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Validation Report

Recogen Limited

VALIDATION OF THE CDM-PROJECT:
COCONUT SHELL CHARCOALING AND POWER GEN-
ERATION AT BADALGAMA, SRI LANKA

REPORT NO. 983233, REVISION 01

December 03, 2007

TÜV SÜD Industrie Service GmbH
Carbon Management Service
Westendstr. 199 - 80686 Munich – GERMANY

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Subject: Validation of a CDM Project			
Accredited TÜV SÜD Unit: TÜV SÜD Industrie Service GmbH Certification Body "climate and energy" Westendstr. 199 - 80686 Munich Federal Republic of Germany		TÜV SÜD Contract Partner: TÜV SÜD South Asia C-153/1, Okhla Industrial Estate Phase- 1 New Delhi – 110020 India	
Client: Recogen Limited 400, Deans Road Colombo – 10, Sri Lanka		Project Site(s): North Western province of Sri Lanka at Beatrice Estate, km 19 on Negambo-Katana Road, Badalgama	
Project Title: Coconut shell charcoaling and power generation at Badalgama, Sri Lanka			
Applied Methodology / Version:		AMS III.K. Version 01	Scope(s): 4
First PDD Version: Date of issuance: 2007-01-24 Version No.: 01 Starting Date of GSP 2007-02-21		Final PDD version: Date of issuance: 2007-10-16 Version No.: 05	
Estimated Annual Emission Reduction:		43,113 tons CO_{2e}	
Assessment Team Leader: Dr. Ayse Frey		Further Assessment Team Members: Sunil Kathuria	
Summary of the Validation Opinion:			
<input checked="" type="checkbox"/> The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board in case letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively.			
<input type="checkbox"/> The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence to determine the fulfilment of all stated criteria. Hence TÜV SÜD will not recommend the project for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board on this decision.			



Abbreviations

ACM	Approved Consolidated Methodology
AM	Approved Methodology
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEB	Ceylon Electricity Board
CER	Certified Emission Reduction
CR	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission reduction
GHG	Greenhouse gas(es)
IRR	Internal Rate of Return
KP	Kyoto Protocol
MP	Monitoring Plan
NGO	Non Governmental Organisation
PDD	Project Design Document
PP	Project Participant
PPP	Private Power Producers
SEMA	Strategic Enterprise Management Agency
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual

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1 INTRODUCTION

1.1 Objective

The validation objective is an independent assessment by a Third Party (Designated Operational Entity = DOE) of a proposed project activity against all defined criteria set for the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and will finally result in a conclusion by the executing DOE whether a project activity is valid and should be submitted for registration to the CDM-EB. The ultimate decision on the registration of a proposed project activity rests at the CDM Executive Board and the Parties involved.

The project activity discussed by this validation report has been submitted under the project title:

Coconut shell charcoaling and power generation at Badalgama, Sri Lanka

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of CDM project activities the scope is set by:

- The Kyoto Protocol, in particular § 12
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Decisions by the EB published under <http://cdm.unfccc.int>
- Specific guidance by the EB published under <http://cdm.unfccc.int>
- Guidelines for Completing the Project Design Document (CDM-PDD), and the Proposed New Baseline and Monitoring Methodology (CDM-NM)
- The applied approved methodology
- The technical environment of the project (technical scope)
- Internal and national standards on monitoring and QA/QC
- Technical guideline and information on best practice

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.

Once TÜV SÜD receives a first PDD version, it is made publicly available on the internet at TÜV SÜD's webpage as well as on the UNFCCC CDM-webpages for starting a 30 day global stakeholder consultation process (GSP). In case of any request a PDD might be revised (under certain conditions the GSP will be repeated) and the final PDD will form the basis for the final evaluation as presented by this report. Information on the first and on the final PDD version is presented at page 1.

The only purpose of a validation is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD 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.

2 METHODOLOGY

The project assessment aims at being a risk based approach and is based on the methodology developed in the Validation and Verification Manual, an initiative of Designated and Applicant Entities, which aims to harmonize the approach and quality of all such assessments.

In order to ensure transparency, a validation protocol was customised for the project. TÜV SÜD developed a “cook-book” for methodology-specific checklists and protocol based on the templates presented by the Validation and Verification Manual. The protocol shows, in a transparent manner, criteria (requirements), the discussion of each criterion by the assessment team 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 three tables. The different columns in these tables are described in the figure below.

The completed validation protocol is enclosed in Annex 1 to this report.

Validation Protocol Table 1: Conformity of Project Activity and PDD				
Checklist Topic / Question	Reference	Comments	PDD in GSP	Final PDD
<i>The checklist is organised in sections following the arrangement of the applied PDD version. Each section is then further subdivided. The lowest level constitutes a checklist question / criterion.</i>	<i>Gives reference to documents where the answer to the checklist question or item is found in case the comment refers to documents other than the PDD.</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. In some cases sub-checklist are applied indicating yes/no decisions on the compliance with the stated criterion. Any Request has to be substantiated within this column</i>	<i>Conclusions are presented based on the assessment of the first PDD version. This is either acceptable based on evidence provided (✓), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). Clarification Request (CR) is used when the validation team has identified a need for further clarification.</i>	<i>Conclusions are presented in the same manner based on the assessment of the final PDD version.</i>

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Clarifications and corrective action requests	Ref. to table 1	Summary of project owner response	Validation team conclusion
<i>If the conclusions from table 1 are either a Corrective Action Request or a Clarification Request, these should be listed in this section.</i>	<i>Reference to the checklist question number in Table 1 where the Corrective Action Request or Clarification Request is explained.</i>	<i>The responses given by the client or other project participants during the communications with the validation team should be summarised in this section.</i>	<i>This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 1, under "Final PDD".</i>

In case of a denial of the project activity more detailed information on this decision will be presented in table 3.

Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	Id. of CAR/CR 1	Explanation of the Conclusion for Denial
<i>If the final conclusions from table 2 results in a denial the referenced request should be listed in this section.</i>	<i>Identifier of the Request.</i>	<i>This section should present a detail explanation, why the project is finally considered not to be in compliance with a criterion.</i>

2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body “climate and energy”. The composition of an assessment team has to be approved by the Certification Body ensuring that the required skills are covered by the team. The Certification Body TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Greenhouse Gas Auditor (GHG-A)
- Greenhouse Gas Auditor Trainee (T)
- Experts (E)

It is required that the sectoral scope linked to the methodology has to be covered by the assessment team.

The validation team was consisting of the following experts (the responsible Assessment Team Leader in written in bold letters):

Name	Qualification	Coverage of technical scope	Coverage of sectoral expertise	Host country experience
Dr. Ayse Frey	ATL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	
Sunil Kathuria	GHG-A	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Dr. Ayse Frey is a lead auditor and assessment team leader for CDM/JI projects as well as an energy/waste expert at TÜV SÜD Industrie Service GmbH. In her position she is responsible for the implementation of validation, verification and certifications processes for greenhouse gas mitigation projects in the context of the Kyoto Protocol. After her studies in civil and environmental engineering, she completed a PhD in the field of water and waste policy. She has extensive experience with the CDM and JI flexible mechanisms as well as with management systems.

Sunil Kathuria is an electrical engineer and was a lead auditor for CDM projects and a lead auditor for quality and environmental management systems (according to ISO 9001 and ISO 14001) at TÜV SÜD South Asia, TÜV SÜD Group. He was based in New Delhi. In his position he was implementing validation, verification and certifications audits for CDM projects. He has received extensive training in the CDM validation process and has already participated in several CDM project assessments.

2.2 Review of Documents

The first PDD version submitted by the client and additional background documents related to the project design and baseline were reviewed as initial step of the validation process. A complete list of all documents and proofs reviewed is attached as annex 2 to this report.

2.3 Follow-up Interviews

In the period of March 1-2, 2007, TÜV SÜD performed interviews on-site with project stakeholders to confirm selected information and to resolve issues identified in the first document review. Annex 2 lists all persons interviewed in the context of this on-site visit.

2.4 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions and clarifications and any other outstanding issues which needed to be clarified for TÜV SÜD's positive conclusion on the project design. The Corrective Action Requests and Clarification Requests raised by TÜV SÜD were resolved during communication between the client and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are summarised in chapter 3 below and documented in more detail in the validation protocol in annex 1.

2.5 Internal Quality Control

As final step of a validation the validation report and the protocol have to undergo an internal quality control procedure by the Certification Body "climate and energy", i.e. each report has to be approved either by the head of the certification body or his deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one.

It rests at the decision of TÜV SÜD's Certification Body whether a project will be submitted for re-requesting registration by the EB or not.

3 SUMMARY OF FINDINGS

This section summarizes the main issues that were found and resolved during the validation process. A detailed listing of all findings is available in table 2 of the attached validation protocol (in annex 1 of this report).

The project activity involves construction of a mechanized charcoaling plant for converting coconut shells to charcoal using gasification cum pyrolysis process and utilization of the energy of released gases to generate electricity. The charcoal would have otherwise been produced in conventional open pits thereby releasing methane to the atmosphere. In the project activity, methane, other gases and vapours released in the process would be fully combusted to generate electricity. The electricity generated would be sold to the Ceylon Electricity Board (CEB). The charcoal production capacity in the project has been planned according to the demand projections of charcoal and its ultimate use in the region. To ensure that the baseline scenario is verified during the crediting period, a parameter has been included in the monitoring plan which is an “annual demonstration that in the absence of the project activity, pit charcoaling would have been used to produce charcoal”.

The main issues identified were:

1. Calculation of grid emission factor
2. Proof of additionality using the prevailing practice barrier
3. Missing parameters in Monitoring Plan
4. Verification of the methane emission factor for open pit charcoal manufacturing process (My,b)

Resolution of: 1. Calculation of grid emission factor

The main issue in the validation process was the calculation of the grid emission factor. In the first PDD version, it was not clear which option from AMS I.D. was being used: ex-ante or ex-post. It was clarified that the ex-ante option (a) was used and the grid emission factor is calculated according to ACM0002 version 06. Then, the project proponent had to demonstrate that dispatch data is not available and that low-cost/must run resources constitute less than 50% of grid electricity. This was done accordingly. The data for the state-owned power plants was available in the annual reports on the Ceylon Electricity Board's (CEB) website. However, the fuel consumption data for the Private Power Producers (PPPs) was not available on this website. Based on a Clarification Request, the project proponent received more accurate fuel consumption data from the Strategic Enterprise Management Agency (SEMA), which is the agency that oversees the CEB. This SEMA letter with the detailed breakdown of PPPs and their fuel consumption data was submitted to the audit team. The project proponent revised the OM and BM calculations based on this data and used the data vintage 2004-2006 instead of 2003-2005. These two changes resulted in a grid emission factor that was roughly 34% lower than the previous one, which is deemed conservative and more accurate. Finally, the audit team observed that the BM calculation only included 4 power plants (20% of generation). However, ACM0002 requires that the larger of the two samples (last 5 plants or 20% of generation) is used. Accordingly, the BM calculation was revised to include 5 power plants. The final grid emission factor is now deemed correct. The estimated emission reductions due to electricity generation are based on this grid emission factor and the expected net electricity generation, which was verified by the audit team with the project feasibility report.

Resolution of: 2. Proof of additionality using the prevailing practice barrier

The main additionality argument in this project activity is the barrier due to prevailing practice. The project proponent has described in the PDD that this is the first project of its kind in the host country, Sri Lanka. In order to verify this statement, further documentation was necessary. Not only has the technology applied in the project activity been patented by Recogen's parent company, Haycarb, but a letter from the Sri Lankan Ministry of Science and Technology has been received which states that "We congratulate you on overcoming the many technical problems encountered which is to be expected in a pioneering project of this nature. This being the first project of this nature in Sri Lanka which uses waste energy from the otherwise highly polluting traditional charcoaling process..." Hence, it is demonstrated that this project is the first of its kind in Sri Lanka and fulfils the additionality criteria. The audit team is of the opinion that it is the purpose of CDM to help introduce new environmental technologies in industries which are traditionally much more GHG-intensive. This letter is uploaded along with the validation report. Finally, the series of technical problems encountered due to the pioneering nature of the project activity are described in detail in the PDD.

Resolution of: 3. Missing parameters in Monitoring Plan

The Monitoring Plan in the first PDD version was missing several parameters such as:

1. annual demonstration that the "amount of charcoal raw material used in the project activity facilities would have been used in open pit charcoal manufacturing sites without methane recovery in the absence of the project activity"
2. quantity of HSD (High Speed Diesel) used
3. four parameters (CT1, CT2, DAFw1, DAFw2) needed to estimate project emission due to incremental transportation distances

Based on a clarification request, the project proponent responded that the four parameters in point 3 above would not be monitored since the incremental distances are zero. However, since the transportation routes may change during the crediting period, the audit team requested that these parameters are monitored to ensure that no project emissions will occur as a result of increase in transportation distances. This was included in the Monitoring Plan accordingly. The other missing parameters were also included in the revised Monitoring Plan. The final, revised Monitoring Plan is deemed complete now.

Resolution of: 4. Verification of the methane emission factor for open pit charcoal manufacturing process (My,b)

The most important factor in estimating the emission reductions due to the methane component is the methane emission factor for open pit charcoal manufacturing process (My,b). The applied methodology AMS III.K version 01 states a generic procedure for estimating this factor. The project proponent has submitted a detailed lab report clearly describing how this factor was determined. The audit team was able to verify the factor used in the emission reduction calculations based on this lab report, and the estimations are deemed correct.

In conclusion, the assessment team has found that all major and minor issues were resolved during the validation process.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on UNFCCC website by installing a link to TÜV SÜD's own website and invited comments by Parties, stakeholders and non-governmental organisations during a period of 30 days.

The following table presents all key information on this process:

webpage: http://www.netinform.de/KE/Wegweiser/Guide2_1.aspx?ID=2611&Ebene1_ID=26&Ebene2_ID=782&mode=1	
Starting date of the global stakeholder consultation process: 2007-02-21	
Comment submitted by: No comments have been received.	Issues raised and responses by project proponent and TÜV SÜD: Not applicable.

5 VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CDM project activity:

Coconut shell charcoaling and power generation at Badalgama, Sri Lanka

The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Hence TÜV SÜD will recommend the project for registration by the CDM Executive Board.

An analysis as provided by the applied methodology 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 as designed, the project is likely to achieve the estimated amount of emission reductions as specified within the final PDD version.

The validation is based on the information made available to us and the engagement conditions detailed in this report. The validation has been performed using a risk based approach as described above. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, TÜV SÜD 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.

Munich, 2007-12-03



Certification Body "climate and energy"
TÜV SÜD Industrie Service GmbH

Munich, 2007-12-03



Assessment Team Leader

Validation of the CDM Project:
Coconut shell charcoaling and power generation at Badalgama, Sri
Lanka



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Annex 1: Validation Protocol

Validation Protocol

Project Title: Coconut shell charcoaling and power generation at Badalgama, Sri Lanka

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
A. General description of small-scale project activity				
A.1. Title of the small-scale project activity				
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	1,6	Yes, project title clearly enables to identify the project activity. Coconut shell would be combusted for producing charcoal and waste gases released in process would be used for generation of electricity	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2. Are there any indication concerning the revision number and the date of the revision?	1,6	The PDD submitted is of version 01 and dated 24.01.07.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.3. Is this consistent with the time line of the project's history?	1,6	It is consistent with the project because the methodology for the same was only approved on 23 rd December 2006	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2. Description of the small-scale project activity				
A.2.1. Is the description delivering a transparent overview of the project activities?	1,2,3,4,5,6	The project activity has been clearly defined. Project will convert coconut shells to charcoal and will generate power from the waste gases emanating out of process.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.2. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1,2,3,4,5,6	Project report, Layouts, Photographs of existing practice of converting coconuts were verified during onsite visit.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.3. Is the information provided by these proofs consistent with the information provided by the PDD?	1,2,3,4,5,6	The information provided is consistent with the existing and planned implementation of the project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.4. Is all information presented consistent with details provided by further chapters of the PDD?	1,2,3,4,5,6	The description of the project activity is consistent within the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.5. Does the description of the technology to be applied provide sufficient and transpar-	1,2,3,4,5,	The gasification and pyrolysis process in the kiln will convert coconut shell to charcoal. The gases generated in the kiln shall be	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
ent input to evaluate its impact on the greenhouse gas balance?	6	combusted in downstream and the sensible heat of flue gases shall be used to generate steam which will be further converted to electricity		
A.2.6. Is the brief explanation how the project will reduce greenhouse gas emission transparent and suitable?	1,2,3,4,5,6	The explanation of the current conversion process of charcoal in the open pit process is clearly described. In the absence of the project activity, the methane released in manufacturing of charcoal from coconut shell in open pits would have caused GHG emissions which are prevented in the project activity. Furthermore, electricity equivalent to that exported to the grid by the project activity would have been generated in fossil-fuel based power plants connected to the grid.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3. Project participants				
A.3.1. Is the form required for the indication of project participants correctly applied?	1,2,3,4,6	The form has been correctly filled stating Recogen Limited and Japan Carbon Finance (JCF). JCF is only financing the cost of PDD development.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3.2. Is the participation of the listed entities or Parties confirmed by each one of them?	1,2,3,4,6	Clarification Request No. 1. Modalities of communication and Host Country Approvals from Sri Lanka and Japan need to be submitted to DOE.	CR	<input checked="" type="checkbox"/>
A.3.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	1,2,3,4,6	The information on project participants is consistent with the further chapters of the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4. Technical description of the small-scale project activity				
A.4.1. Location of the small-scale project activity				
A.4.1.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1,2,3,4,6,8,	The information on the location is defined but the geo stationary coordinates are not included. Geo stationary coordinates indicating projects location needs to	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
	10	be included in the PDD.		
A.4.1.2. How is it ensured and/or demonstrated, that the project proponents can implement the project at this site (ownership, licenses, contracts etc.)?	1,2,3 ,4, 6,8, 10	The phase I of the plant has already been installed and commissioned and the procurement for the balance project is planned. The company has all ownership rights and necessary licences for commissioning the plant.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2. Type and category(ies) and technology/measure of the small-scale project activity				
A.4.2.1. To which type(s) does the project activity belong to? Is the type correctly identified and indicated?	1,2,3 ,4, 6,8, 10	Project category is correctly identified and belongs to type ID and type IIK of small scale CDM project categories.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.2. To which category (ies) does the project activity belong to? Is the category correctly identified and indicated?	1,2,3 ,4, 6,8, 10	The project activity belongs to category AMS.I.D and AMS III.K which are correctly described.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.3. Does the technical design of the project activity reflect current good practices?	1,2,3 ,4, 6,8, 10	Detailed and exhaustive studies have been done in designing the project. Based on letter from the Sri Lanka Ministry of Science and Technology, this is the first such plant in Sri Lanka, thus the complete technical detailing has been done through in house resources.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.4. Does the implementation of the project activity require any technology transfer from Annex-I-countries to the host country (ies)?	1,2,3 ,4, 6,8, 10	The technology has been developed in Sri Lanka and there is no transfer of technology from any other country.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.5. Is the technology implemented by the project activity environmentally safe?	1,2,3 ,4,	Yes, the technology implemented is environmentally safe and will protect the environment.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
	6,8,10			
A.4.2.6. Is the information provided in compliance with actual situation or planning?	1,2,3,4,6,8,10	The information on technical specification needs to be included. <u>Corrective Action Request No.1.</u> A detailed technical specification of the existing equipments and how the future additions will be added during the crediting period needs to be made transparent in the PDD.	CAR	<input checked="" type="checkbox"/>
A.4.2.7. Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?	1,2,3,4,6,8,10	Since the project is the first of its kind in Sri Lanka, it will result in a significantly better performance than any commonly used technology in the host country.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.8. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1,2,3,4,6,8,10	The probability that the technology will be replaced is considered to be very low.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.9. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	1,2,3,4,6,8,10	Yes, the project will require additional training efforts and the PDD should describe the same in detail. <u>Corrective Action Request No.2.</u> PDD should include more information on training and maintenance needs of the entire project, especially since this project is "first of its kind" and possibility for failure is higher. Furthermore, please provide additional documentation to the audit team describing training and maintenance plans.	CAR	<input checked="" type="checkbox"/>
A.4.2.10. Is information available on the demand and requirements for training and maintenance?	1,2,3,4,6,8,	See above in A.4.2.10	CAR	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
	10			
A.4.2.11. Is a schedule available for the implementation of the project and are there any risks for delays?	1,2,3 ,4, 6,8, 10, 33	The project is likely to be completed in four stages and the last stage's completion is scheduled for 2009, but a schedule for completion could not be evidenced. <u>Clarification Request No. 2.</u> A time schedule outlining the implementation of the entire project should be submitted to the audit team.	CR	<input checked="" type="checkbox"/>
A.4.3. Estimated amount of emission reductions over the chosen crediting period				
A.4.3.1. Is the form required for the indication of projected emission reductions correctly applied?	1,2,3 ,4, 7	The form required for the indication of projected emission reductions is correctly applied and the starting year chosen is 2007-08.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.2. Are the figures provided consistent with other data presented in the PDD?	1,2,3 ,4, 7	The figures provided are consistent with other data presented in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.3.3. Are the figures consistent with the small-scale criteria for the used Type?	1,2,3 ,4, 7	Yes, figures are consistent as per the small-scale criteria for the chosen type of project.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.4. Public funding of the small-scale project activity				
A.4.4.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1,2, 10,1 2,13 21	The project was funded through Internal accruals. The 50 Million Sri Lankan Rupees loan is an e-friends loan scheme from Japanese Govt. funding and the total investment is going to 940 Million Sri Lankan Rupees. <u>Clarification Request No. 3.</u> A document containing sources of funds for the project is to be provided to the audit team, and also provide the evidence that the funds provided by the Japanese government do not result in a diversion of ODA. As per the SSC-PDD guidelines "In case public funding from Parties included in Annex I to the Convention is involved, please provide in Annex 2 information on sources of pub-	CR	<input checked="" type="checkbox"/>

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		lic funding for the project activity from Parties included in Annex I providing an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties." Thus, please revise Annex 2 accordingly.		
A.4.4.2. Is all information provided consistent with the details given in remaining chapters of the PDD (in particular annex 2)?	1,2, 10,1 2,13 21	See A.4.4.1	CR	<input checked="" type="checkbox"/>
A.4.5. Confirmation that the small-scale project activity is not a debundled component of a large scale project activity				
A.4.5.1. Is there a registered small-scale CDM project activity or an application to register another small-scale CDM project activity: with the following characteristics:	1,2, 3,4,6 ,17,1 8	Debundling checklist	Yes / No	<input checked="" type="checkbox"/>
		The same project participants?	No	
		In the same project category and technology/measure?	No	
		Registered within previous two years? Or in registration process?	No	
		Whose boundary is within 1 km of the project boundary of the small scale project activity under consideration?	No	
A.4.5.2. If the answer to all the above question is 'Yes' then does the total size of the small scale project activity combined with previously registered small scale CDM project activity exceeds the limits of small scale CDM project activities?	1,2, 3,4,6 ,17,1 8	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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B. Application of a baseline and monitoring methodology					
B.1. Title and reference of the approved baseline and monitoring methodology applied to the small-scale project activity					
B.1.1.1.Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1,2,6	Yes, the PDD is applying baseline monitoring methodology AMS.I.D “Grid connected renewable electricity generation” version 10, dated 23 rd December 2006 and AMS.III.K “Avoidance of methane from charcoal production by shifting from pit method to mechanized charcoaling process” Version 01. Correct reference has been given in PDD, Chapter B.1.		☑	☑
B.1.1.2.Is the applied version the most recent one and / or is this version still applicable?	1,2,3,4,5,6	The applied versions are the most recent versions for both small scale methodologies.		☑	☑
B.2. Justification of the choice of the methodology and why it is applicable to the project activity					
B.2.1.1.Is the applied methodology considered the most appropriate one?	1,2,3,4,5,6	The applied methodology AMS IIK Version 01 is chosen which is most suitable for avoidance of methane from charcoal production by shifting from pit method to mechanized charcoaling process. Also AMS I.D. Version 10 is applied since the combustion facility is used for electricity generation and AMS III.K. refers to this methodology.		☑	☑
B.2.1.2. Criterion 1: Does the project activity avoid release of methane from pit charcoal production by producing charcoal in new facilities equipped with recovery and flaring/combustion of methane generated in the production process?	1,2,3,4,5,6	Applicability checklist		Yes / No / NA	
		Criterion discussed in the PDD?		No	
		Compliance provable?		No	
		Compliance verified?		Yes	
		<u>Corrective Action Request No.3.</u> Section B must clearly list all applicability criteria from both methodologies and their applicability must be demonstrated in the		CAR	☑

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		PDD. Please revise accordingly.			
B.2.1.3.Criterion 2(a): Is project category applicable under one of the following conditions: (a) Local regulations do not require controlling methane emissions in charcoal production, or	1,2,3 ,4,5, 6,33	Applicability checklist	Yes / No / NA	CAR	☑
		Criterion discussed in the PDD?	No		
		Compliance provable?	No		
		Compliance verified?	Yes		
		See B.2.1.2			
B.2.1.4.Criteria 2(b) : Is there a wide spread non compliance of local regulation evidenced by <ul style="list-style-type: none">Annually collected data from control groups set up by the project activity, orAnnually collected data on legal action and enforcement mechanisms implemented under the prevailing regulation, orAny Official report	1,2,3 ,4,5, 6,33	Applicability checklist	Yes / No / NA	CAR	☑
		Criterion discussed in the PDD?	N/A		
		Compliance provable?	N/A		
		Compliance verified?	N/A		
		See B.2.1.2			
B.2.1.5.Criterion 3: No relevant changes in greenhouse gas emissions other than methane occur as a consequence of the project activity and/or need to be accounted, except for the possibilities of	1,2,3 ,4,5, 10,6, 33	Applicability checklist	Yes / No / NA	CAR	☑
		Criterion discussed in the PDD?	No		
		Compliance provable?	No		
		Compliance verified?	Yes		

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leakage.		See B.2.1.2			
B.2.1.6.Criterion 4: The implementation of the project activity shall not result in changes in the type and source of bio-mass raw material used for production of charcoal (e.g. if in the baseline charcoal was produced from coconut shells, the project activity will only produce charcoal from coconut shells).	1,2,3 ,4,5, 10,6, 33	Applicability checklist	Yes / No / NA	☑	☑
		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Compliance verified?	Yes		
B.2.1.7.Criterion 5:Measures are limited to those that result in emission reductions of less than or equal to 60 kt CO2 equivalent annually.	1,2,3 ,4,5, 10,6, 33	Applicability checklist	Yes / No / NA	☑	☑
		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Compliance verified?	Yes		
B.2.1.8.Criterion 6: If the combustion facility is used for heat and electricity generation that component of the project activity shall use a relevant category under type I.	1,2,3 ,4,5, 10,6, 33	Applicability checklist	Yes / No / NA	☑	☑
		Criterion discussed in the PDD?	Yes		
		Compliance provable?	Yes		
		Compliance verified?	Yes		
B.3. Description of the project boundary					
B.3.1. Does the project boundary include the physical, geographical site where the charcoal is manufactured in open pits and the avoided methane emission occurs in absence of the proposed project activity?	1,2,3 ,4,5, 10,6, 33	Yes.		☑	☑

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B.3.2. Does the project boundary include physical, geographical site and where the charcoal manufacturing with recovery and flaring/ combustion of methane takes place?	1,2,3 ,4,5, 10,6, 33	The project boundary includes almost all applicable components from the coconut shells storage to electricity generation, however it is not complete. <u>Corrective Action Request No.4.</u> Please include the following in the project boundary: (a) Where the charcoal manufacturing with recovery and flaring/combustion of methane takes place; (b) And in the itineraries between them, where the transportation of raw material for charcoal manufacturing occurs.	CAR	<input checked="" type="checkbox"/>
B.3.3. Are the itineraries between the sites, where the transportation of raw material for charcoal manufacturing occurs included in the project boundary?	1,2,3 ,4,5, 10,6, 33	No. See B.3.2.	CAR	<input checked="" type="checkbox"/>
B.3.4. Does the project boundary include the physical, geographical site of the renewable generation source?	1,2,3 ,4,5, 10,6, 33	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.3.5. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PDD?	1,2,3 ,4,5, 10,6, 33	See above in B.3.2.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4. Description of baseline and its development				
B.4.1. Have all technically feasible baseline scenario alternatives to the project activity been identified and discussed by the PDD? Why can this list be considered as being complete?	1,2,3 ,4,5, 10,6, 33	Yes, all feasible technical baseline scenario alternatives to the project activity been identified correctly within the PDD and these alternatives do not face any legal and regulatory barriers.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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B.4.2. Does the project identify correctly and exclude those options not in line with regulatory or legal requirements?	1,2,3 ,4,5, 10,6, 33	Yes, all scenarios are in line with the regulatory and legal requirements.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.3. Have applicable regulatory or legal requirements been identified?	1,2,3 ,4,5, 10,6, 33	There are no legal requirements mentioned by Sri Lankan Government on this issue.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.4. Does the PDD identify the most likely baseline scenario in absence of the project activity?	1,2,3 ,4,5, 10,6, 33	Yes, all feasible baseline scenario alternatives of the project activity have been identified. The most likely baseline scenario is the production of charcoal from coconut shells in open pits (continuation of current practice). However, it must be demonstrated why alternative 3 is unattractive. <u>Clarification Request No. 4.</u> It should be explained in the PDD why alternative 3 is economically unattractive. And a calculation sheet needs to be submitted to demonstrate that alternative 3 is economically unattractive.	CR	<input checked="" type="checkbox"/>
B.4.5. Is this identification supported by official and/or verifiable documents (e.g. studies, web pages, certificates, etc)?	1,2,3 ,4,5, 10,6, 33	There is supporting literature which describes the current practice of open pit conversion of Charcoal.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.4.6. Is the identified baseline scenario in line with regulatory or legal requirements?	1,2,3 ,4,5, 10,6, 33	Yes, the identified baseline scenario is in line with the regulatory and legal requirements.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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B.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the registered small-scale CDM project activity:				
B.5.1. In case of applying step 2 / investment analysis of the additionality tool: Is the analysis method identified appropriately (step 2a)?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.2. In case of Option I (simple cost analysis): Is it demonstrated that the activity produces no economic benefits other than CDM income?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.3. In case of Option II (investment comparison analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.4. In case of Option III (benchmark analysis): Is the most suitable financial indicator clearly identified (IRR, NPV, cost benefit ratio, or (levelized) unit cost)?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.5. In case of Option II or Option III: Is the calculation of financial figures for this indicator correctly done for all alternatives and the project activity?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.6. In case of Option II or Option III: Is the analysis presented in a transparent manner including publicly available proofs for the utilized data?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.7. In case of applying step 3 (barrier analysis) of the additionality tool: Is a complete list of barriers developed that prevent the differ-	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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ent alternatives to occur?				
B.5.8. In case of applying step 3 (barrier analysis): Is transparent and documented evidence provided on the existence and significance of these barriers?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.9. In case of applying step 3 (barrier analysis): Is it transparently shown that the execution of at least one of the alternatives is not prevented by the identified barriers?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.10. Have other activities in the host country / region similar to the project activity been identified and are these activities appropriately analyzed by the PDD (step 4a)?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.11. If similar activities are occurring: Is it demonstrated that in spite of these similarities the project activity would not be implemented without the CDM component (step 4b)?	1,2,3 ,4,5	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.5.12. Is it appropriately explained how the approval of the project activity will help to overcome the economic and financial hurdles or other identified barriers (step 5)?	1,2,3 ,4,5, 17,1 8,19	Not Applicable	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
If the additionality tool has not been used please answer B.5.13 to B.5.18				
B.5.13. If the starting date of the project activity is before the date of validation, is evidence available to prove that incentive from the CDM was seriously considered in the decision to proceed with the project activity?	1,2,3 ,4,5, 23,2 2,20, 27,2	The first consideration of the CDM was done in the recommendation to the board on 11 th May 2001. The Company considered the CDM by getting into discussions with the CDM consultants like ECO Securities with which they reached up to draft LOI and then further with E&Y in July 2005. The submission of the project activity for the validation process could only occur once the new meth-	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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	8,29	odology was accepted in December 2006. Relevant documents have been submitted to the audit team.																	
B.5.14. Is a complete list of barriers developed that prevents the project activity to occur?	1,2,3 ,4,5, 23,2 2,20	Yes, all project activity related barriers are clearly mentioned within the PDD.	☑	☑															
B.5.15. Does this list include at least one of the following barriers?	1,2,3 ,4,5, 23,2 2,20	<table><tr><th>Barrier</th><th>Discussed?</th><th>Verifiable?</th></tr><tr><td>Investment</td><td>No</td><td>No</td></tr><tr><td>Technological</td><td>Yes</td><td>Yes</td></tr><tr><td>Due to prevailing practice</td><td>Yes</td><td>Yes</td></tr><tr><td>Other</td><td>No</td><td>No</td></tr></table> <p>Project activity would be the first of its kind in the country as per the project participant, but the same needs to be substantiated with the necessary evidence.</p> <p><u>Clarification Request No. 5.</u></p> <p>The project proponent needs to substantiate the claim of being the first one to set up such project in the country. Supporting documentary evidence should be submitted to the audit team.</p>	Barrier	Discussed?	Verifiable?	Investment	No	No	Technological	Yes	Yes	Due to prevailing practice	Yes	Yes	Other	No	No	CR	☑
Barrier	Discussed?	Verifiable?																	
Investment	No	No																	
Technological	Yes	Yes																	
Due to prevailing practice	Yes	Yes																	
Other	No	No																	
B.5.16. Does the discussion sufficiently take into account relevant national and/or sectoral policies?	1,2,3 ,4,5, 23,2 2,20	Yes the discussions take into account relevant national and sectoral policies.	☑	☑															
B.5.17. Is transparent and documented evi-	1,2,3	The audit team has been provided with the documents however	CR	☑															

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dence provided on the existence and significance of these barriers?	,4,5,23,22,20	the evidence in locating suppliers for the plant and equipments need to be submitted to DOE Clarification Request No. 6. Please substantiate the statement of the difficulties faced in locating the suppliers and equipment manufacturers for this plant.								
B.5.18. Is it appropriately explained how the approval of the project activity will help to overcome the identified barriers?	1,2,3,4,5,23,22,20	Yes, it has been appropriately explained.	☑	☑						
B.6. Emissions reductions										
Integrate questions concerning methodological choices and selection of options, if necessary										
B.6.1. Explanation of methodological choices										
B.6.1.1.Is it explained how the procedures provided in the methodology are applied by the proposed project activity?	1,2,3,4	The procedures from AMS IIK & AMS ID have been detailed in the emission reduction calculations.	☑	☑						
B.6.1.2.Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?	1,2,3,4	The options selected are in line with the methodology and justified.	☑	☑						
B.6.1.3.Determination of project emissions (Comment on any line answered “No”) Replace blue text										
B.6.1.4.Component 1: emissions related to the power used by the project activity including the equipments for air pollution control.	1,2,3,4,6,7	<table><tr><td>Project emission checklist</td><td>Yes / No</td></tr><tr><td>Component discussed in the PDD?</td><td>Yes</td></tr><tr><td>Formulae correctly applied?</td><td>Yes</td></tr></table>	Project emission checklist	Yes / No	Component discussed in the PDD?	Yes	Formulae correctly applied?	Yes	☑	☑
Project emission checklist	Yes / No									
Component discussed in the PDD?	Yes									
Formulae correctly applied?	Yes									

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B.6.1.5.Component 2: emissions from incremental distances between the charcoal manufacturing facilities to the consumption points in comparison to the baseline case.	1,2,3 ,4,6, 7	<table><tr><td>Project emission checklist</td><td>Yes / No</td></tr><tr><td>Component discussed in the PDD?</td><td>Yes</td></tr><tr><td>Formulae correctly applied?</td><td>Yes</td></tr></table>		Project emission checklist	Yes / No	Component discussed in the PDD?	Yes	Formulae correctly applied?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Project emission checklist	Yes / No										
Component discussed in the PDD?	Yes										
Formulae correctly applied?	Yes										
B.6.1.6.Component 3: emissions from incremental distances between the raw material collection points to the new charcoal manufacturing facilities in comparison to the baseline case.	1,2,3 ,4,6, 7	<table><tr><td>Project emission checklist</td><td>Yes / No</td></tr><tr><td>Component discussed in the PDD?</td><td>Yes</td></tr><tr><td>Formulae correctly applied?</td><td>Yes</td></tr></table>		Project emission checklist	Yes / No	Component discussed in the PDD?	Yes	Formulae correctly applied?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Project emission checklist	Yes / No										
Component discussed in the PDD?	Yes										
Formulae correctly applied?	Yes										
B.6.1.7.Component 4: fugitive emissions from capture and flare inefficiencies.	1,2,3 ,4,6, 7	<table><tr><td>Project emission checklist</td><td>Yes / No</td></tr><tr><td>Component discussed in the PDD?</td><td>Yes</td></tr><tr><td>Formulae correctly applied?</td><td>Yes</td></tr></table>		Project emission checklist	Yes / No	Component discussed in the PDD?	Yes	Formulae correctly applied?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Project emission checklist	Yes / No										
Component discussed in the PDD?	Yes										
Formulae correctly applied?	Yes										
B.6.1.8.Are the formulae required for the determination of baseline emissions correctly presented, enabling a complete identification of parameters to be used and / or monitored?	1,2,3 ,4,6, 7	The equations of baseline determination are presented in a transparent manner. However, see also B.6.3.2.		CR	<input checked="" type="checkbox"/>						
B.6.1.9.Are the formulae required for the determination of leakage emissions correctly presented, enabling a complete identification of parameter to be used	1,2,3 ,4,6, 7	Not Applicable, as no leakage is expected as per the applied methodologies.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						

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and / or monitored?																							
B.6.1.10. Are the formulae required for the determination of emission reductions correctly presented?	1,2,3 ,4,6, 7	Yes, emission reductions are defined as follows: ER = BE – (PE + L)		☑	☑																		
B.6.2. Data and parameters that are available at validation																							
B.6.2.1.Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology?	1,2,3 ,4,6, 7	No the PDD does not contain the complete list of parameters as required. <u>Corrective Action Request No.5.</u> Please include ALL parameters that are available at the time of validation in section B.6.2. If a parameter is taken as zero, please include a table and mention that the value applied is zero and why. If baseline emission factor is calculated ex-ante, then all major parameters should be listed in here too (see recently registered ACM0002 projects as an example).		CAR	☑																		
B.6.2.2. Parameter Title: EFCO ₂ : CO ₂ emission factor for the fuel used in transport (tCO ₂ /km)	1,2,3 ,4,6, 7	<table><tr><th>Data Checklist</th><th>Yes / No / NA</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>	Data Checklist	Yes / No / NA	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA		☑	☑
Data Checklist	Yes / No / NA																						
Title in line with methodology?	NA																						
Data unit correctly expressed?	NA																						
Appropriate description of parameter?	NA																						
Source clearly referenced?	NA																						
Correct value provided?	NA																						
Has this value been verified?	NA																						
Choice of data correctly justified?	NA																						
Measurement method correctly described?	NA																						
		Since there is no increase in the distance between charcoal manufacturing site and consumption points, emissions due to in-																					

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		cremental distances for transportation of raw material and charcoal are zero.																					
B.6.2.3. My,b - Methane emission factor for open pit charcoal manufacturing process (tonnes of CH4/tonne raw material used)	1,2,3 ,4,6, 7	<table><tr><th>Data Checklist</th><th>Yes / No / NA</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Data Checklist	Yes / No / NA	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No		CR	<input checked="" type="checkbox"/>
Data Checklist	Yes / No / NA																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	No																						
Correct value provided?	No																						
Has this value been verified?	No																						
Choice of data correctly justified?	No																						
Measurement method correctly described?	No																						
		Clarification Request No. 7. Kindly submit all back-up calculations and laboratory reports for arriving at the parameter of $M_{y,b}$ (14.61 kg CH4/MT of charcoal)																					
B.6.2.4. My,d - Factor to account for any legal requirement for capture and flare of methane in open pit charcoal production (tonne of CH4/tonne of raw material)	1,2,3 ,4,6, 7,27, 28,2 9	<table><tr><th>Data Checklist</th><th>Yes / No / NA</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table>	Data Checklist	Yes / No / NA	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	Yes	Has this value been verified?	Yes	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No / NA																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	Yes																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	Yes																						
Has this value been verified?	Yes																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	Yes																						
		Since there is no legal requirement in the country the same is																					

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		taken as zero, but this should be documented in B.6.2. See also B.6.2.1.			
B.6.2.5. GWpch4 - Global Warming Potential of Methane (CH4)	1,2,3 ,4,6, 7, 7,28, 29	Data Checklist	Yes / No / NA	CAR	☑
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	No		
		Source clearly referenced?	Yes		
		Correct value provided?	Yes		
		Has this value been verified?	Yes		
		Choice of data correctly justified?	Yes		
		Measurement method correctly described?	Yes		
		This parameter has been taken as 21 throughout the crediting period, but should also be included in B.6.2. in the PDD. See also B.6.2.1.			
B.6.3. <i>Ex-ante calculation of emission reductions</i>					
B.6.3.1.Is the projection based on the same procedures as used for future monitoring?	1,2,3 ,4,6, 7	Yes the procedure remains consistent.		☑	☑
B.6.3.2.Are the GHG calculations documented in a complete and transparent manner?	1,2,3 ,4,6, 7	<u>Clarification Request No. 8.</u> All emission reduction calculations needs to be submitted in Excel format to DOE for verification.		CR	☑
B.6.3.3.If there is more than one component of the project activity, then, emission reduction calculations provided separately for each component?	1,2,3 ,4,6, 7	Yes, the emission reduction calculations for both components have been calculated separately.		☑	☑
B.6.3.4.Is the data provided in this section con-	1,2,3	See above in B.6.3.2		☑	☑

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sistent with data as presented in other chapters of the PDD?	,4,6,7			
B.6.4. Summary of the ex-ante estimation of emission reductions				
B.6.4.1. Will the project result in fewer GHG emissions than the baseline scenario?	1,2,3,4,6,7	Yes, the mechanised charcoal process project emission will result in fewer GHG emissions as compared to the open pit charcoal process baseline scenario.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.4.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1,2,3,4,6,7	<p>Separate tables have been provided for each of the elements listing the emission reduction calculations.</p> <p><u>Corrective Action Request No.6.</u></p> <p>Please provide the final table in section B.6.4 in the exact same format as defined in the SSC-PDD guidelines.</p>	CAR	<input checked="" type="checkbox"/>
B.6.4.3. If the project activity involves more than one component, is separate table included for each of the component.	1,2,3,4,6,7	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.4.4. Do these values comply with small-scale criteria for every year?	1,2,3,4,6,7	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.4.5. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1,2,3,4,6,7	The project will be commissioned by 1 st May 2007 as per the mentioned date in the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.6.4.6. Is the data provided in this section in consistency with data as presented in other chapters of the PDD?	1,2,3,4,6,7	Yes, it is consistent within the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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B.7. Application of the monitoring methodology and description of the monitoring plan										
B.7.1. Data and parameters monitored										
B.7.1.1.Is the list of parameters presented in chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?	1,2,3 ,4,6, 7	<p>No. See CARs/CRs in Section B.7.1. All parameters listed in the methodology should be included in the monitoring plan in the PDD as a separate table.</p> <p><u>Corrective Action Request No.7.</u></p> <p>Section B.7.1. must include all parameters that need to be monitored as per AMS I.D. and AMS III.K.</p> <p>Thus, all missing parameters (MEy,project, PEEy,power, amount of fossil fuel input, annual demonstration) should be included as a separate table.</p> <p>However, do not include any parameters in Section B.7.1. that are assumed to be zero or will not be monitored. If a parameter is assumed to be zero, please explain in B.6.2. or B.6.3.</p> <p><u>Corrective Action Request No.8.</u></p> <p>All external data used in the PDD must show the references with the exact description of the document. These references should be retraceable and exact (i.e. "IPCC standard value" is not acceptable). It should mention the document name, if possible a weblink, chapter, page number, etc.</p>	CAR	<input checked="" type="checkbox"/>						
B.7.1.2.Comment on any line answered with "No" Replace blue text										
B.7.1.3. Parameter Title: Quantity of raw material (Qy,raw) used each year (tonnes)	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	CR	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No									
Title in line with methodology?	Yes									
Data unit correctly expressed?	Yes									

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		<table><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>	Appropriate description of parameter?	No	Source clearly referenced?	Yes	Correct value provided for estimation?	No	Has this value been verified?	Yes	Measurement method correctly described?	No	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes							
Appropriate description of parameter?	No																										
Source clearly referenced?	Yes																										
Correct value provided for estimation?	No																										
Has this value been verified?	Yes																										
Measurement method correctly described?	No																										
Correct reference to standards?	Yes																										
Indication of accuracy provided?	Yes																										
QA/QC procedures described?	Yes																										
QA/QC procedures appropriate?	Yes																										
		<p><u>Clarification Request No. 9.</u></p> <p>The current method of determining this parameter $Q_{y,raw}$: Quantity of raw material used is not correct and not in line with methodology. The table in B.7.1. should describe clearly the method and all values for this parameter that have been used to estimate emission reductions (in the section “Value of data”).</p>																									
B.7.1.4. Parameter Title: Moisture content of raw material through representative sampling	1,2,3,4,6,7	<table><tr><td>Monitoring Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes		☑	☑
Monitoring Checklist	Yes / No																										
Title in line with methodology?	Yes																										
Data unit correctly expressed?	Yes																										
Appropriate description of parameter?	Yes																										
Source clearly referenced?	Yes																										
Correct value provided for estimation?	Yes																										
Has this value been verified?	Yes																										
Measurement method correctly described?	Yes																										
Correct reference to standards?	Yes																										
Indication of accuracy provided?	Yes																										
QA/QC procedures described?	Yes																										

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		<table><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>		QA/QC procedures appropriate?	Yes																								
QA/QC procedures appropriate?	Yes																												
B.7.1.5. Parameter Title: Quantity of charcoal produced (Qy,prod) and its moisture content in each year;	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	☑	☑
Monitoring Checklist	Yes / No																												
Title in line with methodology?	Yes																												
Data unit correctly expressed?	Yes																												
Appropriate description of parameter?	Yes																												
Source clearly referenced?	Yes																												
Correct value provided for estimation?	Yes																												
Has this value been verified?	Yes																												
Measurement method correctly described?	Yes																												
Correct reference to standards?	Yes																												
Indication of accuracy provided?	Yes																												
QA/QC procedures described?	Yes																												
QA/QC procedures appropriate?	Yes																												
B.7.1.6. Parameter Title: Moisture content of charcoal produced in each year	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	☑	☑		
Monitoring Checklist	Yes / No																												
Title in line with methodology?	Yes																												
Data unit correctly expressed?	Yes																												
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Source clearly referenced?	Yes																												
Correct value provided for estimation?	Yes																												
Has this value been verified?	Yes																												
Measurement method correctly described?	Yes																												
Correct reference to standards?	Yes																												
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QA/QC procedures described?	Yes																												

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		QA/QC procedures appropriate?	Yes																										
B.7.1.7. Parameter Title: The average truck capacity (CTy 1 and CTy2) and the distances over which the raw materials and charcoal are transported in the baseline and the project situation (DAFw1 and DAFw2) (to determine the component of project activity emission on account of transportation)	1,2,3,4,6,7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> <p>Clarification Request No. 10. Please clarify what value has been chosen for the parameters CTy1, CTy2, DAFw1, and DAFw2. Demonstrate suitable justification for choosing the same.</p>		Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	CR	☑
Monitoring Checklist	Yes / No																												
Title in line with methodology?	Yes																												
Data unit correctly expressed?	Yes																												
Appropriate description of parameter?	Yes																												
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QA/QC procedures described?	No																												
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B.7.1.8. Parameter Title: PE _{y,power} emissions from electricity or diesel consumption in the year “y” (tCO2e)		<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> To be included in Monitoring Plan. See B.7.1.1.	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	CAR	☑
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
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Measurement method correctly described?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											
B.7.1.9. Parameter Title: The power consumption and/or generation of the production facility.	1,2,3,4,6,7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	☑	☑														
Monitoring Checklist	Yes / No																											
Title in line with methodology?	Yes																											
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		Correct value provided for estimation?	Yes																										
		Has this value been verified?	Yes																										
		Measurement method correctly described?	Yes																										
		Correct reference to standards?	Yes																										
		Indication of accuracy provided?	Yes																										
		QA/QC procedures described?	Yes																										
		QA/QC procedures appropriate?	Yes																										
B.7.1.10. Parameter Title: MEy,project: methane emission potential of the project charcoal manufacturing process in the year “y” (tonnes)	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> To be included in Monitoring Plan. See B.7.1.1.		Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	CAR	☑
Monitoring Checklist	Yes / No																												
Title in line with methodology?	No																												
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QA/QC procedures appropriate?	No																												

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B.7.1.11. Parameter Title: CFEproject: capture and flare efficiency of the methane recovery and combustion equipment in the project charcoal manufacturing plant	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> <u>Clarification Request No. 11.</u> Please explain why no fugitive methane emissions are expected due to capture and flare inefficiencies. Please provide substantial justification for the same.	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	CR	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	No																											
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Correct value provided for estimation?	No																											
Has this value been verified?	No																											
Measurement method correctly described?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											
B.7.1.12. Parameter Title: Fraction of methane in the gas.	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	CR	<input checked="" type="checkbox"/>																		
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											

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		Appropriate description of parameter?	No																		
		Source clearly referenced?	No																		
		Correct value provided for estimation?	No																		
		Has this value been verified?	No																		
		Measurement method correctly described?	No																		
		Correct reference to standards?	No																		
		Indication of accuracy provided?	No																		
		QA/QC procedures described?	No																		
		QA/QC procedures appropriate?	No																		
		See B.7.1.11																			
B.7.1.13. Parameter Title: Temperature of gas (°C).	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>		Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	CR	☑
Monitoring Checklist	Yes / No																				
Title in line with methodology?	No																				
Data unit correctly expressed?	No																				
Appropriate description of parameter?	No																				
Source clearly referenced?	No																				
Correct value provided for estimation?	No																				
Has this value been verified?	No																				
Measurement method correctly described?	No																				

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PPD in GSP	Final PDD
		Correct reference to standards?	No		
		Indication of accuracy provided?	No		
		QA/QC procedures described?	No		
		QA/QC procedures appropriate?	No		
		See B.7.1.11			
B.7.1.14. Parameter Title: Pressure of gas (kg/cm ²).	1,2,3 ,4,6, 7	Monitoring Checklist	Yes / No	CR	☑
		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided for estimation?	No		
		Has this value been verified?	No		
		Measurement method correctly described?	No		
		Correct reference to standards?	No		
		Indication of accuracy provided?	No		
		QA/QC procedures described?	No		
		QA/QC procedures appropriate?	No		
		See B.7.1.11			

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD																								
B.7.1.15. Parameter Title: Temperature in exhaust gas of flare (°C).	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> See B.7.1.11	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	CR	☑
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	No																											
Source clearly referenced?	No																											
Correct value provided for estimation?	No																											
Has this value been verified?	No																											
Measurement method correctly described?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											
B.7.1.16. Parameter Title: gas flow rate	1,2,3 ,4,6, 7	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	CR	☑																
Monitoring Checklist	Yes / No																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	No																											

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		PPD in GSP	Final PDD
		Source clearly referenced?	No		
		Correct value provided for estimation?	No		
		Has this value been verified?	No		
		Measurement method correctly described?	No		
		Correct reference to standards?	No		
		Indication of accuracy provided?	No		
		QA/QC procedures described?	No		
		QA/QC procedures appropriate?	No		
		See B.7.1.11			
B.7.1.17. Parameter Title: Annual demonstration that the amount of charcoal raw material used in the project activity facilities would have been used in open pit charcoal manufacturing sites without methane recovery in the absence of the project activity.	1,2,3 ,4,6, 7	<u>Corrective Action Request No.9.</u> The annual demonstration that the “amount of charcoal raw material used in the project activity facilities would have been used in open pit charcoal manufacturing sites without methane recovery in the absence of the project activity” must be included in B.7.1. as a separate table.		CAR	☑
B.7.2. Description of the monitoring plan					
B.7.2.1.Is the operational and management structure clearly described and in compliance with the envisioned situation?	1,2,3 ,4,6, 7	It has been mentioned in the PDD that a special team responsible for monitoring of CDM parameters will be established but a detailed procedure needs to be submitted. <u>Clarification Request No. 12.</u>		CR	☑

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		Please define a documented procedure, correctly describing how each parameter will be measured. Additionally the procedure must define roles, responsibilities and authorities for monitoring, reporting, reviewing and conducting internal audits of data along with calibration schedules.		
B.7.2.2.Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1,2,3 ,4,6, 7	See above in B.7.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.2.3.Does the monitoring plan provide current good monitoring practice?	1,2,3 ,4,6, 7	Yes the monitoring plan demonstrates good monitoring practice.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.7.2.4.If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1,2,3 ,4,6, 7	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8. Date of completion of the application of the baseline study and monitoring methodology an the name of the responsible person(s)/entity(ies)				
B.8.1.1.Is there any indication of a date when the baseline was determined?	1,2,3 ,4,6, 7	Yes , the date has been mentioned within the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.2.Has dd/mm/yyyy format been used to indicate the date.	1,2,3 ,4,6, 7	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.3.Is this consistent with the time line of the PDD history?	1,2,3 ,4,6, 7	Yes the consistency is evident with PDD history.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B.8.1.4.Is the information on the person(s) / en-	1,2,3	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	PPD in GSP	Final PDD
tity (ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	,4,6,7			
B.8.1.5. Is information provided whether this person / entity is also considered a project participant?	1,2,3,4,6,7	Yes.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C. Duration of the project activity / crediting period				
C.1. Duration of the project activity				
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	1,6,10,14,15,16	Yes, project starting date is 01.12.05 and operational lifetime is 25 years. These are clearly defined in section C.1 within the PDD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.2. Choice of the crediting period and related information				
C.2.1. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	1,6,10,14,15,16	Yes, a fixed crediting period has been chosen and defined within the PDD. Observation: It is recommended to postpone the start of the crediting period, as once the project is submitted for registration; there is at least a one-week completeness check by the UNFCCC and a four-week review period.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.2.2. Has dd/mm/yyyy format been used to indicate the start date of the crediting period.	1,6,10,14,15,16	The Project crediting period start date has been taken as 01.05.2007.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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D. Environmental impacts				
D.1. If required by the host Party, documentation on the analysis of the environmental impacts of the project activity:				
D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved? If yes answer also D.1.2 to D.1.4	1,2,1 1,17, 18,2 4,26 31	No environment impact assessment is required as per regulation of the host country.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.2. Has the analysis of the environmental impacts of the project activity been sufficiently described?	1,2,1 1,17, 18,2 4,26 31	No, the PDD does not include detailed information on the environmental impacts of the project activity. <u>Corrective Action Request No.10.</u> The environmental impacts need to be explained in the PDD in a transparent manner during pre and post project scenario. It should also include recommendations from the Central Environmental Authority and whether any mitigation measures are planned. Furthermore, this section should also describe which permits and consents are necessary and whether they have been obtained.	CAR	<input checked="" type="checkbox"/>
D.1.3. Will the project create any adverse environmental effects?	1,2,1 1,17, 18,2 4,26 31	No adverse environmental effect is expected from the project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4. Were trans boundary environmental impacts identified in the analysis?	1,2,1 1,17, 18,2 4,26	No transboundary environment impacts have been identified in the project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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	31			
D.2. If environmental impacts are considered significant by the project participants or the host Party, please provide conclusions and all references to support documentation of an environmental impact assessment undertaken in accordance with the procedures as required by the host Party				
D.2.1. Have the identified environmental impacts been addressed in the project design sufficiently?	1,2,1 1,17, 18,2 4,26 31	See above in D.1.2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2. Does the project comply with environmental legislation in the host country?	1,2,1 1,17, 18,2 4,26 31	The project has obtained all the relevant permissions and approvals from the governmental authorities.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E. Stakeholders' comments				
E.1. Brief description how comments by local stakeholders have been invited and compiled				
E.1.1. Have relevant stakeholders been consulted?	1,2,1 0,11 30	<p>Stakeholder consultation process needs to be described in more depth.</p> <p><u>Corrective Action Request No.11.</u></p> <p>The stakeholder process need to be explained in more detail. It should include how the process was carried out and what were the comments made . When was the hearing? How many people participated? What comments were made? Are documents available? A summary of comments should be included in PDD.</p> <p><u>Clarification Request No. 13.</u></p>	CR, CAR	<input checked="" type="checkbox"/>

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		Please submit the English translation of all stakeholder documents and other documents which have been submitted.		
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	1,2,1 0,11 30	See above in E.1.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.3. 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?	1,2,1 0,11 30	The stakeholder consultation process is not required as per the law of the country.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1,2,1 0,11 30	See above in E.1.1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.2.Summary of the comments received				
E.2.1. Is a summary of the received stakeholder comments provided?	1,2,1 0,11 30	See above in E.1.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.3.Report on how due account was taken of any comments received				
E.3.1. Has due account been taken of any stakeholder comments received?	1,2,1 0,11 30	See above in E.1.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F. Annexes 1 – 4				
F.1.Annex 1: Contact Information				
F.1.1. Is the information provided consistent with the one given under section A.3?	1,2,3 ,4,6	Yes, the information contains complete contact address of the project proponent.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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F.1.2. Is the information on all private participants and directly involved Parties presented?	1,2,3 ,4,6	The information of all directly involved parties is presented.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.2. Annex 2: Information regarding public funding				
F.2.1. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	1,2,3 ,4,6	The funding from Japan Carbon Finance is limited to PDD development only. However, see also A.4.4.1	CAR	<input checked="" type="checkbox"/>
F.2.2. If necessary: Is an affirmation available that any such funding from Annex-I countries does not result in a diversion of ODA?	1,2,3 ,4,6	See above in F.2.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3. Annex 3: Baseline information				
F.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?	1,2,3 ,4,,6,	Yes, information has been provided choosing charcoal production from coconut shells in open pits as baseline scenario.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.2. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1,2,3 ,4,,6,	See above in F.3.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.3. Does the additional information substantiate / support statements given in other sections of the PDD?	1,2,3 ,4,,6,	See above in F.3.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4. Annex 4: Monitoring information				
F.4.1. If additional background information on monitoring is provided: Is this informa-	1,2,3 ,4,,6,	Yes, information present in this section is consistent with the other sections of the PDD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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tion consistent with data presented in other sections of the PDD?				
F.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1,2,3 ,4,,6,	See above in F.4.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4.3. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PDD?	1,2,3 ,4,,6,	See above in F.4.1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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Table 1A Sections B.2., B.6.2.2. and B.7.1.2. repeated for AMS I.D. Version 10

G. Justification of the choice of the methodology and why it is applicable to the project activity													
G.1.1. Is the applied methodology considered for “renewable electricity generation for the grid” the most appropriate one?	1,2,3 ,4,6	The applied methodology is correct for generation of electricity for renewable sources. <u>Corrective Action Request No.12.</u> The PDD mentions on page 21 that “the average of the approximate operating margin and the build margin” method has been selected. Please revise using the exact wording (either option a or b). If option (a) is chosen, then mention that the emission factor will be calculated ex-ante and include all parameters in B.6.2. For option (a) please follow all steps of ACM0002, and demonstrate why each option is chosen (simple OM, adjusted simple OM, etc.) Include all imports to the grid in your calculation. If option (b) is chosen, then mention that the emission factor will be calculated ex-post and include all parameters in B.7.1.		CAR	<input checked="" type="checkbox"/>								
G.1.1.1. Criterion 1: This category comprises renewable energy generation units, such as photo voltaics, hydro, tidal/wave, wind, geothermal and renewable biomass, that supply electricity to and/or displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit.	1,2,3 ,4,6	<table border="1"><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>No</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> See B.2.1.2		Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	No	Compliance provable?	Yes	Compliance verified?	Yes	CR	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA												
Criterion discussed in the PDD?	No												
Compliance provable?	Yes												
Compliance verified?	Yes												
G.1.1.2. Criterion 2: If the unit added has both renewable and non-renewable components e.g. a wind/diesel unit), the	1,2,3 ,4,6	<table border="1"><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>No</td></tr></table>		Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	No	CAR	<input checked="" type="checkbox"/>				
Applicability checklist	Yes / No / NA												
Criterion discussed in the PDD?	No												

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eligibility limit of 15MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15MW.		<table><tr><td>Compliance provable?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table> <p>The audit team observed that there exists a provision for co-firing of the waste gases along with fossil fuels, however, total capacity of the entire unit is going to be less than 15MW.</p> <p><u>Corrective Action Request No.13.</u></p> <p>The PDD does not discuss the provision of co-firing with the waste gases in downstream during start up periods, and also the same is not included in the monitoring plan.</p>	Compliance provable?	No	Compliance verified?	No						
Compliance provable?	No											
Compliance verified?	No											
G.1.1.3. Criterion 3: Biomass combined heat and power (co-generation) systems that supply electricity to and/or displace electricity from a grid are included in this category. To qualify under this category, the sum of all forms of energy output shall not exceed 45 MW thermal e.g. for a biomass based co-generating system the rating for all the boilers combined shall not exceed 45 MW thermal.	1,2,3 ,4,6	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>NA</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	NA	Compliance provable?	NA	Compliance verified?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	NA											
Compliance provable?	NA											
Compliance verified?	NA											
G.1.1.4. Criterion 4: In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct1 from the existing units.	1,2,3 ,4,6	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>NA</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table> <p>There is no addition of renewable energy generation source.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	NA	Compliance provable?	NA	Compliance verified?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	NA											
Compliance provable?	NA											
Compliance verified?	NA											

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G.1.1.5. Criterion 5: Project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category. To qualify as a small scale project, the total output of the modified or retrofitted unit shall not exceed the limit of 15 MW.	1,2,3 ,4,6	<table><tr><th>Applicability checklist</th><th>Yes / No / NA</th></tr><tr><td>Criterion discussed in the PDD?</td><td>NA</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table> <p>The project activity is a greenfield project.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	NA	Compliance provable?	NA	Compliance verified?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>										
Applicability checklist	Yes / No / NA																					
Criterion discussed in the PDD?	NA																					
Compliance provable?	NA																					
Compliance verified?	NA																					
H. Data and parameters that are available at validation																						
H.1.1.1. Comment on any line answered with “No”																						
H.1.1.2. Parameter Title: Annual electricity supplied to the grid prior to retrofit (applicable only for retrofit and modification activities)	1,2,3 ,4,6	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	NA																					
Data unit correctly expressed?	NA																					
Appropriate description of parameter?	NA																					
Source clearly referenced?	NA																					
Correct value provided?	NA																					
Has this value been verified?	NA																					
Choice of data correctly justified?	NA																					
Measurement method correctly described?	NA																					
H.1.1.3. Parameter Title: Emission factor of the grid (CM)	1,2,3 ,4,6	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td></td><td></td></tr></table>	Data Checklist	Yes / No			CAR	<input checked="" type="checkbox"/>														
Data Checklist	Yes / No																					

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		<table><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> <p>See G.1.1. and B.6.2.1.</p>	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	No	Correct value provided?	Yes	Has this value been verified?	No	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes				
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	No																					
Correct value provided?	Yes																					
Has this value been verified?	No																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
H.1.1.4. Parameter Title: Operating margin (OM) emission factor of the grid	1,2,3 ,4,6	<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table> <p>See G.1.1. and B.6.2.1.</p>	Data Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description?	Yes	Source clearly referenced?	No	Correct value provided?	Yes	Has this value been verified?	No	Choice of data correctly justified?	Yes	Measurement method correctly described?	Yes	CAR	<input checked="" type="checkbox"/>
Data Checklist	Yes / No																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description?	Yes																					
Source clearly referenced?	No																					
Correct value provided?	Yes																					
Has this value been verified?	No																					
Choice of data correctly justified?	Yes																					
Measurement method correctly described?	Yes																					
H.1.1.5. Parameter Title:	1,2,3		CAR	<input checked="" type="checkbox"/>																		

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Build margin (BM) emission factor of the grid	,4,6	Data Checklist	Yes / No		
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	No		
		Correct value provided?	Yes		
		Has this value been verified?	No		
		Choice of data correctly justified?	Yes		
		Measurement method correctly described?	Yes		
		See G.1.1. and B.6.2.1.			
H.1.1.6. Parameter Title: fuel consumption of each power source	1,2,3 ,4,6, 7	Data Checklist	Yes / No	CAR	<input checked="" type="checkbox"/>
Title in line with methodology?	No				
Data unit correctly expressed?	No				
Appropriate description of parameter?	No				
Source clearly referenced?	No				
Correct value provided?	No				
Has this value been verified?	No				
Choice of data correctly justified?	No				
Measurement method correctly described?	No				

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		See G.1.1. and B.6.2.1.																				
H.1.1.7. Parameter Title: emission coefficient of each fuel	1,2,3 ,4,6, 7	<table><thead><tr><th>Data Checklist</th><th>Yes / No</th></tr></thead><tbody><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></tbody></table> See G.1.1. and B.6.2.1.	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	CAR	<input checked="" type="checkbox"/>
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Source clearly referenced?	No																					
Correct value provided?	No																					
Has this value been verified?	No																					
Choice of data correctly justified?	No																					
Measurement method correctly described?	No																					
H.1.1.8. Parameter Title: electricity generation of each power source		<table><thead><tr><th>Data Checklist</th><th>Yes / No</th></tr></thead><tbody><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr></tbody></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	CAR	<input checked="" type="checkbox"/>		
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		<table><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Measurement method correctly described?	No																		
Measurement method correctly described?	No																					
		See G.1.1. and B.6.2.1.																				
H.1.1.9. Parameter Title: surface area of full reservoir level (for new hydroelectric activities only)		<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Source clearly referenced?	NA																					
Correct value provided?	NA																					
Has this value been verified?	NA																					
Choice of data correctly justified?	NA																					
Measurement method correctly described?	NA																					
H.1.1.10. Parameter Title: fraction of time with low costs /must run plant at the margin (for simple adjusted OM only)		<table><tr><th>Data Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	CAR	<input checked="" type="checkbox"/>						
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		<table><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No														
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Choice of data correctly justified?	No																					
Measurement method correctly described?	No																					
		See G.1.1. and B.6.2.1.																				
H.1.1.11. Parameter Title: electricity imports		<table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	CAR	<input checked="" type="checkbox"/>
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Correct value provided?	No																					
Has this value been verified?	No																					
Choice of data correctly justified?	No																					
Measurement method correctly described?	No																					
		See G.1.1. and B.6.2.1.																				
H.1.1.12. Parameter Title: CO ₂ emission coefficient of fuels used in connected grids		<table><tr><td>Data Checklist</td><td>Yes / No</td></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr></table>	Data Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	CAR	<input checked="" type="checkbox"/>										
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		<table border="1"> <tr> <td>Source clearly referenced?</td><td>No</td></tr> <tr> <td>Correct value provided?</td><td>No</td></tr> <tr> <td>Has this value been verified?</td><td>No</td></tr> <tr> <td>Choice of data correctly justified?</td><td>No</td></tr> <tr> <td>Measurement method correctly described?</td><td>No</td></tr> </table>	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No																
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Has this value been verified?	No																											
Choice of data correctly justified?	No																											
Measurement method correctly described?	No																											
		See G.1.1. and B.6.2.1.																										
I. Data and parameters monitored																												
I.1.1 Comment on any line answered with "No"																												
I.1.1.1. Parameter Title: Electricity generated by the renewable technology	1,2,3 ,4,6	<table border="1"> <tr> <th>Monitoring Checklist</th><th>Yes / No</th></tr> <tr> <td>Title in line with methodology?</td><td>Yes</td></tr> <tr> <td>Data unit correctly expressed?</td><td>Yes</td></tr> <tr> <td>Appropriate description of parameter?</td><td>Yes</td></tr> <tr> <td>Source clearly referenced?</td><td>Yes</td></tr> <tr> <td>Correct value provided for estimation?</td><td>Yes</td></tr> <tr> <td>Has this value been verified?</td><td>Yes</td></tr> <tr> <td>Measurement method correctly described?</td><td>Yes</td></tr> <tr> <td>Correct reference to standards?</td><td>Yes</td></tr> <tr> <td>Indication of accuracy provided?</td><td>Yes</td></tr> <tr> <td>QA/QC procedures described?</td><td>Yes</td></tr> <tr> <td>QA/QC procedures appropriate?</td><td>Yes</td></tr> </table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
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I.1.1.2. Amount of biomass input (if applicable)	1,2,3 ,4,6	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>Yes</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr><tr><td>Correct reference to standards?</td><td>Yes</td></tr><tr><td>Indication of accuracy provided?</td><td>Yes</td></tr><tr><td>QA/QC procedures described?</td><td>Yes</td></tr><tr><td>QA/QC procedures appropriate?</td><td>Yes</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	Yes	Has this value been verified?	Yes	Measurement method correctly described?	Yes	Correct reference to standards?	Yes	Indication of accuracy provided?	Yes	QA/QC procedures described?	Yes	QA/QC procedures appropriate?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No																											
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Has this value been verified?	Yes																											
Measurement method correctly described?	Yes																											
Correct reference to standards?	Yes																											
Indication of accuracy provided?	Yes																											
QA/QC procedures described?	Yes																											
QA/QC procedures appropriate?	Yes																											
I.1.1.3. Amount of fossil fuel (if applicable)	1,2,3 ,4,6	<table><tr><th>Monitoring Checklist</th><th>Yes / No</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr></table>	Monitoring Checklist	Yes / No	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	CAR	<input checked="" type="checkbox"/>												
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		Has this value been verified?	No			
		Measurement method correctly described?	No			
		Correct reference to standards?	No			
		Indication of accuracy provided?	No			
		QA/QC procedures described?	No			
		QA/QC procedures appropriate?	No			
		See above G.1.1.2				

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Table 2 Resolution of Corrective Action and Clarification Requests

Clarifications and corrective action re-quests by validation team	Ref. to table 1	Summary of project owner response	Validation team Conclusion
<u>Observation:</u> Please correct the statement in the PDD that the Letter of Approval from Sri Lanka was obtained in 2002, as this was not the case.	General	The statement has been modified in the revised PDD.	☑
<u>Observation:</u> It is recommended to postpone the start of the crediting period, as once the project is submitted for registration; there is at least a one-week completeness check by the UNFCCC and a four-week review period.	C.2.1	The start Date of the Crediting Period has been modified to 01/06/2007 in the revised PDD.	☑ The date of crediting period has been revised and also a note has been added that the start of the crediting period will only start after registration.
<u>Corrective Action Request No.1.</u> A detailed technical specification of the existing equipments and how the future additions will be added during the crediting period needs to be made transparent in the PDD.	A.4.2.6	The detailed technical specification of the existing equipments and the future additions has been provided in Section A.4.2	☑ The detailed specifications of the existing equipments and information about planned proposed additions have been now included.
<u>Corrective Action Request No.2.</u> PDD should include more information on training and maintenance needs of the entire project, especially since this project is “first of its kind” and possibility for failure is higher. Furthermore, please provide additional documentation to the audit team describing training and maintenance plans.	A.4.2.9	GHG monitoring procedure mentioning the training needs and the maintenance plans has been prepared. (please refer attached GHG Monitoring Manual)	<u>Response by audit team:</u> An unsigned, undated GHG Monitoring procedure has been submitted to the DOE. Though the procedure includes information about training of the employees on maintenance and operation, but no training and maintenance plans have been submitted. In addition the procedure is generic in nature and does not detail how the quantities

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			<p>shall be measured.</p> <p><u>Further response by project owner:</u></p> <p>A signed copy of the GHG monitoring procedure including measurement details of the quantities to be measured is attached. The training and maintenance plans have been incorporated in the GHG monitoring procedure as Annexes. The details of measurement methods have been included in the revised GHG monitoring procedure.</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>A detailed, signed GHG monitoring procedure has been submitted to the audit team.</p>
<p><u>Corrective Action Request No.3.</u></p> <p>Section B must clearly list all applicability criteria from both methodologies and their applicability must be demonstrated in the PDD. Please revise accordingly.</p>	B.2.1.2	<p>The applicability criteria for category III.K and I.D. have been specified and their applicability has been demonstrated in the revised PDD.</p>	<p><input checked="" type="checkbox"/></p> <p>The applicability criteria for both Methodologies have been now included in the revised PDD and the applicability has been demonstrated.</p>
<p><u>Corrective Action Request No.4.</u></p> <p>Please include the following in the project boundary:</p> <p>(a) Where the charcoal manufacturing with recovery and flaring/combustion of methane takes place;</p> <p>(b) And in the itineraries between them, where the transportation of raw material for charcoal manufacturing occurs.</p>	B.3.2	<p>(a) The charcoal manufacturing and methane recovery takes place in the processing kiln and the controlled combustion of the methane recovered takes places in the combustion chamber. The Project boundary diagram in the revised PDD has been modified accordingly.</p> <p>(b) A conveyor belt system is used for transporting the raw material to the processing kiln. The same has been incorporated in the revised PDD also.</p>	<p><input checked="" type="checkbox"/></p> <p>The project boundary is now revised to include charcoal manufacturing with recovery and flaring/combustion of methane. The itineraries between the transportation and manufacturing have been now included in the PDD.</p>

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<p><u>Corrective Action Request No.5.</u> Please include ALL parameters that are available at the time of validation in section B.6.2. If a parameter is taken as zero, please include a table and mention that the value applied is zero and why. If baseline emission factor is calculated ex-ante, then all major parameters should be listed in here too (see recently registered ACM0002 projects as an example).</p>	B.6.2.1.	The relevant parameters have been added in the Section B.6.2 in the revised PDD.	<input checked="" type="checkbox"/> All parameters required at the time of validation have been included in the revised PDD as per AMS IIK version 01 and AMS I.D. version 10.
<p><u>Corrective Action Request No.6.</u> Please provide the final table in section B.6.4 in the exact same format as defined in the SSC-PDD guidelines</p>	B.6.4.2	The Table has been modified into the correct format as per the SSC-PDD guidelines in the revised PDD	<input checked="" type="checkbox"/>
<p><u>Corrective Action Request No.7.</u> Section B.7.1. must include all parameters that need to be monitored as per AMS I.D. and AMS III.K. Thus, all missing parameters (MEy,project, PEy,power, amount of fossil fuel input, annual demonstration) should be included as a separate table. However, do not include any parameters in Section B.7.1. that are assumed to be zero or will not be monitored. If a parameter is assumed to be zero, please explain in B.6.2. or B.6.3.</p>	B.7.1.1.	<p>All the parameters that would be monitored are there in Section B.7.1. Relevant parameters have been mentioned in Section B.6.2 in the revised PDD.</p> <p>No fossil fuel is being used.</p>	<p><u>Response by audit team:</u> Most parameters to be monitored have been included in section 7.1., except the annual demonstration (point 14 from AMS IIK). See also CAR9.</p> <p>Furthermore, since the existing facility has provision of burning HSD during the start-up period, please explain whether additional project emissions (PEy,power) are expected due to this. To be clarified.</p> <p><u>Further response by project owner:</u> Annual demonstration has been included as a monitoring parameter in the section B.7.1 of the revised PDD.</p>

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			<p>The amount of HSD consumed in the project activity would be monitored by maintaining HSD stock inventory. The same has been incorporated in section B.7.1 in the revised PDD</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>Annual demonstration and amount of HSD has been included in the Monitoring Plan. See also CAR13.</p>
<p><u>Corrective Action Request No.8.</u></p> <p>All external data used in the PDD must show the references with the exact description of the document. These references should be retraceable and exact (i.e. "IPCC standard value" is not acceptable). It should mention the document name, if possible a weblink, chapter, page number, etc.</p>	B.7.1.1	The references for the external data used has been included in the revised PDD	<p><input checked="" type="checkbox"/></p>
<p><u>Corrective Action Request No.9.</u></p> <p>The annual demonstration that the "amount of charcoal raw material used in the project activity facilities would have been used in open pit charcoal manufacturing sites without methane recovery in the absence of the project activity" must be included in B.7.1. as a separate table.</p>	B.7.1.17	The quantity of raw material used in the project activity shall be monitored ex-post and is already included in section B.7.1	<p><u>Response by audit team:</u></p> <p>The quantity of raw material used in the project activity does not demonstrate that it would have been used in open pit charcoal manufacturing sites without methane recovery. This is usually demonstrated with something like a market study which shows that it is not common practice and that the legal requirements have not changed in that direction. Please include as a separate parameter in B.7.1.</p> <p><u>Further response by project owner:</u></p> <p>The parameter has been included as a separate</p>

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			<p>table in the relevant section. Kindly refer CAR 7</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>The “annual demonstration” parameter has now correctly been included in the monitoring plan, and it will be based on published data, field surveys and market surveys.</p>
<p><u>Corrective Action Request No.10.</u></p> <p>The environmental impacts need to be explained in the PDD in a transparent manner during pre and post project scenario. It should also include recommendations from the Central Environmental Authority and whether any mitigation measures are planned. Furthermore, this section should also describe which permits and consents are necessary and whether they have been obtained.</p>	D.1.2	<p>The environmental impacts attributable to the project activity have been explained in the revised PDD. The environmental impacts are not very significant and mitigation measures taken, if any have also been included. An environmental recommendation from Central environmental authority for establishing the charcoal manufacturing process has been achieved.</p>	<p><input checked="" type="checkbox"/></p> <p>The environmental impacts during commissioning and operation have been discussed and analysed in a transparent manner. The company has a permission from the Central Environmental Authority, which is the nodal agency in Sri Lanka for giving environmental clearances.</p>
<p><u>Corrective Action Request No.11.</u></p> <p>The stakeholder process needs to be explained in more detail. It should include how the process was carried out and what were the comments made. When was the hearing? How many people participated? What comments were made? Are documents available? A summary of comments should be included in PDD.</p>	E.1.1	<p>The Stakeholders' process details have been incorporated in the revised PDD. Meetings were organised both during planning and operational stages. Details of meetings along with numbers of participants and the comments raised in the meeting are enclosed.</p>	<p><input checked="" type="checkbox"/></p> <p>The stakeholder process has been described in detail in the revised PDD. Additionally, evidences have been submitted to substantiate the statements. The comments received during the stakeholder process have been recorded and a copy of the Minutes of the Meeting have been submitted to the DOE.</p>
<p><u>Corrective Action Request No.12.</u></p> <p>The PDD mentions on page 21 that</p>	G.1.1.	<p>The following has been mentioned in the revised PDD</p>	<p><u>Response by audit team:</u></p> <p>The emission factor has been calculated ex ante</p>

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<p>“the average of the approximate operating margin and the build margin” method has been selected. Please revise using the exact wording (either option a or b). If option (a) is chosen, then mention that the emission factor will be calculated ex-ante and include all parameters in B.6.2. For option (a) please follow all steps of ACM0002, and demonstrate why each option is chosen (simple OM, adjusted simple OM, etc.) Include all imports to the grid in your calculation. If option (b) is chosen, then mention that the emission factor will be calculated ex-post and include all parameters in B.7.1.</p>		<ol style="list-style-type: none"> 1. Option (a) of AMS I.D. has been used to calculate emission coefficient 2. Emission factor is calculated ex-ante 3. simple OM has been chosen as the contribution of low cost/must run resources constitute less than 50 of the total grid generation <p>There is only a single grid in Sri Lanka that supplies electricity to whole of the country. Any trans-boundary import from any other country is not done.</p>	<p>choosing the option (a). The calculations have been submitted for determining the emission factor ex ante in the soft format. The reference for external data used has been mentioned for each parameter.</p> <p>However, please clarify why the option (c) “Dispatch Data Analysis OM” is not selected.</p> <p><u>Further response by project owner:</u></p> <p>Dispatch data analysis is not selected because of the unavailability of the dispatch data for electricity generation.</p> <p>Simple OM, has been chosen considering low cost must run sources contribution to the grid is less than 50 %.</p> <p><u>Further response by audit team:</u></p> <p>Please explain how the fuel consumption for the PPP plants was calculated, as these do not seem to appear on the Annual Report by Ceylon Electricity Board.</p> <p><u>Further response by project owner:</u></p> <p>Emission factor has been recalculated based on fossil fuel consumption and generation details of individual PPPs as provided by competent agency under the ministry of power, government of Sri Lanka. These details have not been published in official (CEB) reports considering the confidential nature of the data.</p> <p><u>Further response by audit team:</u></p> <p>OM and BM are re-calculated based on the data vintage 2004-2006, instead of 2003-2005, which is deemed appropriate. Furthermore, the calcula-</p>
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			<p>tion of CM seems much more conservative since it has gone from 935.96 to 613.04 (also partly because the values in 2006 are lower). However, the audit team is having a hard time following the fuel consumption and generation details for PPPs. As an example, please explain how the figures in the sheet "Generation 2005" in cells E12 and F12 (353.70 million kWh and 84 million liters for Asia Power) have been derived based on the submitted document from the Ministry of Power and Energy.</p> <p>Also, please explain why there are only 4 plants in BM, if ACM0002 requires that the larger of the two options (last 5 plants or 20% of generation) is used.</p> <p><u>Further response by project owner:</u></p> <p>For assessing fuel consumed by each PPPs in the respective years, data has not been published by CEB. SEMA has provided fuel consumption data on request by project participant. Strategic Enterprise Management Agency (SEMA) has been established by a decree of The President of Sri Lanka as an agency to oversee CEB functions and can be considered as a reliable source of data.</p> <p>Generation details for individual PPP has been arrived at by statistics available in CEB reports wherein expenditure total and unit electricity cost has been given for all PPPs. Generation figures are calculated by dividing total expenditure and unit electricity cost.</p>
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			<p>BM calculations have been updated based on weighted average emission factor taking generation from larger of the two options</p> <p>(A) Five most recent built plants</p> <p>(B) Most recent 20 % generation capacity additions in the grid.</p> <p>The revised emission factor has been incorporated in the PDD.</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>The final OM and BM calculations are deemed correct now. The figures can be verified based on the annual reports (statistical digests) from the Ceylon Electricity Board (CEB). The missing information on fuel consumption by the PPPs (Private Power Plants) are given in a separate document from the Strategic Enterprise Management Agency, which oversees the CEB. This is deemed acceptable. The BM has also been corrected to comprise of the larger sample.</p>
<p><u>Corrective Action Request No.13.</u></p> <p>The PDD does not discuss the provision of co-firing with the waste gases in downstream during start up periods, and also the same is not included in the monitoring plan.</p>	G.1.2	<p>There is no provision of co-firing. Please Elaborate about waste gases.</p>	<p><u>Response by audit team:</u></p> <p>During the site visit, it was observed that the combustion chamber and boiler have been provided with burners which consume HSD. If the same is being used then the same has to monitored if any project emissions due to the project activity are expected.</p> <p><u>Further response by project owner:</u></p> <p>The Amount of HSD used in the project activity would be monitored and a HSD stock inventory</p>

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			<p>would be maintained. The same has been included in section B.7.1 as a monitoring parameter. The HSD consumption for the start operations has been assumed to be zero as the phase I & II are already commissioned and are under commercial operation. Therefore, no project emission on account of HSD consumption has been included in section B.6.3 in the PDD. However, HSD may be consumed at later stages say for initial start up operations or start up after shut-down / breakdown of the operational phases. To account for the attributable project emissions, the quantity of HSD consumed would be monitored and recorded. The Formula provided in section B.6.1 would be used to calculate the same.</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>As the plant is already running, no project emissions for start operations have been taken into account. If HSD should be consumed in the future, however, then the PDD and Monitoring Plan accounts for this. The Monitoring Plan includes the quantity of HSD (High Speed Diesel) as a parameter to be monitored and the PDD also clearly describes how project emissions – if any – from HSD will be calculated.</p>
<p><u>Clarification Request No. 1.</u> Modalities of communication and Host Country Approvals from Sri Lanka and Japan need to be submitted to DOE.</p>	A.3.2	Modalities of communication and HCA are being attached.	<p><input checked="" type="checkbox"/></p>

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<p><u>Clarification Request No. 2.</u> A time schedule outlining the implementation of the entire project should be submitted to the audit team.</p>	<p>A. 4.2.11</p>	<p>The same has been attached.</p>	<p><u>Response by audit team:</u> The time schedule indicates completion dates for various stages of the project in 2008 and 2009, but the crediting period is to start in September 2007. Please clarify.</p> <p><u>Further response by project owner:</u> The project activity is being implemented in four phases. Phase I & II have been already been implemented and are under commercial operation. Phase III & IV are under construction and shall start as stated above in 2008 & 2009 respectively. As the initial phases are operational and resulting in GHG emission reductions crediting period shall start from September (After Registration of the project) . The emission reduction calculation has taken into consideration the phased implementation nature of the project for estimating CERs. (Refer attached CER calculation sheet)</p> <p><u>Further response by audit team:</u> <input checked="" type="checkbox"/> CER calculation takes into account the phased implementation of the project. This is deemed correct.</p>
<p><u>Clarification Request No. 3.</u> A document containing sources of funds for the project is to be provided to the audit team, and also provide the evidence that the funds provided by the Japanese government do not result in a diversion of ODA. As per the SSC-PDD guidelines "In case public funding</p>	<p>A.4.4.1</p>	<p>There is no ODA funding involved in either the project financing or for buying of CERs</p>	<p><u>Response by audit team:</u> Evidence has not been submitted that the funds provided by the Japanese government do not result in a diversion of ODA. Also please provide evidence of the sources of funds for the project.</p> <p><u>Further response by project owner:</u></p>

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from Parties included in Annex I to the Convention is involved, please provide in Annex 2 information on sources of public funding for the project activity from Parties included in Annex I providing an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties." Thus, please revise Annex 2 accordingly.			<p>LOA from Japanese government stating that there is no diversion of ODA due to the project activity has been attached in both English and Japanese versions.</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>LoA from Japan confirms that there is no diversion of ODA due to project.</p>
<p><u>Clarification Request No. 4.</u></p> <p>It should be explained in the PDD why alternative 3 is economically unattractive. And a calculation sheet needs to be submitted to demonstrate that alternative 3 is economically unattractive.</p>	B.4.4	The IRR for the mechanized charcoaling process without the power generation element has been calculated and the results clearly show that the alternative is not attractive. The excel file is being submitted.	<input checked="" type="checkbox"/>
<p><u>Clarification Request No. 5.</u></p> <p>The project proponent needs to substantiate the claim of being the first one to set up such project in the country. Supporting documentary evidence should be submitted to the audit team.</p>	B.5.15	<p>The patent documentations were provided to the local assessor proving that there is no such activity operational in Sri Lanka at present.</p> <p>The patent in the name of Haycarb was for the mechanised charcoaling technology.</p> <p>Furthermore, a letter from ministry of science and technology stating that there is no such activity other than Haycarb in the country is attached.</p> <p>Haycarb group is one of the leading companies in Sri Lanka engaged in research and development. Several R&D tasks are being performed by the company in various fields.</p>	<p><u>Response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>A letter from the Ministry of Science and Technology stating that there is no such activity other than this Recogen project in Badalgama was submitted. Thus, the project is first-of-its-kind in the country and has faced technical problems due to its pioneering nature. This letter will be uploaded as an enclosure.</p>

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		<p>The mechanised charcoaling process technology was developed by the company after much R&D and they got the technology patented in 1998.</p> <p>However, the decision to go ahead with the project activity, i.e. commercial production of charcoal through mechanised charcoaling was taken up much later in 2005. The exact starting date of the project activity is same as that mentioned in the PDD.</p>	
<p><u>Clarification Request No. 6.</u></p> <p>Please substantiate the statement of the difficulties faced in locating the suppliers and equipment manufacturers for this plant.</p>	B.5.17	The documents are being attached.	<p><u>Response by audit team:</u></p> <p>The commissioning history only depicts the problems since the plant's commissioning. Please give evidence that locating suppliers and manufacturers was difficult during the design phase.</p> <p>Also, please explain why the starting date of the project activity has been chosen as 01.12.2005. What does this date represent? Why does the commissioning history document start on 13.02.2004 if the project only started on 01.12.2005?</p> <p><u>Further response by project owner:</u></p> <p>The evidence for the problems faced in locating the local suppliers and the manufacturers is being provided.</p> <p>All equipments used in the project activity were imported from India, due to non availability in Sri Lanka. Letters of equipment suppliers from India</p>

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			<p>are attached.</p> <p>The starting date of the project activity as mentioned in the PDD refers to the date of start of commercial production through mechanised charcoaling process. The certification given by CEB (Ceylon Electricity Board) for export of electrical power to the national grid, after formal testing is 28th July 2005. After the certification, Haycarb continued the commissioning of the plant over extended periods in order to ensure stability. Therefore, a further four months period was allocated for getting over operational issues. Thus, 1st December 2005 is documented as the plant start-up which is the actual date of start up of the project activity.</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>Several documents have been submitted indicating that equipments have been purchased from India, which implies that local manufacturers were not available. Also, the discrepancy concerning the start-up date has been clarified.</p>
<p><u>Clarification Request No. 7.</u></p> <p>Kindly submit all back up calculations and laboratory report for arriving at the parameter of $M_{y,b}$ (14.61 kg CH₄/MT of charcoal) .</p>	B.6.2.3	The laboratory report was provided to the local assessors at the validation visit.	<p><u>Response by audit team:</u></p> <p>No such calculations have been submitted.</p> <p><u>Further response by project owner:</u></p> <p>Detailed lab report in PDF version has been attached comprising of 9 Pages.</p>

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			<p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>A lab report has been submitted which demonstrates how the value of $M_{y,b}$ has been determined.</p>
<p><u>Clarification Request No. 8.</u></p> <p>All emission reduction calculations needs to be submitted in Excel format to DOE for verification.</p>	B.6.3.2	The Excel sheet having all the emission reduction calculations is being submitted	<p><input checked="" type="checkbox"/></p> <p>Calculations in the excel sheets have been submitted and are deemed to be correct.</p>
<p><u>Clarification Request No. 9.</u></p> <p>The current method of determining this parameter $Q_{y,raw}$: Quantity of raw material used is not correct and not in line with methodology. The table in B.7.1. should describe clearly the method and all values for this parameter that have been used to estimate emission reductions (in the section "Value of data").</p>	B.7.1.3.	<p>The total weight of the raw material would be measured using a weigh bridge. Also the moisture content of the raw material through sample testing will be determined to arrive at the dry quantity of the raw material used ($Q_{y,raw}$).</p> <p>The Table given in B.7.1 depicts these values which are used for determining emission reductions.</p>	<p><u>Response by audit team:</u></p> <p>The procedure for GHG Monitoring does not include this. (See above in CAR2)</p> <p><u>Further response by project owner:</u></p> <p>The same has been incorporated in the GHG monitoring procedure.</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>This has been included in the revised GHG Monitoring Procedure.</p>
<p><u>Clarification Request No. 10.</u></p> <p>Please clarify what value has been chosen for the parameters CTy1, CTy2, DAFw1, and DAFw2. Demonstrate suitable justification for choosing</p>	B.7.1.7	<p>Due to the project activity there has been a reduction in distance in both the following cases:</p> <ol style="list-style-type: none"> 1. between the raw material collection points to the new charcoal manufac- 	<p><u>Response by audit team:</u></p> <p>This has not been substantiated. Kindly submit how the reduction has been achieved between the raw material collection point and the manu-</p>

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the same.		<p>turing facility(ies) in comparison to the baseline case (DAFw1)</p> <p>2. between the charcoal manufacturing facility(ies) to the consumption points in comparison to the baseline case (DAFw2)</p> <p>Thus, the value of DAFw1 and DAFw2 has been taken as 0.0</p> <p>Since, the incremental distances have been taken as 0.0 hence CTy1, CTy2 need not be considered as no project emissions would occur because of increase in distances.</p> <p>The same has been verified by the local assessor during the site visit.</p>	<p>facturing facility.</p> <p>The consumption point of the charcoal is closer to its manufacturing point hence the same can be assumed as zero.</p> <p><u>Further response by project owner:</u></p> <p>The average distance between raw material collection centres and the open pits is 50 Km per tonne of charcoal produced. On the other hand, the average distance between the raw material collection centres and mechanised charcoaling kiln is 37.5 km per unit of charcoal produced. Thus, the incremental transportation distance due to the raw material collection and the new charcoal manufacturing facility over the base case has been taken as zero.</p> <p><u>Further response by audit team:</u></p> <p>In estimating project emissions due to incremental transportation distances during validation, it is acceptable to assume they are zero.</p> <p>However, since this might change during the crediting period, they must be monitored and verified during verification. Hence, please include all four parameters (CT1, CT2, DAFw1, DAFw2) in monitoring plan. Monitoring of these four parameters is also clearly required by AMS III.K. version 01.</p> <p><u>Further response by project owner:</u></p> <p>The aforesaid parameters (CT1, CT2, DAFw1, DAFw2) have been included in the section B.7.1.</p>
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			<p>Kindly refer to the revised PDD.</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>Although the incremental transportation distance is planned to be zero, these four parameters have been included in the monitoring plan in case this changes during the crediting period.</p>
<p><u>Clarification Request No. 11.</u></p> <p>Please explain why no fugitive methane emissions are expected due to capture and flare inefficiencies. Please provide substantial justification for the same.</p>	B.7.1.11	<p>The project activity involves capturing of methane generated during charcoal production process in a closed system which shall be combusted under controlled conditions and not flared. Hence, no fugitive methane emissions are expected due to capture and flare inefficiencies.</p>	<p><input checked="" type="checkbox"/></p>
<p><u>Clarification Request No. 12.</u></p> <p>Please define a documented procedure, correctly describing how each parameter will be measured. Additionally the procedure must define roles, responsibilities and authorities for monitoring, reporting, reviewing and conducting internal audits of data along with calibration schedules</p>	B.7.2.1	<p>The GHG monitoring manual having all the details has been prepared.</p>	<p><u>Response by audit team:</u></p> <p>The procedure is generic in nature and does not detail the responsibility and frequency of monitoring of parameters how the quantities shall be measured and their records shall be maintained. Please refer to CAR2. Issue still open.</p> <p><u>Further response by project owner:</u></p> <p>Please refer to the revised GHG monitoring Procedure.</p> <p><u>Further response by audit team:</u></p> <p><input checked="" type="checkbox"/></p> <p>The revised GHG Monitoring Procedure clearly defines roles and responsibilities, along with monitoring methods for the parameters, metering</p>

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			points and training plans for the project activity.
<u>Clarification Request No. 13.</u> Please submit the English translation of all stakeholder documents and other documents which have been submitted.	E.1.1	The same is being attached.	<input checked="" type="checkbox"/>

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Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)


Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-

Validation of the CDM Project:
Coconut shell charcoaling and power generation at Badalgama, Sri Lanka




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Annex 2: Information Reference List

	Validation of the “Coconut Shell Charcoaling and Power Generation at Badalgama, Srilanka” Information Reference List	Page 1 of 2	
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Reference No.	Document or Type of Information										
1.	<p>On-site interviews at the Recogen Limited offices in Colombo and at the project site at Badalgama, Sri Lanka conducted on March 01-02, 2007 by the auditing team of TÜV SÜD:</p> <p>Validation team:</p> <table> <tr> <td>Sunil Kathuria</td><td>TÜV SÜD South Asia</td></tr> </table> <p>Interviewed persons:</p> <table> <tr> <td>Parakrama Jaysinghe</td><td>Recogen Limited, Sri Lanka</td></tr> <tr> <td>B.Balaratnarajah</td><td>Recogen Limited, Sri Lanka</td></tr> <tr> <td>Rohan Peris</td><td>Recogen Limited, Sri Lanka</td></tr> <tr> <td>J.Rajasekar</td><td></td></tr> </table>	Sunil Kathuria	TÜV SÜD South Asia	Parakrama Jaysinghe	Recogen Limited, Sri Lanka	B.Balaratnarajah	Recogen Limited, Sri Lanka	Rohan Peris	Recogen Limited, Sri Lanka	J.Rajasekar	
Sunil Kathuria	TÜV SÜD South Asia										
Parakrama Jaysinghe	Recogen Limited, Sri Lanka										
B.Balaratnarajah	Recogen Limited, Sri Lanka										
Rohan Peris	Recogen Limited, Sri Lanka										
J.Rajasekar											
2.	UNFCCC homepage http://www.unfccc.int										
3.	Small Scale Methodology AMS IIK version 01 dated 23.12.2006										
4.	Small Scale Methodology AMS ID version 10 dated 23.12.2006										
5.	Photographs of the baseline-open pit process, Audit team dated 02.03.2007.										
6.	Draft Project Design Document for CDM project “Coconut Shell Charcoaling and Power Generation at Badalgama, Sri Lanka”, Version 01, dated January 24, 2007										
7.	Emission reduction calculation (excel sheet), no date, submitted February 2007.										
8.	Excerpts from the Project Report, dated nil, submitted March 2007.										
9.	Certificate for Grant of Patent dated 29.07.2003, submitted March 2007.										
10.	Overview of Recogen project, dated nil, submitted March 2007.										
11.	Approval from Local Authority, dated 2001, submitted March 2007										
12.	Extension of project implementation ,Board of Investment Sri Lanka, dated 25.05.05, submitted March 2007										
13.	Certificate of incorporation, Registrar of Companies, dated 18.10.97, submitted March 2007										
14.	LOI between Recogen and EcoSecurities for CDM project, dated 20.10.04, submitted March 2007										
15.	Communication on CDM consideration with Adventure in Sustainable NRG-Netherlands BV, dated 13.10.04, submitted March 2007										
16.	Permission for participating in CERUPT tender, Sri Lankan Government, dated 24.01.02, submitted March 2007										
17.	Approval letter ,Ministry of Home Affair Provincial Council & Local Government, dated 22.05.03, submitted March 2007										

	Validation of the “Coconut Shell Charcoaling and Power Generation at Badalgama, Srilanka” Information Reference List	Page 2 of 2	
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Reference No.	Document or Type of Information
18.	Host Country Approval, Director Environmental Economic and Global Affairs, dated 20.10.05, submitted March 2007
19.	Extract from the meeting ,Recogen limited , dated 14.05.04, submitted March 2007
20.	Commissioning History , Recogen limited , starting date 13.02.2004, submitted March 2007
21.	Profit and Loss account of Recogen Limited for the period 01.04.2006 to 31.01.2007, submitted March 2007
22.	Power Purchase Agreement between Ceylon Electricity Board and Recogen Limited, dated June 2003, submitted March 2007
23.	Interconnection Certificate, Ceylon Electricity Board, dated 28.07.2005, submitted March 2007.
24.	Environment protection License, Central Environment Authority, dated 02.07.06, submitted March 2007
25.	First and the most current joint metering report on power export, dated 28.07.2005 and 31.01.2007, submitted March 2007
26.	Web pages of CEA www.cea.lk
27.	Sample of daily stock of shells, dated nil, submitted March 2007.
28.	Samples of Electricity Bills dated respective month, submitted March 2007.
29.	Sample of Invoice raised for sale of electricity, Recogen Limited, submitted March 2007.
30.	Records of Meeting of Stake Holder process, dated 2002, submitted March 2007.
31.	Certificate of registration, Coconut development authority , dated 08.02.2007, submitted March 2007.
32.	Sample of daily record of shells and charcoal, dated 12.02.2007, submitted March 2007.
33.	Photographs of the baseline activity dated 03.03.2007, by the validation team.
34.	GHG performance Procedure ,dated nil , submitted May 2007.
35.	Host country approval ,Ministry of Economy, Trade and Industry of Japan, dated 12.04.2007,submitted May 2007.
36.	Calculation of Internal rate of return, Recogen Limited, dated nil, submitted May 2007.
37.	Calculation of carbon emission reduction version 02 Recogen Limited, dated nil, submitted May 2007.
38.	Letter from SEMA with fuel consumption figures for IPPs from 2003-2006, dated September 28, 2007.
39.	Statistical Digests from CEB for 2004,2005 and 2006, www.ceb.lk
40.	Final Project Design Document for CDM project “Coconut Shell Charcoaling and Power Generation at Badalgama, Sri Lanka”, Version 05, dated October 16, 2007