency

Statement of Competence

Name: Pankaj Mohan

SGS Affiliate: SGS India Pvt. Ltd.

Status

- Product Co-ordinator ☐
- Operations Co-ordinator ☐
- Technical Reviewer ☐
- Expert ☒

Validation

Verification

- | | | |
|-------------------------|-------------------------------------|-------------------------------------|
| - Local Assessor | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Lead Assessor | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Assessor | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| / Trainee Lead Assessor | | |

Scopes of Expertise

- | | |
|--|-------------------------------------|
| 1. Energy Industries (renewable / non-renewable) | <input checked="" type="checkbox"/> |
| 2. Energy Distribution | <input checked="" type="checkbox"/> |
| 3. Energy Demand | <input checked="" type="checkbox"/> |
| 4. Manufacturing | <input checked="" type="checkbox"/> |
| 5. Chemical Industry | <input type="checkbox"/> |
| 6. Construction | <input type="checkbox"/> |
| 7. Transport | <input type="checkbox"/> |
| 8. Mining/Mineral Production | <input type="checkbox"/> |
| 9. Metal Production | <input type="checkbox"/> |
| 10. Fugitive Emissions from Fuels (solid,oil and gas) | <input type="checkbox"/> |
| 11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride | <input type="checkbox"/> |
| 12. Solvent Use | <input type="checkbox"/> |
| 13. Waste Handling and Disposal | <input type="checkbox"/> |
| 14. Afforestation and Reforestation | <input type="checkbox"/> |
| 15. Agriculture | <input type="checkbox"/> |

Approved Member of Staff by: Marco van der Linden

Date: 03-04-07



Statement of Competence

Name: Kamesh Iyer

SGS Affiliate: India

Status

- Product Co-ordinator ☐
- Operations Co-ordinator ☐
- Technical Reviewer ☐
- Expert ☐

Validation

Verification

- | | | |
|---------------------------|-------------------------------------|-------------------------------------|
| - Local Assessor | <input checked="" type="checkbox"/> | <input checked="" type="checkbox"/> |
| - Lead Assessor | <input type="checkbox"/> | <input type="checkbox"/> |
| - Assessor | <input type="checkbox"/> | <input type="checkbox"/> |
| - / Trainee Lead Assessor | | |

Scopes of Expertise

- | | |
|---|--------------------------|
| 1. Energy Industries (renewable / non-renewable) | <input type="checkbox"/> |
| 2. Energy Distribution | <input type="checkbox"/> |
| 3. Energy Demand | <input type="checkbox"/> |
| 4. Manufacturing | <input type="checkbox"/> |
| 5. Chemical Industry | <input type="checkbox"/> |
| 6. Construction | <input type="checkbox"/> |
| 7. Transport | <input type="checkbox"/> |
| 8. Mining/Mineral Production | <input type="checkbox"/> |
| 9. Metal Production | <input type="checkbox"/> |
| 10. Fugitive Emissions from Fuels (solid,oil and gas) | <input type="checkbox"/> |
| 11. Fugitive Emissions from Production and
Consumption of Halocarbons and Sulphur Hexafluoride | <input type="checkbox"/> |
| 12. Solvent Use | <input type="checkbox"/> |
| 13. Waste Handling and Disposal | <input type="checkbox"/> |
| 14. Afforestation and Reforestation | <input type="checkbox"/> |
| 15. Agriculture | <input type="checkbox"/> |

Approved Member of Staff by Siddharth Yadav Date: 11/07/2007