

FINDINGS OVERVIEW

Findings from validation of [Rice Husk based power project CDMVal.0159]

Each Table below represents a finding from the validation assessment. The findings are numbered consecutively, approximately in the order that they have been identified.

Description of table:

Type	Findings are either New Information Requests (NIR) or Corrective Action Requests (CAR). CARs are items that must be addressed before a project can receive a recommendation for registration. NIRs may lead to the raising of CARs. Observations are included at the end and may or may not be addressed. They are primarily to act as signposts for the verifying DOE.
Issue	Details the content of the finding
Ref	refers to the item number in the Validation Protocol
Response	Please insert response to finding, starting with the date of entry.

Rows for comments and further response will be appended to the table until the Findings has been addressed to the satisfaction of the Lead Assessor.

Please note that this is an open list and more findings may be added as validation progresses.

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
1	CAR	No letter of approval from Host Country has been provided to the validator	1.2
<p>Comment from project developer</p> <p>Date: 8th August 2005</p> <p>The letter will be produced to the validator during the site visit. Scanned copy of the letter is enclosed herewith as Annexure I.</p>			
<p>Date: 9th September 2005; Irma Lubrecht</p> <p>Awaiting outcome of site visit; CAR 1 remains valid.</p>			
<p>Date: 25th October 2005; Marco van der Linden</p> <p>Scanned copy of the Letter provided and checked. Original viewed during site visit.</p>			
CAR closed out			

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
2	CAR	Please provide full reference for all data sources (especially section B) to allow the validator to verify the data produced in the PDD	1.11
<p>Comment from project developer</p> <p>Date: 8th August 2005</p> <p>The necessary details will be provided in the revised PDD and the supportive documents will be submitted to the Validator during the site visit.</p>			
<p>Date: 9th September 2005; Irma Lubrecht</p> <p>CAR 2 remains valid until after the site visit by Shivananda Shetty.</p>			
<p>Date: 26th October 2005; Marco van der Linden</p>			

Documents and the web address provided during site visit. Cross checked and found to be ok on the basis of the documents provided. Copies have been submitted to SGS. Revised version of the PDD received

CAR closed out

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
3	NIR	<p>Situation with co-firing coal is not totally transparent. Please provide information on the following:</p> <ul style="list-style-type: none"> - page 13 of the PDD claims that coal will be co-fired in case of exigency however page 48 the PDD mentions the use of about 16.5% coal in the boiler with the expectation it could be reduced. Please provide more detailed information on the amount of coal to be co-fired - please indicate how the 7.7 MW generating capacity has been determined e.g. is this the maximum rated capacity as indicated by the boiler manufacturer (please support this with documented evidence) and is the 7.7 the rated capacity for firing biomass only or is this for co-firing. 	2.1

Comment from project developer

Date: 8th August 2005

- In the project activity, coal is co-fired with rice husk in the FBC Boiler. Ministry of Non-conventional Energy Sources (MNES) has allowed the use of fossil fuel as a supporting fuel up to a limit of 25% in biomass based power generation projects. VVL has used 16.5% (w/w) of coal with rice husk in FY 2002-2003 and proposes to reduce the same in the coming years. However the project emissions for the entire crediting period have been calculated with this coal percentage which evidently leads to a conservative estimate of emission reductions resulting from the project activity. In any case the CERs are going to depend on actuals which will be verified every year.
- The total generating capacity of the rice husk based power plant is 7.7MW which is achieved by co-firing of rice husk and coal. This can be substantiated by the fact that the capacity of the single bleed cum condensing steam turbine generator (STG) used in the project activity is 7.7MW. Please refer to Annexure-II: Turbine Design Data (provided by the supplier BHEL).

Date: 9th September 2005; Irma Lubrecht

Until documented evidence is provided CAR 3 remains valid.

Date: 25th October 2005; Marco van der Linden

From the reply of the project developer and the findings of the local assessment it was clear that coal will be co-fired with the biomass on a daily/regular basis. It was also clarified that the total generating capacity of the rice husk based power plant is 7.7MW which is achieved by co-firing of rice husk and coal.

CAR closed out

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
4	NIR	<p>In the situation where coal is being co-fired, project emission should be calculated. PDD proposes to use stoichiometric CO₂ release from coal. Please explain why this is considered as the most appropriate method. Monitoring plan provides for the determination of the NCV of the coal</p>	2.4

		used and it might be more appropriate to use this in the calculations.	
<p>Comment from project developer</p> <p>Date: 8th August 2005</p> <p>Calculation of project emissions (due to co-firing of coal) using NCV of coal will require the project developer to use the emission factor of coal. The country specific value for emission factor of coal will be used for this purpose. However in absence of country specific value, IPCC emission factor will be considered. IPCC emission factor does not give a true reflection of the emission factor of the specific grade of coal used in the facility site.</p> <p>But project emissions due to co-firing of coal, calculated as the stoichiometric CO₂ release from coal, require the project developer to use the carbon percentage of the specific grade of coal used in the facility site. This is determined through sample testing which gives the actual carbon percentage in the specific grade of coal used. Thus this method of calculating the project emissions due to co-firing of coal is considered to be the most appropriate method.</p>			
<p>Date: 9th September 2005; Irma Lubrecht</p> <p>NIR 4 has been closed out.</p>			
<p>Date: 26th October 2005; Marco van der Linden</p> <p>Following NIR 3 and NIR 4 and based on findings of the local assessor 2 new CARs (16 and 17) have been raised. See below for more details</p>			

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
5	NIR	Please provide more details where exactly the project is located (location within the industrial zone) and what type of industrial units surrounds this industry to allow for unique identification of the project activity.	2.2
<p>Comment from project developer</p> <p>Date: 8th August 2005</p> <p>The rice husk based power project is undertaken at VVL plant, located at Sirgitti Industrial Area of Bilaspur district in the state of Chattisgarh, India. The plant comes under Bilha block of Bilaspur district. There are two plants located within 10km radius of VVL. They are:</p> <ol style="list-style-type: none"> 1. BEC Fertilizers – Fertilizer plant 2. Indian Speciality Limited – Vegetable Oil Solvent Extraction and Refinery <p>VVL belongs to the Vandana Group of Industries which is mainly engaged in the production of High Tensile Steel, Galvanised Iron and other wires, High Density Poly Ethylene, Poly Propylene woven sacks, steel products, re-rolled items, steel ingots and heavy structurals, elastic clips and processing of steel products. Therefore the core business area of the Group is totally different from that of the above two plants which ensures unique identification of VVL (and hence the project activity) in the industrial area.</p>			
<p>Date: 9th September 2005; Irma Lubrecht</p> <p>NIR 5 has been closed out.</p>			

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
6	CAR	The unit MU is used to describe the electricity production. MU is defined as million Units. It is not clearly defined what a "Unit" is. PDD should only use official SI Units	1.11
<p>Comment from project developer</p> <p>Date: 8th August 2005</p> <p>In electrical energy terms, "Unit" is a terminology used for kWh which is an official SI Unit. Therefore 1MU=1Million kWh. The definition of MU has been incorporated in the revised PDD in the 'Appendix I: Abbreviations'.</p>			
<p>Date: 26th October 2005; Marco van der Linden</p>			

Change is not incorporated in Appendix I of the revised PDD received
Comment from project developer Date: 3rd November 2005 Electrical energy units have been changed to million kWh in the revised PDD.
Date: 20 th November 2005; Marco van der Linden Revised PDD received and reviewed
CAR closed out

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
7	CAR	Calculation of the Operating Margin is not transparent. Simple calculations of the Operating margin it either done from the amount of fuel burned OR using the power generated taking into account the thermal efficiency of the plants. From the calculation presented, it is not clear if the efficiency of the plants has been taken into account and if so, how this efficiency has has been determined.	2.3
Comment from project developer Date: 8 th August 2005 The Operating Margin emission factor of CSEB grid has been recalculated following the guidelines in paragraph 7 of Category-I.D project activity (of Appendix B of the simplified modalities and procedures for small-scale CDM project activities) in a transparent manner. The same is enclosed herewith as Annexure III: Calculation of Grid Emission Factor of CSEB Grid. All the supportive documents can be provided to the Validator during their visit at site. This revision has to be incorporated in the PDD.			
Date: 9 th September 2005; Irma Lubrecht Awaiting revised version of the PDD. CAR 7 remains valid.			
Date: 26 th October 2005; Marco van der Linden Calculation in revised PDD reviewed no mistakes were found. Input data checked during site visit. CAR closed out but some of the assumptions and formulas in the revised PDD were not clear. Several new NIRs (18-21) were raised to ask for clarification (see below for details)			

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
8	CAR	Calculation of the Build Margin calculation is not transparent. In accordance with the methodology the build margin calculation needs to take into account all the generation capacity in the grid (so including hydro, biomass etc). Secondly from the data presented it appears that the 5 most recent plants would have a higher capacity than 20% of the grid and therefore should have been taken as the basis for the calculation.	2.3
Comment from project developer Date: 8 th August 2005 The Build Margin emission factor of CSEB grid has been recalculated following the guidelines in paragraph 7 of Category-I.D project activity (of Appendix B of the simplified modalities and procedures for small-scale CDM project activities) in a transparent manner. The same is enclosed herewith as Annexure III: Calculation of Grid Emission Factor of CSEB Grid. All the supportive documents can be provided to the Validator during their visit at site. This revision has to be incorporated in the PDD.			

<p>Date: 9th September 2005; Irma Lubrecht Awaiting revised version of the PDD. CAR 8 remains valid.</p>
<p>Date: 26th October 2005; Marco van der Linden</p> <p>Revised PDD reviewed. BM calculation seems incorrect. In accordance with the methodology the “build margin” is the weighted average emissions (in kg CO₂equ/kWh) of recent capacity additions to the system. This does not allow for the exclusion of hydro, geothermal, wind, low-cost biomass, nuclear and solar generation. The emission factor should therefore take into account all generation considered instead of only taking into account power generation from coal as seems to be the case in the calculation.</p> <p>CAR remains</p>
<p>Comment from project developer Date: 3rd November 2005 The Build Margin has been recalculated and necessary changes have been incorporated in the revised PDD. Please refer to the revised PDD and revised Appendix III (enclosed with the revised PDD) for the same</p>
<p>Date: 20th November 2005; Marco van der Linden Revised PDD and Appendix received. Calculation checked with the data (EF) provided and found to be correct</p> <p>CAR closed out</p>

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
9	CAR	<p>In accordance with the requirements for barrier analysis, especially the financial barrier and the technological barrier, the project activity should be compared with a credible alternative. The analysis on the PDD has not done this.</p> <p>For the investment barrier you will need to show that a financially more viable alternative to the project activity exists whose implementation is not prevented by the identified barrier. Any financial comparisons should not only take into account the costs of implementation costs but the costs of operating and maintenance as well. The argument that the biomass price has risen in the last year (so after the project was implemented) does not appear valid. Financial barriers should be assessed at the time of the planning / implementation of the project to ensure the project would not have happened anyway.</p> <p>Also for the technological barrier, the project activity will need to be compared to a credible alternative and it should be discussed why the identified technological difficulties would not exist (or would involve lower risks) for the alternative compared to the project activity.</p> <p>All statements made should be supported by verifiable evidence.</p>	3.2
<p>Comment from project developer Date: 8th August 2005 During the project conception stage, VVL has considered the following plausible alternative options which would have similar output as that of the rice husk based power plant</p> <ol style="list-style-type: none"> 1) 100% coal based power plant 2) Diesel based power plant <p>However the generation cost of a diesel generating set (around Rs. 3.5 – 4.6 per kWh) is</p>			

considerably high. Therefore diesel generators are generally used as a back up system and it was unlikely for VVL to set up a diesel based power plant in absence of the project activity.

In Chattishgarh, there are huge reserves of coal and around 85-90% of the power generation is from coal based thermal power plants. A 100% coal based power plant would not have faced all the technological risk that the rice husk based power plant has been facing. Moreover due to surplus availability of coal in Chattishgarh state, a coal (100%) based power plant would not have faced the investment risk that the project activity has been facing due to unanticipated increase in price of rice husk. All these investment risk and technological complexity have resulted in a poor penetration of the technology in the region. The power plant of VVL is only the second such project in the state.

From the above discussion, it is established that a coal (100%) based power plant would have been a credible and realistic alternative option for VVL to adopt. The common practice scenario in the region also substantiates the same.

Date: 9th September 2005; Irma Lubrecht

Awaiting revised version of the PDD. CAR 9 remains valid.

Date: 26th October 2005; Marco van der Linden

Additionality analysis is still not clear. Some of the barriers identified like frequency variations on the grid and energy not being a core business for the company seem to also apply for the identified alternative (energy production through coal).

As stated earlier, financial barriers or investment barriers that occurred after the project was implemented (e.g rise in biomass prices) can not be applied retrospectively. Only if this was foreseen/expected during the planning phase this can be considered as barrier for the implementation of the project. If there were financial/investment barriers at the time of the implementation of the project compared to the alternative(s) considered this should normally take into account the full costs for operating and maintenance and not focus on one aspect of the project. Discussion on barriers should be backed up with (documented) evidence for example feasibility studies with costs analysis.

Also other barriers should be supported by evidence.

CAR remains

Comment from project developer

Date: 3rd November 2005

New alternative for the project activity added:

3) No project activity: Continuation of current situation

However the capital investment (around Rs. 4.25-4.5 Crores per MW) required for setting up a 100% coal based power plant of this scale would have made this alternative option economically unviable for VVL. Furthermore a 100% coal based power plant would have also faced the risks involved with the operation of the power plant in synchronization with the grid.

With Alternative 3, VVL, would not require to invest in the project activity and consequently they would not have faced all the risks associated with its implementation. Under such circumstance, generation of power with the current grid mix of CSEB would have continued. Since there is no displacement of electricity in the grid mix of CSEB, an equivalent amount of carbon dioxide would be generated at the thermal power generation end. This alternative is in compliance with all applicable legal and regulatory requirements. The barriers identified for the project activity would evidently not be there for Alternative 3 and therefore "Alternative 3: No project activity:

Continuation of current situation" is the baseline scenario.

Comment from project developer

Date: 3rd November 2005

Please refer to earlier comment from project developer for details on the alternatives.
The financial or investment barrier related to rise in the rice husk price was also considered in the planning phase of the project activity. This is further substantiated from the “Extracts from the minutes of Board of Directors meeting held on October 5th 2000”. The same has been submitted to the validator during the site visit.
It may be noted that these barriers are effective for the project activity in conjunction with the other barriers described in the PDD. These barriers are not applicable for the baseline option.
Evidences related to the barriers have been produced to the validator as desired during site validation.

Date: 20th November 2005; Marco van der Linden

It is accepted that continuation of the current situation would be an alternative. However, project is still requested to provide evidence to show the existence of the barriers. Extract of Board minutes only show that the CDM would result in additional revenue and increase financial viability. This is a very general statement and doesn't relate to most of the barriers identified.

Project is requested to review the section on additionality, focus on the main barrier(s) and provide evidence to support the statements made.

Comment from project developer

Date: 31st November 2005

The additionality section has been reframed with a focus on the main barriers.
Barrier due to prevailing practice can be substantiated by the fact that this is the first grid connected rice husk based power plant in Chattisgarh. Supportive document has been provided for the same.

Date: 21st December 2005; Marco van der Linden

Documented evidence was provided to show that the project is the first grid-connected rice husk based power plant in Chattisgarh and only the second rice husk based power project in the state. Other barriers were presented as anecdotal evidence to show that power production from biomass is not a usual practice for the project participant and the project has presented them with different problems and challenges.

The extract from the board meeting of Vandana Vidhyut Limited declares that the benefits from the CDM “may increase the project financial viability and protect against obstacles that may arise out of price rise of basic Raw Material or any others”. The other documents provided show that the project activity is the first grid-connected rice husk based power plant in Chattisgarh and only the second biomass based power project in the state. Hence it was accepted that setting up a biomass based power plant is not prevailing practice for Vandana Vidhyut Limited and that the CDM was taken into consideration when making the decision to proceed with the project. The identified alternatives would have led to higher emissions.

CAR closed out

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
10	NIR	The quantity of the rice husk and coal being used in the boiler is an important parameter for determining the emission reductions especially if coal is being co-fired. Page 41 of the PDD states that “an approximate measure is done by scaling” and “the amount of rice husk needs to be verified from invoices”. In the QA/QC section the uncertainty is still considered low. Please discuss further the uncertainty related to these	4.3

		parameters and measurements/estimates and how this impacts on the estimated amount of emission reductions	
<p>Comment from project developer Date: 8th August 2005 For both rice husk and coal, an approximate measurement is carried out by scaling of the respective bunkers where they are stored. From the bunkers, they are transported to the feeding hoppers of the boiler. Therefore the actual quantities of rice husk and coal fed to the boiler are always less than their measured amount since there is always some amount of transportation loss. There is no project emission due to firing of rice husk. Project emission, occurring due to co-firing of coal, is calculated based on the measured quantity of coal which is always higher than the actual amount of coal fired in the boiler (as stated above). This leads to a larger project emission and the emission reduction resulting from the project activity is therefore conservative. This justifies the consideration of a lower uncertainty level for the quantity of rice husk and coal used.</p>			
<p>Date: 9th September 2005; Irma Lubrecht NIR 10 has been closed out.</p>			

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
11	CAR	<p>Monitoring plan does not provided information on:</p> <ul style="list-style-type: none"> - authority and responsibility of project management - procedures for training of monitoring personnel - procedures for emergency preparedness for cases where emergencies can cause unintended emissions - procedures for maintenance of monitoring equipment and installations - procedures for dealing with possible monitoring data adjustments and uncertainties <p>Furthermore, project is requested to provide more information regarding types of meters used and the metering setup (where are meters located)</p>	5.2
<p>Comment from project developer Date: 8th August 2005 The details on the Procedure of GHG Performance Monitoring, Measurement and Reporting of data shall be provided to the Validator during the site visit. The procedure provides all information related to the meters used (accuracy of meters etc), specification of meters, plans for calibration, mode of data recording and the responsibilities.</p>			
<p>Date: 9th September 2005; Irma Lubrecht Awaiting outcome of site visit; CAR 11 remains valid.</p>			
<p>Date: 27th October 2007; Marco van der Linden Procedure reviewed during site visit and was implemented</p>			
<p>CAR closed out</p>			

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
12	NIR	Project describes contribution to sustainable development without making clear how the performance of the project will be monitored	5.1
<p>Comment from project developer Date: 8th August 2005 As per the extract in Article 12 of the Kyoto Protocol “the purpose of the clean development</p>			

mechanism shall be to assist Parties not included in Annex I to the Convention in achieving sustainable development”.

The project activity contributes to the sustainable development of the host country, India. The project’s contribution to sustainable development of the India has been documented in details in the PDD. Further the project activity has also received the Host Country Approval from the Indian DNA – the MoEF.

As stated in the PDD the project activity follows Category I.D project of Appendix B of the simplified M&P for small-scale CDM project activities. This does not require the project activity to monitor its contribution to sustainable development. Therefore the same is not a part of the Monitoring Plan.

However it may be noted that all aspects related to sustainable development are related to the implementation of project activity and export of electricity to the CSEB grid. Therefore the project activity’s operations will ensure the project’s continued contribution towards the sustainable development of India.

Date: 9th September 2005; Irma Lubrecht

NIR 12 has been closed out.

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
13	NIR	Local stakeholder process is not transparent. In accordance with EB guidance, “an invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. In this regard, project participants shall describe a project activity in a manner which allows the local stakeholders to understand the project activity”. Under the CDM, stakeholders are defined as “the public, including individuals, groups or communities affected, or likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity”. From the current description it is not transparent how comments have been provided , how information was presented to the stakeholders and no contact details are provided for the validator to verify the statements made in the PDD	7.1

Comment from project developer

Date: 8th August 2005

As detailed in Section G of the PDD, VVL has consulted with the stakeholders who are relevant to the project activity at various stages of its implementation. All these consultation processes mainly aimed at various aspects of the direct and indirect impacts of the project activity. The project activity has been deservedly acclaimed by the local stakeholders and VVL has documented them in a proper manner. The same can be verified during site validation of the project activity.

Date: 9th September 2005; Irma Lubrecht

Awaiting outcome of site visit. NIR 13 remains valid.

Date: 27th October 2005; Marco van der Linden

The stakeholder consultation has been carried in conformance with local requirements for EIA study and has received clearance the regulatory authorities. Comments have been gathered from various stakeholders, copies of which have been verified at site and submitted to the validator.

NIR closed out

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
14	NIR	<p>Project starting date is listed as April 2000 with start of the crediting period on April 1, 2002. This is before the registration date of the project. The Marrakesh Accords and decision 18/CP.9 provide guidance on the eligibility of a proposed CDM project activity which started before registration.</p> <p>Please provide further documented evidence of the starting date of the CDM project activity. Also provide evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity. This evidence shall be based on (preferably official, legal and/or other corporate) documentation that was available to third parties at, or prior to, the start of the project activity.</p>	8.3.1
<p>Comment from project developer Date: 8th August 2005</p> <p>The starting date of the project activity is April 2000. VVL will provide supportive document for the same. During the approval of the project activity by the management of VVL, the incentive from CDM was seriously considered. It was found that the CDM revenue would assist VVL to overcome all the barriers associated with the implementation of the project activity. On the basis of the assumption of availing the CDM revenue, the management of VVL decided to proceed with project activity. The same has been documented in the extract of the Board Meeting where the approval for the project activity was granted. All these documentary evidences may be verified during the site validation of the project activity.</p>			
<p>Date: 9th September 2005; Irma Lubrecht Awaiting outcome of site visit; NIR 14 remains valid.</p>			
<p>Date: 27th October 2005; Marco van der Linden Documents provided include certified extract of a board meeting which was held on October 5, 2000 which discussed the possibility of selling carbon benefits. Also provided was a copy of the project schedule showing progress and which showed trial runs in July 2001 and expected export of power from August 2001. This confirms the starting date of the project in 2001</p>			
NIR closed out			

Date: 21.07.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
15	CAR	PDD not entirely confirms to SSC norms, text exceeding the limits (Refer: SSC M & P Appendix B ¹) such as Contribution to sustainable development should not exceed one page limit. Few changes such as excess number of pages than specified, font size, italics, shaded tables etc	9.4
<p>Comment from project developer Date: 8th August 2005 Necessary changes will be done in the revised PDD.</p>			
<p>Date: 9th September 2005; Irma Lubrecht Awaiting revised version of PDD. CAR 15 remains valid.</p>			
<p>Date: 27th October 2005; Marco van der Linden</p>			
<p>Revised version of PDD received but it is not clear the changes have been incorporated</p>			
<p>Comment from project developer Date: 3rd Nov 2005 The section on sustainability has been reduced to meet the criteria.</p>			
<p>Date: 20th November 2005; Marco van der Linden</p>			

Can you please provide a 'clean' version of the PDD

Comment from project developer

Date: 31 Nov 2005

A clean revised version of the PDD is enclosed along with tracked one.

Date: 20th December 2005; Marco van der Linden

PDD received and reviewed.

CAR closed out

Date: 26.10.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
16	CAR	<p>Coal is co-fired with the biomass on a regular basis. Following NIR 04 the emission factor for the coal will be determined based on the carbon percentage of the specific grade of coal used in the facility site which will be determined through sample testing. Based on the monitoring plan this would be determined on a monthly basis.</p> <p>Project has a crediting period starting in April 2002 and therefore monthly data should be available for this parameter. However, during the site visit the local assessor was asked to check the emission factor used for the coal. He commented that "F-grade coal is purchased from the South Eastern Coalfields Limited (SECL), the same has been verified at site. As per the PDD, the total carbon % in coal is considered to be 40% based on which the project emission calculation is carried out. This is taken from theoretical calculation. <u>VVL has sent the sample to a government laboratory for analysis and the results will be forwarded to SGS shortly</u>".</p> <p>This implies that no monthly data are available and project is not implementing its own monitoring plan</p>	NIR 4, PDD section D.3 and site visit

Comment from project developer

Date: 3rd November 2005

As per the monitoring plan, the carbon content of the fuel is monitored monthly. Proximate analysis of coal is carried out on a daily basis in the in-house laboratory of VVL which gives the fixed carbon percentage in coal used for power generation. The monthly reports containing the fixed carbon percentage in the coal co-fired are available from the start of the project activity. The project developer does not have facilities to measure the elemental carbon through ultimate analysis of coal in their laboratory.

However, F grade of coal has been used by project activity throughout. The total carbon content for F Grade coal in India can go up to 45% maximum (refer to

www.osc.edu/research/pcrm/emissions/coal.shtml, the file is attached). The coal that is co-fired in project activity has a total carbon content less than 40% as may be supported by the analysis report from Central Fuel Research Institute, Bilaspur Unit (accredited by NABL, India) which is enclosed. To remain on the most conservative side of CER estimates the CERs for the project has been revised for the past period 2002-03 to 2004-05 with a total carbon % of 45% instead of 40% done earlier. Estimates for future period have also been arrived at based on 45% total carbon in coal. However the CERs for the future period ie. 2005 – 2012 will depend on actual analysis to be conducted by VVL and can be checked during verification. The PDD has been revised accordingly.

Date: 20th November, 2005; Marco van der Linden

Confirmed by local assessor that invoices for coal delivered contains information on the grading and the coal received was graded F. Based on this the assumption of 45% carbon was found to

be acceptable

CAR closed out

Date: 26.10.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
17	CAR	<p>Following NIR 3 it is clear that coal will be co-fired in the project all the time. Project activity emissions from the firing of coal are calculated based on carbon content as detailed in E.1.2.1</p> <p>Section E.1.2.4 provides the formulae for the calculation of the baseline emissions. In this section formulas are given to calculate the “emission reduction by the project activity”. This is confusing because emission reductions are being calculated in section E.1.2.5. Please provide the appropriate formulas in this section</p> <p>Furthermore project is asked to be consistent and clear in the use of the parameters and notations. It should be clear that the calculation in section E.1.2.1 is used to calculate PE (E.1.2.4 and E.1.2.5). Furthermore when providing formulas and parameters that are being monitored and can change, values should not be fixed. For example on page 63 of the revised PDD, PE is said to be 14351 tonnes/year. However in accordance with the monitoring plan this value will be monitored and calculated regularly. To avoid confusion the relevant sections should only contain formulas. Any assumptions made to predict and calculate the emission reductions should be discussed and justified elsewhere.</p>	NIR 3, PDD section E

Comment from project developer

Date: 3rd November 2005

The formula for emission reduction calculation has been provided in Section E.1.2.5 of the revised PDD.

In the revised PDD, formula for estimation of baseline emissions, project emissions and emissions reductions are provided first in the relevant section. Then the same have been calculated for the project activity under consideration with project specific parameters.

Date: 20th November, 2005; Marco van der Linden

PDD received and reviewed

CAR closed out

Date: 26.10.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
18	NIR	Formula provided for ‘power generation and export by project activity’ on page 62 of the revised PDD doesn’t seem to make sense. It is also not clear how this formula affects the ER from the project since the calculations only use TPexp which is monitored directly	

Comment from project developer

Date: 3rd November 2005

The emission reductions resulting from the project activity depends on the gross power generated, auxiliary consumption of the power plant and the net quantum of power exported to the grid. However the estimation of the emission reduction is based only on the quantum of power exported to the grid. The PDD has been revised to address the NIR.

Date: 20th November, 2005; Marco van der Linden

Revised PDD received and reviewed

NIR closed out

Date: 26.10.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
19	NIR	In the first version of the PDD, the Emission factor for the grid was calculated using both the combined margin and the weighted average emission of the current generation mix. The weighted average emission of the current generation mix was selected as being the most conservative approach. In the revised version of the PDD the calculation of the weighted average emission is dismissed entirely. Please explain/justify why the combined margin approach is no longer considered as more appropriate.	

Comment from project developer

Date: 3rd November 2005

Calculation of the emission factor of the grid as per the combined margin approach takes into consideration both the present as well as future generation mix of the grid whereas the calculation of the emission factor of the grid as per weighted average approach considers only the power generating stations currently supplying to the grid (i.e. it does not consider the future generation mix of the grid). Since the project activity's crediting period extends upto ten years from its start date, hence future generation mix of the grid will have a significant impact on the emission reductions resulting from the project activity. This justifies the choice of the combined margin approach over the weighted average approach for the calculation of the emission factor of the grid.

Date: 20th November 2005; Marco van der Linden

Accepted, NIR closed out

Date: 26.10.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
20	NIR	In the revised version of the PDD, please clarify the use of the number 860 in the formula for calculating the fuel consumption (page 59). If this is a printing error please correct	

Comment from project developer

Date: 3rd November 2005

The fuel consumption is calculated on the basis of the total electrical energy generated with that fuel source, efficiency of power generation and the net calorific value of the fuel. As given in the PDD, the electrical energy generated is measured in MWh and the net calorific value is measured in kCal/kg. Now 1MWh = 860x103 kCal. So the 860 figure in the formula is the conversion factor of MWh into kCal.

Date: 20th November 2005; Marco van der Linden

Accepted, NIR closed out

Date: 26.10.2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
21	NIR	In the calculation of the simple operating margin and the build margin, please clarify how the imports from the other grids have been taken into account in the calculation and please explain assumptions/ data sources	

Comment from project developer

Date: 3rd November 2005

Please refer to Appendix III, enclosed with the revised PDD, for clarification. All the data sources

used for accounting the imported electrical energy from other grids have been submitted to the validator during the site visit.

Date: 20th November 2005; Marco van der Linden

Accepted, NIR closed out

Date: 29-11-2005

Raised by: Marco van der Linden

No.	Type	Issue	Ref
22	NIR	<p>Regarding the spatial boundary of the grid for grid connected renewable energy projects, the Meth panel has stated that:</p> <p>“In large countries with layered dispatch systems, such as India, the regional grid definition should be used. A state/provincial grid definition may in many cases be too narrow given significant electricity trade among states/provinces that might be affected, directly or indirectly, by a CDM project activity. In the presence of significant inter-state/provincial transmission capacity, a regional grid definition represents an imperfect but reasonable default;”</p> <p>In this respect, please provide further information on the choice of the grid and the significance of power imports/exports on the CSEB grid</p>	

Indra Guha ; 01-12-2005

Being a small-scale project, the emission factor of the CSEB grid has been calculated as per the guidelines given in paragraph 7.a. of Category-I.D project activities of Appendix B of the simplified M&P for small-scale CDM project activities of the UNFCCC CDM website. The calculation of grid emission factor considers the import from central power generating stations as well as from other state grids (e.g WBPDC, GRIDCO, DVC, GEB, Tripura, Assam, APTRANSCO and DTL). However the import from these state grids being insignificant as compared to the total generation of the CSEB grid, the regional grid emission factors for the corresponding state grids are used (as given by the MNES). The imports from central generating stations are significant and hence the import from them are treated similarly as that of state generating stations.

Date: 20th December 2005; Marco van der Linden

Accepted for small scale project

NIR closed out

Observations:

Observation 1

Please note that during EB 20, a new template for the SSC PDD has been accepted by the Executive Board.

In accordance with their decision: “Revisions to the CDM-SSC-PDD do not affect projects already validated, or already made publicly available by an operating entity for receiving comments ... prior to the adoption of the revised CDM-SSC-PDD. The Executive Board will not accept documentation using previous versions of the CDM-SSC-PDD six (6) months after the adoption of the new version”. You might consider taking the revision into account at this stage anyhow.