
VALIDATION REPORT

DEEPAK FERTILISERS AND PETROCHEMICALS CORPORATION LIMITED

10 MW Wind Power Project in Maharashtra by Deepak Fertilizers and Petrochemicals Corporation Limited

SGS Climate Change Programme

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Summary:			
Deepak Fertilisers and Petrochemicals Corporation Limited has commissioned SGS to perform the validation of the project: 10 MW Wind Power Project in Maharashtra by Deepak Fertilizers and Petrochemicals Corporation Limited Methodology used: AMS I D Version and Date: Version 13, valid from 14th December 2007 The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs. The report is based on the findings of document reviews, the stakeholder consultation process and responses from the project participants to the findings raised in this report. The report and the annexed validation describes a total of (09) findings which include: (04) Corrective Action Requests; (05) Clarification Requests; and All findings have been closed out satisfactorily and- will be recommended to the CDM Executive Board with a request for registration.			
Subject:			
CDM Validation			
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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CFO	Consent for Operation
CL	Clarification Request
CO ₂	Carbon Dioxide
COP/MOP	Conference of Parties serving as the Meeting of Parties to Kyoto Protocol
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EIA	Environment Impact Assessment
GHG	Greenhouse Gas(es)
GWh	Giga Watt hour
I	Interview
IDBI	Industrial Development Bank of India
IPCC	Intergovernmental Panel on Climate Change
kWh	Kilo Watt hour
MEDA	Maharashtra Energy Development Agency
MERC	Maharashtra Electricity Regulatory Commission
MITCON	Maharashtra Industrial and Technical Consultancy
MNES	Ministry of Non Conventional Energy Sources
MoEF	Ministry of Environment and Forest
MoV	Means of Verification
MSEDCL	Maharashtra State Electricity Distribution Company Limited
MP	Monitoring Plan
MW	Mega Watt
MT	Metric Tonnes
NGO	Non Government Organisation
NOC	No Objection Certificate
PDD	Project Design Document
PLF	Plant Load Factor
PPA	Power Purchase Agreement
UNFCCC	United Nations Framework Convention for Climate Change
WTG	Wind Turbine Generators

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1. Validation Opinion

SGS United Kingdom Ltd has been contracted by Deepak Fertilisers and Petrochemicals Corporation Limited to perform a validation of the project: 10 MW Wind Power Project in Maharashtra by Deepak Fertilizers and Petrochemicals Corporation Limited in India.

The Validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism (CDM) and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

SGS reviewed of the project design documentation, using a risk based approach and conducted follow-up interviews.

By installing wind electricity generators and supplying the electricity produced to Western Grid, the project activity will result in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project correctly applies methodology AMS I.D. version 13. It is demonstrated that the project 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.

The total emission reductions from the project are estimated to be 143,130 tCO₂e over a ten year crediting period, averaging **14,313 tCO₂e** annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given the underlying assumptions do not change.

The project will hence be recommended by SGS for registration with the UNFCCC.

Signed on Behalf of the Validation Body by Authorized Signatory



Signature:

Name: Siddharth Yadav

Date: 16th June 2009

2. Introduction

2.1 Objective

Deepak Fertilisers and Petrochemicals Corporation Limited have commissioned SGS to perform the validation of the project: 10 MW Wind Power Project in Maharashtra by Deepak Fertilizers and Petrochemicals Corporation Limited with regard to the relevant requirements for CDM project activities. The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

2.2 Scope

The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

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

2.3 GHG Project Description

The proposed CDM project activity is an electricity generation project through Wind Electricity Generators (WEGs) and supplying the same to the Western Grid. The project will result in replacing the same amount of electricity from same grid which is dominated by fossil fuel based power plants. The project activity is located at Dhule and Nandurbar district of Maharashtra state in India. The project activity was already commissioned and working in satisfactory condition. The project activity involves installation of eight wind electricity generator of 1.25 MW capacity each which was commissioned on 29th September 2006. This was checked during the site visit and cross-checked from commissioning letter and found acceptable.

2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Vikrant Badve	Lead Assessor	SGS India
Ramkrishna Patil	Assessor	SGS India
Ravi Kant Soni	Local Assessor (Trainee)	SGS India

3. Methodology

3.1 Review of CDM-PDD and Additional Documentation

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

A site visit is usually required to verify assumptions in the baseline.

A site visit was performed on 29th August 2008 by the Local Assessor and assessor and the results are summarized in the Local Assessment Checklist attached as Annex 1.

3.2 Use of the Validation Protocol

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

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

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

Checklist Question	Ref ID	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	Lists any references and sources used in the validation process. Full details are provided in the table at the bottom of the checklist.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (Y), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). Clarification Requests (CLs) is used when the validation team has identified a need for further clarification.

The completed validation protocol for this project is attached as Annex 1 to this report

3.3 Findings

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

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **Clarification Requests (CLs)** specifying what additional information is required.

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

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

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

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

Corrective Action Requests and Clarifications are raised in the draft validation protocol and detailed in a separate form (Annex 2). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to CLs and FARs.

3.4 Internal Quality Control

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

4. Validation Findings

4.1 Participation Requirements

The host Party for this project is India. India has ratified the Kyoto protocol on 26th Aug 2002. A Letter of Approval from the Indian DNA was not submitted by the project proponent. CAR #1 was raised asking project proponent to submit the Letter of Approval from the Indian DNA. In response to CAR #1 the project proponent has received the Host country approval letter for the present project activity dated 9th April 2008 issued by the Indian DNA (reference number 4/5/2008-CCC. This letter was checked and approved by the assessment team and the project activity name indicated in the HCA and in section A.1 of the PDD was found to be the same.

CAR #1 was closed out.

No Annex I Party has been identified in the PDD and therefore no further Letter of Approval was available. It is observed that the CDM EB has agreed that the registration of a CDM project activity can take place without an Annex I Party being involved at the stage of registration although it should be noted that before CER can be transferred to an Annex 1 Party, a Letter of Approval from Annex 1 Party will need to be submitted.

4.2 Project Design

The PDD was not prepared as per the guidelines stated in CDM-SSC-PDD, thus CAR #2 was raised. In response CAR #2 the PP submitted a revised PDD (version 5) which was prepared in accordance with the guidelines for completing CDM-SSC-PDD version 5 and CDM-SSC-PDD template version 3. The revised PDD was checked and verified by the assessment team and found to be correct.

CAR #2 was closed out.

It was found that C.1.1 of version 1 of the PDD indicated 7th June 2006 as project activity starting date. For the start date CL #6 was raised this was further discussed under section 4.7 of the report.

Operational lifetime and the technical specifications mentioned for the project activity were required to be cross-checked with the purchase orders thus CL #3 was raised. In response the project proponent provided the Purchase order copies dated 7th June 2006 along with the technical specifications. The technical specifications were cross-checked with the same mentioned in the PDD and were acceptable. The operation lifetime was accepted as 20 years after reviewing the technical specifications for the project activity. Thus CL #3 was closed. The project proponent has submitted a letter of undertaking mentioning that the project technology will not be substituted or replaced by more efficient technology during the crediting period.

The project proponent has submitted certificate from the chartered accountant which mentions the project cost and financing structure. The letter was checked and the project cost was the same as mentioned in the financial calculations, the letter also mentioned that no ODA was used and the project was financed by debt and promoter's contribution, the same was also discussed with the project proponent.

4.3 Eligibility as a Small Scale Project

The project activity is power generation by using wind energy and supplies the same to the Western Grid and is following AMS I D. The total capacity of the project is 10 MW which is less than the 15 MW limit for the small scale project activity. The project is following AMS I D version 13 valid from 14/12/2007. The same was checked with the UNFCCC site and found acceptable.

4.4 Baseline Selection and Additionality

The project has applied baseline as mentioned in the small scale methodology AMS I D version 13 valid from 14th December 2007 for "Grid connected Renewable Electricity generation" as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities. The project activity generates electricity from wind mills and supplies the same to the, Western Grid and thus replaces electricity which

would have been generated from fossil fuels and contributes to conservation of fossil fuels, and falls under the category AMS I D of the appendix B.

The project has adopted the Investment barrier to discuss the additionality of the present project activity. The investment barrier calculates equity IRR without CDM benefits for the project activity. Project proponent has also analysed, sensitivity for the project activity considering the net electricity generation. It is not clear why project cost, O&M cost, income from sale of electricity has not considered for sensitivity analysis. In order to get all the related documents on the basis of which the project was shown additional, CAR #4 was raised.

The investment analysis described under the section B.5 of revised PDD was discussed with the project proponent. The benchmark for the project activity has been taken as 15.81 % return on equity as per the Gordon model of Dividend Capitalization method. The assumptions used for the calculation of benchmark are as follows

1. The benchmark selected for the equity IRR applicable for the project activity is derived based on the government bond rates increased by a suitable risk premium. The risk premium has been calculated as 8.31% which is based on the bond yield of 7.49% which is referred from RBI which can be cross-checked at (http://www.rbi.org.in/scripts/BS_ViewBulletin.aspx?ld=7549) and
2. The Dividend yield was taken as 1.81% which is based on Data of CNX index from 1st April 2005 to 21st March 2006(<http://www.nse-india.com> (Open >Indices/statistics/Divd Yield for CNX 100))
3. The growth rate has been considered as 9% referred (<http://indiabudget.nic.in/ub2006-07/frbm/frbm1.pdf> (page 5 item 7))
4. The inflation is accounted as 5% the same referred and cross-checked from (http://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=14623),

Based on the above data the risk premium has been estimated as 8.31%. The Required rate of return has been estimated as the sum of Bond Yield (7.49%), risk premium of (8.31%). Thus the required rate of return comes to be 15.81 %. The project participant has not considered the additional risk premium for Windmill project, thus the calculated value is conservative. The project proponent has calculated equity IRR for project activity without CDM benefits which stands to be 12.06%. The calculation and assumptions were provided in the excel sheet which were checked and found acceptable. Thus the equity IRR for project is less than the benchmark for investment.

The appropriateness of the input values for the financial calculation has been checked as follows

1. The PLF value referred as 20% in the electricity generation from the project activity; the same was mentioned under section 2.2.2.B on page 32 of 176 of MERC order dated 24/11/2003 and cross-checked with PPA signed on 06/11/2006 which mentions the same under Exhibit C for the project activity. Thus PLF of 20% for the project activity was accepted. It has been checked for Maharashtra Energy Development Agency (MEDA) that PLF in Maharashtra for the last five years prior to conceptualization of project activity was 19-20% based on previous years installed capacity, thus the 20% PLF as per MERC order is acceptable. The transmission and distribution losses have been validated from section 1.6.12 (page 21 of 176) & 2.4.2 (Page 70 of 176) of MERC order 2003. The value considered is 5% and is accepted.
2. The tariff rate has been taken from the MERC order dated 24/11/2003 and same was cross checked with PPA. The value is INR 3.50 per kWh with an escalation of INR 0.15 per year up to 13th year. However as per section 1.4.2 of MERC order 2003, tariff will be cheaper once all debt has been paid off. The loan period for the project activity is eight years. The project participant has considered the 13th year tariff for the next six years and is conservative.
3. Project proponent has also provided proposals for the project activity. The mail dated 01/02/2006 has been checked for the proposals sent by supplier and the project cost has been checked through this mail. Also the copy of purchase order dated 07/06/2006 for the project activity has been cross checked against the total capitalised project cost, MEDA sub station charges and capacity which were used in financial analysis sheet. Bank charges, interest rate and Debt and equity have been checked with loan sanction letter. Interest during construction has been checked with bank interest rate and construction period of three months.

Project financial details were checked during the discussion with project proponent during validation process. The assumptions like PLF, Annual depreciation for the project activity, tariff used for calculating the IRR for the project activity were checked with the respective evidence mentioned in the excel sheet and found acceptable. There were changes in the project cost after the conceptualization stage, however that change did not effecting the additionality of project activity.

The sensitivity analysis for the project activity has been carried out with increase and decrease in electricity generation by 10% to the base electricity generation having PLF value of 20%. The sensitivity analysis result indicate that increase in 10% electricity generation which will affect the equity IRR values and the same will improve to 14.90% and decrease in electricity generation by 10%, equity IRR values are 8.98%. The calculations for the same was checked and found acceptable. Thus even 10% increase in electricity generation, the equity IRR is not crossing the benchmark.

The project cost is realistic and taken from the proposals. The actual project cost has been cross checked with the purchase order and found only 2.6% lower than the considered cost from the proposal, so the chances of significant variations are overruled subject to evidence from the actual situation. Also, it is important to note that equity IRR with actual project cost comes out as 12.82%, much lower than the selected benchmark value (15.81%). Nevertheless, to maintain the transparency in line to guidance sensitivity analysis, based on project cost, was also carried out. The results indicated that an increase in project cost by 10% will decrease the equity IRR figure as 9.70% and a decrease in project cost by 10% will lead the equity IRR to 15.56%. Apparently, even 10% decrease in project cost (a most unlikely event) the equity IRR doesn't cross the benchmark figure. The calculations completed for sensitivity on account of project cost as a variable was checked thoroughly and found in order.

The O&M cost, income from sale of electricity has not considered for sensitivity analysis. The O &M cost is only 18 % of total project revenue and not considered for the sensitivity analysis. This cost does not add up 20% of the total project revenue and not considered for sensitivity analysis as per guidance 16 of investment analysis. The income from sale of electricity has not considered for sensitivity analysis as this factor depends on electricity generation and tariff rate and electricity generation is considered for sensitivity analysis, however tariff rate is constant as per MERC order 2003 for the first 13 years. Project participant has considered the 13th year tariff for next six years for the financial calculation which is conservative as per section 1.4.2 of MERC order 2003 which has mentioned that it is essential that the consumer is able to enjoy the benefit of cheaper power once all debt related obligations are paid off and project has virtually no variable costs.

Based on the above discussion it can be concluded that the project activity without CDM funds is not a financially viable alternative as the financial returns from the project are not crossing the referred benchmark for the investment without CDM funds. Thus the project can be termed as additional due to investment barrier and hence CAR #4 was closed out. The project participant has also mentioned the risks due to unforeseen events of cable theft, however these barriers are after conceptualization of project activity and not acceptable.

The project activity start date is 07/06/2006 which is the date mentioned on the purchase order for the project activity. Project participant had a prior knowledge of CDM, and this was checked through the mail of Suzlon to project participant dated 01/02/2006. The project proponent provided extract of the Board meeting dated 22/03/2006 as an evidence for CDM consideration; the extract mentions that the board has considered investing in this wind project with the revenue from sale of carbon credits. The real action taken to secure CDM activity in parallel with its implementation was validated as follows.

Date	Real Action	Reference/ Comment
01/02/2006	Draft wind energy purchase agreement mentioning about CDM benefits	Mail from Suzlon to DFPCL which contains draft purchase orders, draft PPA for the project activity.
22/03/2006	Decision to invest 51 crores in wind power and avail CDM benefits for the same	Board note dated 22/03/2006
06/06/2006	Proposal by Suzlon Energy to develop the project as candidate CDM project	Letter from SEL to DFPCL dated 06/06/2006; SG/P/496

07/06/2006	Purchase/Work order for Commissioning, erection & Installation of the WTGs Considered as start date for the CDM project activity	P.O. dated 07/06/2006
13/07/2006	Discussion between Synergy Global and DFPCL regarding formalities for development of the project under CDM	Mail from Synergy Global to DFPCL
16/09/2006	Negotiation with Asia Carbon for CDM consultancy services	Mail from Asia Carbon dated 16/09/2006
29/09/2006	Commissioning of the project activity but wind mills are not allowed to export electricity to regional grid in view of not finalising the PPA with MSEDCL	Commissioning certificates SE/DHL/Tech/Wind/No 8166 and SE/DHL/Tech/Wind/No 8171 dated 30/09/2006
06/11/2006	Signing of Power Purchase Agreement between PP and MSEDCL. Wind mills started electricity export to regional grid	Wind Energy Purchase Agreement between DFPCL 10 MW and MSEDCL
27/12/2006	Discussion between E & Y and DFPCL for CDM consultancy for the project activity	Mail from E&Y dated 28/12/2006
30/12/2006	Joint offer for CDM consultancy from MITCON Consultancy Services Ltd. and IDBI Ltd.	mail from IDBI to DFPCL ,dated 30/12/2006
11/04/2007	Post negotiation release of Work Order to MITCON for CDM consultancy services	W.O. dated 11/04/2007
05/06/2007	Stakeholders consultation meeting	Invitation letter for stakeholders meeting dated 25/05/2007
30/07/2007	Discussion on Draft Tri Partite Agreement for terms of agreement between project participant and MITCON and IDBI	Mail from IDBI to DFPCL
30/07/2007	Last two wind mills J 87 & J 91 that had to be shut down because of cable theft problem, resume generation. Due to this the CDM process delayed. Local Stakeholders meeting has been postponed.	Mail from Suzlon Energy Limited dated 31/07/2007
03/09/2007	Internal discussion on tri partite agreement within DFPCL . This internal discussion was to finalize the terms and conditions for fixed fees payable by project participant to MITCON and IDBI.	Series of mails from legal department of DFPCL
20/09/2007	PIN & PDD submission to the promoter by MITCON Consultancy services Limited	Invoice – MITCON; dated 20/09/2007 Invoice – IDBI; dated 28/09/2007 This invoices has mentioned the terms and condition for the payment..
18/12/2007	Indication from the Management of DFPCL to the concerned person regarding finalization of the Draft tri partite agreement.	Letter dated 18/12/2007
17/01/2008	Application for Host country Approval	Application letter dated 17/01/2008
12/02/2008	Tripartite Agreement Signed between IDBI, DFPCL and MITCON	Agreement Copy
20/03/2008	Proposal request with DOE	Mail dated 20/03/2008 by MITCON Consultant to SGS for the proposals.
09/04/2008	HCA accorded	Host Country Approval Document
12/05/2008	Agreement with DOE for validation services	Copy of work order
12/06/2008	Web hosting of the project for international stakeholders' comments	UNFCCC web link

The evidences for all events has been checked and found to be acceptable. The project participant was aware about the CDM project activity and its revenue was the decisive factor for the project activity and project participant has taken real action to secure CDM status for the project in parallel with implementation. This is in line with “Guidance on the demonstration and assessment of prior consideration of the CDM”. The main delay is due to negotiation with consultant, and finalization of joint offer between project participant, consultant and IDBI Ltd. The main reason for the delay in finalizing tripartite agreement is the terms and condition for the fees payable by project participant to IDBI and consultant. The evidences for the same has been checked and found to be appropriate for CDM consideration for the project activity.

The PDD version 1 mentioned the project boundary, the project boundary is described as regional grid along with the details for metering points, and the same was checked and discussed during the site visit found acceptable.

4.5 Application of Baseline Methodology and Calculation of Emission Factors

The present project activity is generating wind power and supplying it to Western Grid. The project has applied baseline methodology as mentioned in the small scale methodology AMS I-D version 13 dated valid from 14th December 2007 for “Grid connected Renewable electricity generation” as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities. The project is of 10 MW capacity and supplies electricity generated to the Western Grid, thus satisfying the condition for the baseline methodology.

The baseline emission factor used for calculation of emission reductions has been referred from Carbon Dioxide baseline database (version 4) published by Central Electricity Authority (CEA), Government of India. The weighted average emission rate for the Western grid has been considered for emission reduction calculation. The Data for the same is provided by the CEA which can be referred at the link (<http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm>) thus the same was acceptable. The revised PDD has mentioned the weighted average grid emission factor as 0.860 for Western grid and this was checked with the latest version of CEA at the time of PDD submission for validation. However the emission factor would be monitored ex-post for the project activity. The latest available version of Carbon Dioxide baseline database published by Central Electricity Authority, Government of India will be used for the same.

Project proponent has not provided excel spreadsheet for calculation of emission reduction for the project activity and it was not clear why emission reduction in first year was higher than the rest of years. Thus CAR #5 was raised. In response to CAR #5 the project participant has mentioned that the higher emission reduction in first year was due to consideration of first year guaranteed generation given by supplier and submitted the revised excel spreadsheet by considering the PLF and losses from Government source, MERC order 2003. As the generation guarantee depends on wind speed, grid and machine availability and conditions for generation guarantee are uncertain, and the PLF and losses considered from MERC order are acceptable. This was checked and verified by the assessment team and found to be acceptable and thus CAR #5 was closed out. The baseline emission calculations and emission reductions were found to be in order during the desk review and during the local assessments at the site. The emission reduction figures would further be checked during verification. As per methodology AMS I-D version 13 dated valid from 14th December 2007; leakage due to project activity will be consider only when there is an equipment transfer from one place to another but this is not the case with present project activity hence no leakage is considered.

4.6 Application of Monitoring Methodology and Monitoring Plan

The present CDM project activity uses monitoring methodology AMS I-D version 13 valid from 14th December 2007 for “Grid connected Renewable Electricity generation”.

CL #7 was raised and project proponent was asked to discuss the QA/QC procedure for the project activity and ISO certificates of EPC contractor. Also project participant was asked to mention the proportioning procedure for the calculation of net electricity export to grid and to include all required parameters in monitoring section B.7.1. In response the project proponent clarified that the operation and maintenance is being carried out by Suzlon and the same is ISO certified and has proper procedures for providing training to its employees. The QA/QC procedure has mentioned in PDD. The ISO certificates for ISO 9001:2000 dated

18th December 2006 and valid till 17th September 2009 and ISO 14001: 2004 dated 25th April 2006 valid till 13th April 2009 were checked and are acceptable. The project participant has mentioned the proportioning procedure for the calculation of net electricity export to grid and included all required parameters in section B.7.1 of revised PDD.

CL #7 was closed out.

4.7 Choice of the Crediting Period

It was not clear about the evidence for start date of project activity and mentioned start date of the crediting period doesn't look realistic thus CL #6 was raised. In response to CL#6 the project proponent clarified that start date considered for the project is the date when purchase order was released for turbines of the project activity and a copy of the same was provided with revised PDD mentioning start date as 07/06/2006. The copy of purchase order was checked and found in order, thus the start date of the project activity was accepted as 07/06/2006.

The project proponent would claim credits from 1st May 2009 or from date of registration whichever is later. The present project activity has chosen ten years fixed crediting period. The start date of crediting period is appropriate at present and acceptable. The clarification given by the PP was checked and verified by the assessment team and found to be sufficient.

CL #6 was closed out.

4.8 Environmental Impacts

The project proponent has mentioned in the PDD that present project activity does not require an EIA to be carried out. This information was cross checked with the EIA notification which mentions projects requiring EIA, and hence evident from notification that wind projects do not require any EIA study. The web-link for the notification is <http://envfor.nic.in/legis/eia/so1533.pdf> CL #8 was raised and the project participant was asked to submit the necessary consents and approvals for the project activity. In response to CL#8 the project proponent submitted the infrastructure clearances as well as clearances from commissioning from MEDA, NOC received from the MSEB and the commissioning certificates for the project activity. The commissioning certificate for the project activity was checked and verified by the assessment team and it mentions the commissioning date as 29/09/2006, this was found to be correct.

CL #8 was closed out.

4.9 Local Stakeholder Comments

The project activity involves setting up of 10 MW wind power project for electricity generation, which is being fed to the Western Grid. The project proponent identified local villagers, and the government institutions like MSEDCL and MEDA as local stakeholders for the project activity. The PDD version 1 has mentioned that local stakeholder consultation was carried out but the evidences for media of invitation, Minutes of meeting, attendance sheet has not submitted, thus CL #9 was raised asking project proponent for the same. In response the project proponent has submitted evidences for media of invitation, Minutes of meeting, attendance sheet. The meeting was carried out on 5th June 2007 for stakeholder consultation. There was no negative comment for the project activity. A copy of was provided by the project proponent which was cross-checked with the original during the discussion at the time of site visit by the assessment team and found to be acceptable.

CL #9 was closed out.

5. Comments by Parties, Stakeholders and NGOs

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

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

The Project Design Document for this project was made available on the SGS website <http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=530> and was open for comments from 12/06/2008 until 11/07/2008. Comments were invited through the UNFCCC CDM homepage

5.2 Compilation of all Comments Received

No comments were received

5.3 Explanation of How Comments Have Been Taken into Account

No comments were received

6. List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
29/08/2008	Bharat Naik	Asst. Manager – CRM – Suzlon	O&M procedure, Monitoring procedure
29/08/2008	Vikash Kumar Singh	Consultant, MITCON	Additionality and monitoring
29/08/2008	Pooja Verma	Principal Consultant, MITCON	Monitoring parameters
29/08/2008	Vivek Date	Chartered Financial Analyst	Financial calculation
29/08/2008	D. Banerjee	VP, Finance & accountant, DFPCL	CDM consideration and chronology of events
29/08/2008	Harshal Thakare	Local stakeholder	Stakeholder consultation
29/08/2008	Ghanshyam Patil	Store assistance, Local stakeholder	Employment and opinion about project.

7. Document References

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

- /1/ PDD version 1 dated 10/06/2008 (submitted for international stakeholder's comments)
- /2/ AMS I D version 13
- /3/ UNFCCC website (<http://cdm.unfccc.int/index.html>)
- /4/ PDD version 2
- /5/ PDD version 4 dated 19/03/2009 (submitted with request for registration)
- /6/ Host Country Approval, reference number 4/5/2008-CCC dated 09/04/2008
- /7/ IRR calculation sheet for the project
- /8/ Board note dated 22/03/2006 as CDM consideration proof
- /9/ Modalities of communication
- /10/ Emission reduction calculation sheet

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

- /11/ Certificate for no use of ODA by chartered accountant B. K. Khare & Co. dated 08/12/2008
- /12/ Notice for stakeholder consultation process dated 25/05/2007
- /13/ MoM for stakeholder consultation process carried on 05/06/2007
- /14/ Letter of undertaking for no change in technology
- /15/ Purchase order for the project activity dated 07/06/2006
- /16/ ISO 9001:2000 valid till 17th September 2009 and ISO 14001:2004 valid till 13/04/2009
- /17/ PPA for the project activity dated 06/11/2006
- /18/ Commissioning certificates dated 29/09/2006
- /19/ Infrastructure and commissioning clearances from MEDA dated 26/09/2006 and 28/09/2006
- /20/ MERC Order dated 24/11/2003
- /21/ Evidences for the chronology of events
- /22/ Calibration certificates of electricity meters concerned with the project activity
- /23/ Annual reports for year 2005-06 and 2006-07

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A.1 Annex 1: Local Assessment

This checklist is designed to provide confirmation of in-country data and information provided in the Project Design Document for “**10 MW Wind Power Project in Maharashtra by Deepak Fertilizers and Petrochemicals Corporation Limited**”.

It serves as a “**reality check**” on the project that is completed by a local assessor from SGS India.

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
1. Host Country Approval letter	The HCA for the project activity has been submitted having reference no is 4/5/2008-CCC dated 09/04/2008	Document Review /6/	Appropriate and accepted
2. Purchase orders for the project activity.	The purchase order has been submitted for the project activity dated 07/06/2006.	Document Review /15/	Appropriate and accepted
3. Financial calculation sheets and evidence against the data and assumptions used.	The same is submitted and is acceptable.	Excel spreadsheet /7/	Appropriate and accepted
4. Evidence is required regarding serious CDM Consideration for the project activity.	The board note dated 22/03/2006 has been submitted by project participant.	Document Review /21/	Appropriate and accepted
5. Evidence for no use of ODA	The same is submitted by chartered accountant	Document Review /11/	Appropriate and accepted
6. Evidence is required to be submitted that the technology used would not be changed during the crediting period.	The same undertaking has been submitted	Document Review /14/	Appropriate and accepted
7. The media used to invite the local stakeholders	The invitation letter has submitted and found to be acceptable.	Document Review /12/	Appropriate and accepted

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
8. MoM of local stakeholder consultation is required. Discussion with the local stakeholders is required during the site visit	The MoM for stakeholder's consultation has been submitted; the same was checked and cross-checked during the site visit and is acceptable. There was no negative comment from local stakeholders.	Document Review /13/	Appropriate and accepted
9. Evidence for start date of the project activity.	The purchase order of WGT dated 07/06/2006 has been submitted and acceptable.	Document Review /15/	Appropriate and accepted
10. It is required to be checked whether the project activity is a de-bundled components of not.	Checked during site visit and found that the project is not de-bundled component of large scale project activity.	Discussion with project participant	Appropriate and accepted
11. PPA for the project activity.	PPA dated 06/11/2006 has submitted; the same was checked and is acceptable.	Document Review /17/	Appropriate and accepted
12. Delay to approach CDM funds needs to be discussed.	Chronology of events has been mentioned in PDD and all evidences are submitted and are acceptable.	Document Review, Discussion with project participant /21/	Appropriate and accepted
13. QA/QC procedures for data monitoring or ISO certificates for the EPC contractor.	ISO certificates for Suzlon have been submitted and are acceptable.	Document Review, site visit /16/	Appropriate and accepted
14. Calibration certificates of electricity meters concerned with the project activity are required to be submitted.	The same is provided.	Document Review /22/	Appropriate and accepted
15. Consents and approval from MEDA along with commission letters for the project activity.	Infrastructure clearances from MEDA dated 26/09/2006 and clearances for commissioning from MEDA dated 28/09/2006 has been checked and found to be acceptable. Commissioning letter from MSEDCL dated 30/09/2006 has been checked for site location, feeder location and found to be	Document Review /19/	Appropriate and accepted



Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
	acceptable		
16. Modalities of Communication for the project activity.	The same is submitted.	Document Review /9/	Appropriate and accepted
17. Annual Reports for the year 2005-06 and 2006-07.	The annual report for the year 2005-06 and 2006-07 are submitted and is acceptable.	Document Review /23/	Appropriate and accepted

A.2 Annex 2: Validation Protocol

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

Requirement	Reference	Comments	Conclusion
1. All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	Marrakech Accords, CDM Modalities §30	India has ratified the protocol on 26 th August 2002 and is allowed to participate. http://unfccc.int/parties_and_observers/parties/items/2109.php	Y
2. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	Marrakech Accords, CDM Modalities §29 and §30	Project will reduce GHG emissions; however no Annex-1 Party is identified by the project proponent so far. This is a unilateral project.	Y
3. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	Marrakech Accords, CDM Modalities §29 and §30 Kyoto Protocol Art. 12.2, Marrakech Accords, CDM Modalities §40a	The project activity will contribute to sustainable development. Host Country Approval from Designated National Authority is to be provided by the project proponent.	CAR #1 The same is provided. CAR #1 was closed

Requirement	Reference	Comments	Conclusion
4. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	Marrakech Accords, CDM Modalities, §40	Yes, the project was listed on UNFCCC website from 12th June 2008 to 11th July 2008 which was also linked to the SGS website http://cdm.unfccc.int/Projects/Validation/D/B/W1715YOXN98VYVOMSIKQN9P6FD5C58/view.html The project is also listed on SGS climate change website from 12th June 2008 to 11th July 2008 http://www.sgsqualitynetwork.com/tradeassurance/ccp/projects/project.php?id=530 Number of comments received during web-hosting period - 0	Y
5. The project design document shall be in conformance with the UNFCCC CDM-PDD format	Marrakech Accords, CDM Modalities, Appendix B, EB Decisions	The PDD is as per the CDM-SSC-PDD version 3 format.	Y
6. The project participants shall submit a letter on the modalities of communication (MoC) before submitting a request for registration	EB-09 F_CDM_REG form	The same needs to be submitted by Project proponent.	Site visit The same is submitted.
7. For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?	-	Not applicable	Not applicable

Table 2 PDD

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A. General Description of Project Activity					
A.1. Project Title					
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	01,06	DR	The title of the project activity mentioned is "10 MW Wind Power Project in Maharashtra by Deepak Fertilizers and Petrochemicals Corporation Limited". This is unique. The title of project activity will be further checked with the LoA from Host country.	Pending closure of CAR #1	Y CAR #1 Closed The HCA is provided and found acceptable
A.1.2. Are there an indication of a revision number and the date of the revision?	01	DR	Yes; The PDD which was webhosted for International stakeholder consultation mentions version 01, dated 10/06/2008.	Y	Y
A.1.3. Is this in consistency with the time line of the project's history?	01,15	DR	The start date of the project activity is 07/06/2006 and the PDD is dated 10/06/2008. The same is in time line. This will be further discussed during the site visit.	Site visit	Y PO is provided
A.2. Description of the Project Activity					
A.2.1 Is the description delivering a transparent overview of the project activities?	01,15	DR	Information regarding the purpose of the project activity, type of technology used and contribution to sustainable development has been described. The same would be cross-checked during the site visit.	Site visit	Y PO is provided

* MoV = Means of Verification, DR= Document Review, I= Interview

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.2.2 Is all information provided in compliance with actual situation or planning?	01,15	DR	The project activity entails installation of Wind Mills for power generation and supplying the same to the western regional grid, the same would be checked during the site visit.	Site visit.	Y PO is provided
A.2.3. Is all information provided consistent with details provided in further chapters of the PDD?	01	DR	The project activity details as mentioned in the PDD are consistent the same would be cross-checked during the site visit.	Site visit.	Y
A.3. Project Participants					
▪ Is the table required for the indication of project participants correctly applied?	01	DR	The table is applied correctly.	Y	Y
▪ Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	01	DR	The project proponent for the project is consistent throughout the PDD.	Y	Y
A.4. Technical Description of the Project Activity					
A.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)? Are the latitude and longitude of the site indicated (decimal points)	01	DR	The project is located at Dhule and Nandurbar districts in Maharashtra state. The coordinates have been described in the PDD. The section A.4.1.4 is not as per the guidelines to complete the PDD, kindly clarify.	CAR#2	Y CAR#2 closed. The same is corrected.
A.4.2. Do the project participants possess ownership or licenses which will allow the implementation of the project at that site / those sites?	01	DR	The same needs to be checked during the site visit.	Site visit	Y Approvals are submitted.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.4.3. Is the category(ies) of the project activity correctly identified?	01	DR	The PDD mentions that the project activity involves electricity generation by Wind mills and supplying the same to the western regional grid, the same would be cross-checked during the site visit.	Site visit	Y PO is provided
A.4.4. Does the project design engineering reflect current good practices?	01,15	DR	The project activity involves electricity generation through wind mills. The technical specifications and Purchase orders for equipments used in the project activity needs to be submitted by the project proponent.	CL #3	Y PO is provided
A.4.5. Is all information provided in compliance with actual situation or planning as available by the project participants?	01	DR	To be checked during the site visit.	Site visit	Y Checked
A.4.6. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	01,15	DR	Pending CL #3	Pending CL #3	Y PO is provided
A.4.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	01,14, 15	DR	The lifetime of the project activity as mentioned in the PDD is 20 years. The same needs to be cross-checked with the technical specifications. Evidence is required that the project technology would not be substituted during the crediting period.	Site Visit	Y Undertaking is submitted.
A.4.8. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	01	DR	The project does not require extensive initial training and maintenance efforts. The same needs to be discussed during the site visit.	Site visit	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.4.9. Does the project make provisions for meeting training and maintenance needs?	01	DR	The same needs to be checked during the site visit.	Site visit	Y O & M agreement is provided
A.4.10. Is a schedule available on the implementation of the project and are there any risks for delays?	01	DR	The project has already been implemented.	Y	Y
A.4.11. Is the table required for the indication of projected emission reductions correctly applied?	01	DR	The table has been applied correctly.	Y	Y
A.5. Public Funding					
A.5.1. Does the information on public funding provided conform with the actual situation or planning as presented by the project participants?	01,11	DR	The PDD mentions that no ODA was used for the project activity. The loan documents are required to be submitted for the project activity. Also evidence is required that No ODA was used in the project activity. The same will be checked during site visit.	Site Visit	Y Undertaking and Loan documents are submitted
A.5.2. Is all information provided consist with details provided by further chapters of the PDD (in particular annex 2)?	01	DR	The same will be checked during site visit.	Site Visit	Y
A.5.3. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance	01	DR	The same will be checked during site visit.	Site Visit	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.6. Debundling					
A.6.1 Is the small-scale project activity a debundled component of a large scale project activity	01	DR	The PDD mentions that the project activity is not a de-bundled component; the same will be checked during the site visit.	Site visit	Y The same is checked
A.6.2 If the project is a debundled component of a larger project, does the larger project fall within the limits for small-scale CDM project activities	01	DR	The project activity is not a de-bundled project activity as mentioned in the PDD. The same needs to be checked during the site visit.	Site visit	Y The same is checked
B. Baseline and Monitoring Methodology					
B.1. Choice and Applicability					
B.1.1. Is the project using an approved simplified methodology?	01, 02, 03	DR	The methodology used is AMS I D version 13; the same is an approved methodology and is valid.	Y	Y
B.1.2. Does the project activity qualify as small scale project?	01, 02	DR	The project uses AMS I D; the total capacity of the project is 10 MW which is less than the specified limit of 15 MW, the same needs to be cross-checked during the site visit.	Site visit.	Y The same is checked
B.1.3. Is the category(ies) of the project activity correctly identified in accordance with Appendix B to the simplified modalities and procedures for small-scale CDM project activities?	01, 02 & 03	DR	The project activity is the electricity generation by Wind mills and supplying the same to western regional grid .The methodology selected is AMS I D and the same is applicable.	Y	Y
B.1.4. Is the project activity a bundle of several small scale activities and if so does it contain any sub-bundles	01, 03	DR	The project activity is not a bundle project activity as mentioned in the PDD, the same needs to be checked during site visit.	Site visit	Y The same is checked

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.1.5. If the project activity is a bundle of several small scale activities, does the sum of the total bundle (including any subbundles) fall within the limits for small scale projects	01, 03	DR	The project activity is not a bundle project activity as mentioned in the PDD, the same needs to be checked during site visit.	Site visit	Y The same is checked
B.1.6. If the project activity is a bundle of several small scale activities, has the form with information related to the bundle been submitted and is it correctly used	01, 03	DR	The project activity is not a bundle project activity as mentioned in the PDD, the same needs to be checked during site visit.	Site visit	Y The same is checked
B.2. Project Boundary					
B.2.1. Has the project boundary of the project activity been based on the guidance of the applicable project category?	01, 02	DR	The project boundary is described as regional grid. The same needs to be checked during the site visit and discussion with the project proponent.	Site visit	Y The same is checked
B.2.2. In case of grid connected electricity projects: Is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	01	DR	The project activity generates electricity and supplies the same to the western regional grid The grid selected is as per the CEA.	Y	Y
B.2.3. Are the project's spatial boundaries (geographical) and the project's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	01	DR	The project boundary has been described clearly.	Y	Y
B.3. Identification of the Baseline Scenario					
B.3.1. Does the PDD discuss the identification of the most likely baseline?	01, 02	DR	The baseline scenario is continuation of electricity generation in the western regional grid as per the current emission levels, the same needs to be discussed during the site visit.	Site visit	Y The same is checked

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.3.2. Is the discussion and determination of the chosen baseline transparent and supported by the available data?	01, 02	DR	The baseline scenario is continuation of electricity generation in the western regional grid as per the current emission levels, the same needs to be discussed during the site visit.	Site visit	Y The same is checked
B.3.3. Is conservativeness addressed in the way of identifying the baseline?	01, 02	DR	The baseline scenario is continuation of electricity generation in the western regional grid, the same needs to be discussed during the site visit.	Site visit	Y The same is checked
B.4. Additionality					
B.4.1. Is the discussion on additionality and the evidence provided consistent with the starting date of the project	01,15	DR	The start date for the project activity is 07/06/2006. The discussions are in line with the start date. To be discussed during the site visit.	Site visit	Y The same is checked
B.4.2. Is the discussion on additionality based on a comparison with realistic and credible alternatives?	01,07	DR	Supporting as mentioned in the PDD is required to be submitted. Kindly clarify how para 40, EB 40 has been considered while selecting the benchmark. It is not clear what is the major barrier faced by the project activity. Regulatory risk is not clear, kindly clarify Kindly provide the supporting for Prevailing practice.	CAR #4	Y CAR #4 closed. Financial barrier is acceptable.
B.4.3. Does the discussion on additionality take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations??	01,07	DR	Pending CAR #4	Pending CAR #4	Y CAR #4 closed. Financial barrier is acceptable.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.4.4. Has it been shown that the proposed project activity faces barriers that prevent the implementation of this type of proposed project activity but would not have prevented the implementation of at least one of the alternatives?	01,07	DR	The PDD identifies the barriers as Barrier due to investment which is as per the attachment A to Appendix B. Evidence is required to be provided to support the same. Pending CAR #4	Pending CAR #4	Y CAR #4 closed. Financial barrier is acceptable.
B.4.5. Is it demonstrated/justified that the project activity itself is not a likely baseline scenario	01, 02	DR	Pending CAR #4	Pending CAR #4	Y CAR #4 closed. Financial barrier is acceptable.
B.5. Application of the Baseline Methodology					
B.5.1. Has the simplified methodology been applied correctly for determining baseline emissions ?	01, 02,10	DR	The Excel spreadsheet of the calculation of emission reductions need to be provided by the project proponent. It is not clear why the emission reductions estimated in the first year is higher than the rest of the years.	CAR #5	Y CAR #5 closed. Revised Excel is submitted.
B.5.2. Has the simplified methodology been applied correctly for determining project emissions ?	01, 02,10	DR	The Excel spreadsheet of the calculation of emission reductions need to be provided by the project proponent.	Pending CAR #5	Y CAR #5 closed.
B.5.3. Has the simplified methodology been applied correctly for determining leakage ?	01, 02,10	DR	The Excel spreadsheet of the calculation of emission reductions need to be provided by the project proponent.	Pending CAR #5	Y CAR #5 closed.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.5.4. Have all the methodological choices been explained, have they been properly justified and are they correct	01, 02,10	DR	Pending closure of CARs/CLs.	Pending CARs/CLs	Y CAR #5 closed.
B.5.5. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	01, 02,10	DR	Pending closure of CARs/CLs.	Pending CARs/CLs	Y CAR #5 closed.
B.6. Ex-ante Data and Parameters Used					
B.6.1. Are the data provided in compliance with the simplified methodology?	01, 02,10	DR	The excel sheet for calculation of emission reductions is required to be submitted along with evidences for the assumptions used. The same would be checked during the site visit.	Pending	Y CAR #5 closed.
B.6.2. Is all the data derived from official data sources or replicable records and have these been correctly quoted?	01, 02 & 03	DR	Evidences for calculation of baseline emissions is required to be submitted, Pending CAR #5 The emission factor used is from CEA and the same is from an official source.	Pending CAR #5	Y CAR #5 closed.
B.6.3. Is the vintage of the baseline data correct?	01	DR	Pending closure of CARs/CLs.	Pending CARs/CLs	Y CAR #5 closed.
B.7. Calculation of Emissions Reductions					
B.7.1. Has the approved methodology been applied correctly for determining emission reductions ?	01, 02,10	DR	Pending CAR #5	Pending CAR #5	Y CAR #5 closed.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.7.2. Are the emission reduction calculations documented in a complete and transparent manner?	01, 02,10	DR	The emission reductions calculation has been described in the PDD, Pending closures of CARs/CLs	Pending closure of CARs/CLs	Y CAR #5 closed.
B.7.3. Have conservative assumptions been used to calculate emission reductions?	01, 02,10	DR	The same needs to be checked with the plant data during the site visit.	Site visit	Y Checked
B.7.4. Is the projection based on provable input parameter?	01, 02,10	DR	To be checked during site visit.	Site visit	Y Checked
B.7.5. Is the projection based on same procedures as used for later monitoring or acceptable alternative models?	01, 02,10	DR	To be checked during the site visit.	Site visit	Y Checked
B.7.6. Is the calculation of the emission reduction correct?	01, 02,10	DR	Pending closures of CARs/CLs	Pending closure of CARs/CLs	Y Checked
B.8. Emission Reductions					
B.8.1. Will the project result in fewer GHG emissions than the baseline scenario?	01, 02	DR	The PDD mentions the emission reduction of 14,314 tCO ₂ e per annum, pending closure of CARs and CLs.	Pending	Y Closed
B.8.2. Is the form/table required for the indication of projected emission reductions correctly applied?	01, 02	DR	The table has been applied correctly.	Y	Y
B.8.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	01	DR	The start date of the crediting period as mentioned in the PDD is 01/08/2008. The start date of crediting period assumed is not realistic, kindly clarify. The same would to be discussed during the site visit.	CL #6	Y CL #6 is closed. Date is appropriate.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.9. Monitoring Methodology					
B.9.1. Does the monitoring methodology provide a consistent approach in the context of all parameter to be monitored and further information provided by the PDD?	01, 02	DR	The same needs to be checked during the site visit.	Site visit	Y The same is checked.
B.9.2. Does the monitoring methodology consistently apply the choice of the option selected for monitoring both of project and baseline emissions?	01, 02	DR	The same needs to be checked during the site visit.	Site visit	Y The same is checked.
B.10. Data and Parameters Monitored					
B.10.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	01	DR	The data archiving system has been discussed for the parameters to be monitored in the PDD. The same would be cross-checked during the site visit.	Site visit	Y The same is checked.
B.10.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the simplified methodology applied?	01	DR	Not applicable	NA	NA
B.10.3. Will it be possible to determine the specified project GHG indicators?	01	DR	The net electricity supplied and the amount imported from the grid can be measured accurately. The emission reduction directly depends on the same.	Y	Y
B.10.4. Will the indicators enable comparison of project data and performance over time?	01	DR	The net energy supplied from the project activity and electricity imported from grid would be monitored thus can be compared in the later years.	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.10.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	01	DR	The same needs to be checked during the site visit	Site visit	Y The same is checked.
B.10.6. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records?	01	DR	To be checked during the site visit	Site visit	Y The same is checked.
B.10.7. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	01	DR	Pending closure of CARs/CLs	Pending	Y The same is checked.
B.10.8. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.	01, 02	DR	Pending closure of CARs/CLs	Pending	Y The same is checked.
B.11. Quality Control (QC) and Quality Assurance (QA) Procedures					
B.11.1. Is the selection of data undergoing quality control and quality assurance procedures complete?	01,16	DR	The Quality control and Assurance procedures are required to be checked during the site visit. The ISO certificates of the EPC contractor are required to be submitted.	CL #7	Y CL #7 closed. Certificates are submitted.
B.11.2. Is the belonging determination of uncertainty levels done correctly for each ID in a correct and reliable manner?	01	DR	To be checked during the site visit	Site visit	Y The same is checked.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.11.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?	01,16	DR	QA/QC procedures have been described for all the parameters in the PDD. The same needs to cross-checked during the site visit.	Site visit	Y The same is checked.
B.11.4. Is it ensured that data will be bound to national or internal reference standards?	01	DR	The same needs to be checked during the site visit.	Site visit	Y The same is checked.
B.11.5. Is it ensured that data provisions will be free of potential conflicts of interests resulting in a tendency of overestimating emission reductions?	01	DR	The same needs to be checked during the site visit. The calibration frequency of the meters has been mentioned as periodic, the same would be checked during the site visit.	Site visit	Y The same is checked.
B.12. Operational and Management Structure					
B.12.1. Is the authority and responsibility of project management clearly described?	01	DR	Management structure for the project activity has been described in the PDD. The same needs to be checked during the site visit.	Site visit	Y The same is checked.
B.12.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	01	DR	The same has been described under the section B.7.2 of the PDD; the same would be cross-checked during the site visit.	Site visit	Y The same is checked.
B.12.3. Are procedures identified for training of monitoring personnel?	01	DR	Training requirements have not been discussed in the PDD,	Y	Y
B.13. Monitoring Plan (Annex 4)					
B.13.1. Is the monitoring plan developed in a project specific manner clearly addressing the unique features of the CDM activity?	01	DR	Pending closure of CARs/CLs	Pending CARs/CLs	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.13.2. Does the monitoring plan completely describes all measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring data quality?	01	DR	Pending closure of CARs/CLs	Pending CARs/CLs	Y
B.13.3. Does the monitoring plan provide information on monitoring equipment and respective positioning in order to safeguard a proper installation?	01	DR	The same needs to be checked during the site visit.	Site visit	Y The same is checked.
B.13.4. Are procedures identified for calibration of monitoring equipment?	01	DR	The PDD describe the procedures as once in a year for calibration of monitoring equipment the needs to be cross-checked during the site visit.	Site visit	Y The same is checked.
B.13.5. Are procedures identified for maintenance of monitoring equipment and installations?	01	DR	The same needs to be checked during the site visit.	Site visit	Y The same is checked.
B.13.6. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	01	DR	The operational and Management Structure has been provided, the same would be cross-checked during the site visit.	Site visit	Y The same is checked.
B.13.7. Are procedures identified for dealing with possible monitoring data adjustments and missing data allowing redundant reconstruction of data in case of monitoring problems??	01	DR	The same has not been described in the PDD. To be checked during the site visit.	Site visit	Y The same is checked.
B.13.8. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	01	DR	The operational and Management Structure has been provided, the same also mentions about periodic checking by the Management. The same would be cross-checked during the site visit.	Site visit	Y The same is checked.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
B.13.9. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	01	DR	The operational and Management Structure has been provided, the same would be cross-checked during the site visit.	Site visit	Y The same is checked.
B.14. Baseline Details					
B.14.1. Is there any indication of a date when determine the baseline?	01	DR	The baseline has been determined on 10/06/2008, as mentioned in the PDD.	Y	Y
B.14.2. Is this in consistency with the time line of the PDD history?	01	DR	The start date of the project activity is 07/06/2006 this is in time line with the project activity. The same needs to be checked during the site visit.	Site visit	Y The same is checked.
B.14.3. Is all data required provided in a complete manner by annex 3 of the PDD?	01	DR	Pending Closure of CARs/CLs	Pending closure of CARs/CLs	Y
C. Duration of the Project / Crediting Period					
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	01,15	DR	The start date of the project activity is 07/06/2006 and the operation lifetime is 20 years as described in the PDD. Evidence is required for the start date of the project activity.	Pending CL #6	Y CL #6 closed. Evidence submitted
C.1.2. 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)?	01	DR	The crediting period chosen is fixed crediting period.	Y	Y
C.1.3. Does the project's operational lifetime exceed the crediting period	01	DR	The operational lifetime of the project activity exceeds the crediting period.	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
D. Environmental Impacts					
D.1.1. Does the project comply with environmental legislation in the host country?	01,18,19	DR	The necessary government approvals and consents are required to be submitted. Approval from MEDA, commissioning letters are required.	CL #8	Y CL #8 closed. Approvals are submitted.
D.1.2. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	01	DR	Environmental Impact Assessment is not required as mentioned in the PDD, the same needs to be checked during the site visit. Evidence for the same is required.	Site Visit	Y The same is checked.
E. Stakeholder Comments					
E.1.1. Have relevant stakeholders been consulted?	01	DR, I	The PDD mentions the stakeholders as the local communities, farmers and villagers the same would be checked during the site visit. The PDD mentions that stakeholder consultation was carried out; the same needs to be cross-checked during the site visit.	Site visit	Y The same is checked.
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	01,12	DR, I	The Media used to communicate the stakeholders has been in form of letters as described in the PDD. The same would be cross-checked during the site visit. Copy of the letters is required to be submitted.	CL #9	Y CL #9 closed. The same is submitted.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
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?	01	DR, I	Stakeholder consultation is not required by host country regulation; however the project proponent has carried the same as a part of CDM requirements. The same would be checked during the site visit. MoM for the stakeholder consultation carried out is required to be submitted.	Pending CL #9	Y CL #9 closed. The same is submitted.
E.1.4. Is the undertaken stakeholder process described in a complete and transparent manner?	01	DR	MoM of the stakeholder consultation process is required to be submitted.	Pending CL #9	Y CL #9 closed.
E.1.5. Is a summary of the stakeholder comments received provided?	01,13	DR	The same is provided and would further be checked during the site visit.	Site visit	Y The same is checked.
E.1.6. Has due account been taken of any stakeholder comments received?	01,13	DR	The same is provided and would further be checked during the site visit.	Site visit	Y The same is checked.

References

Reference ID	Title / Description	Comments
/1/	PDD, version 1 dated 10/06/2008	Table 2 section A, B, C, D and E
/2/	AMS I D version 13	Table 2 section B
/3/	UNFCCC website (http://cdm.unfccc.int/index.html)	Table 1, Table 2 section B
/4/	PDD version 2	Checked for findings responses
/5/	PDD version 3 dated 26/11/2008 (submitted with request for registration)	Checked for CDM guidelines
/6/	Host Country Approval, reference number 4/5/2008-CCC dated 09/04/2008	Checked for project title and project participant name
/7/	IRR calculation sheet for the project	Checked for financial calculation
/8/	Board note dated 22/03/2006 as CDM consideration proof	Checked for CDM consideration
/9/	Modalities of communication	Checked for contact information
/10/	Emission reduction calculation sheet	Checked for emission reductions value
/11/	Certificate for no use of ODA for project activity by chartered accountant B. K. Khare & Co. dated 08/12/2008	Checked for ODA use in project activity
/12/	Notice for stakeholder consultation process dated 25/05/2007	Checked for mode of invitation
/13/	MoM for stakeholder consultation process carried on 05/06/2007	Checked for any comments
/14/	Letter of undertaking for no change in technology	Checked for no change in technology
/15/	Purchase order for the project activity dated 07/06/2006	Checked for earliest real action i.e start date
/16/	ISO 9001:2000 valid till 17 th September 2009 and ISO 14001:2004 valid till 13/04/2009	Checked for QA/QC procedure
/17/	PPA for the project activity dated 06/11/2006	Checked for tariff and terms and conditions
/18/	Commissioning certificates dated 29/09/2006	Checked for project schedule
/19/	Infrastructure clearances from MEDA dated 26/09/2006 and clearances for commissioning from MEDA dated 28/09/2006	Checked for clearances

Reference ID	Title / Description	Comments
/20/	MERC Order dated 24/11/2003	Checked for PLF and other sources mentioned in PDD
/21/	Evidences for the chronology of events	Checked for delay of project activity to submit it for validation.
/22/	Calibration certificates of electricity meters concerned with the project activity	Checked for QA / QC procedure
/23/	Annual reports for year 2005-06 and 2006-07	Checked for CDM consideration and Financial analysis

A.3 Annex 3: Overview of Findings

Findings Overview

Findings from validation of “**10 MW Wind Power Project in Maharashtra by Deepak Fertilizers and Petrochemicals Corporation Limited**”

Each Table below represents a finding from the validation assessment. The findings are numbered consecutively, approximately in the order that they have been identified and irrespective of the nature of the findings, for eg.: CAR #1, CAR #2, CL #3, FAR #4 etc.

Description of Table:

Type Findings are either Corrective Action Requests (CARs), Clarification Requests (CLs), and Forward Action Request (FARs).
A corrective action request (CAR) is raised if one of the following occurs:
I. The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
II. The CDM requirements have not been met;
III. There is a risk that emission reductions cannot be monitored or calculated.

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met

A forward action request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

Lead Assessor Details the content of the finding

Comments

Ref Refers to the item number in the Validation Protocol

Response Please insert response to finding, starting with the date of entry.

Please Note: This is an open list and more findings may be added as validation progresses.

Responses to each Finding and relevant associated documentation should be recorded in this form by the Client and send back to the Lead Assessor in one submission to SGS (exception of finding linked to Letter of Approval, which can be submitted separately).

SGS reserves the right to review the associated fees and timeline if:

- more than one response submission is received from the Client
- a finding (CL/CAR), raised by the Lead Assessor prior to Technical Review stage, is not closed within 30 days of notification to the Client by SGS.

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.

Findings Overview Summary

	CARs	CLs	FARs
Total Number raised	4	5	-

Date:	06/08/2008		Raised by:	Vikrant Badve / Ramkrishna Patil		
Type:	CAR	Number:	1		Reference:	1.3
Lead Assessor Comment:				Date: 06/08/2008		
The project proponent needs to submit the Host Country Approval for the project activity.						
Project Participant Response:				Date: 05/09/2008		
Enclosed.						
Documentation Provided by Project Participant:						

Host Country Approval by Ministry of Environment & Forest (MoEF), Government of India, Letter No. 4/5/2008-CCC dated 09/04/2008	
Information Verified by Lead Assessor:	
Consistency of project activity name, authorised project proponent by the host country DNA.	
Reasoning for not Acceptance or Acceptance and Close Out:	
Project participant has submitted the Host Country Approval from Designated National Authority, MoEF for the proposed project activity. The reference number for the same is 4/5/2008-CCC dated 09/04/2008. The name of the project activity mentioned in HCA is the same as in the section A.1 of the revised PDD and is accepted. Thus CAR #1 was closed out	
Acceptance and Close out by Lead Assessor:	Date: 15/09/2008

Date:	06/08/2008		Raised by:	Vikrant Badve / Ramkrishna Patil	
Type:	CAR	Number:	2	Reference:	A.4.1
Lead Assessor Comment:				Date: 06/08/2008	
The section A.4.1.4 is not as per the guidelines to complete the PDD, kindly clarify why project activity location is exceeding one page.					
Project Participant Response:				Date: 05/09/2008	
Has been updated in the revised PDD. The location is now confined to one page only.					
Documentation Provided by Project Participant:					
Revised PDD					
Information Verified by Lead Assessor:					
Section A.4.1.4 of Revised PDD is checked and found to be acceptable.					
Reasoning for not Acceptance or Acceptance and Close Out:					
Project location information in section A.4.1.4 is not exceeding more than one page. This is as per guidelines to complete the CDM-SSC-PDD version 05. Thus CAR #2 was closed out.					
Acceptance and Close out by Lead Assessor:				Date: 15/09/2008	

Date:	06/08/2008	Raised by:	Vikrant Badve / Ramkrishna Patil		
Type:	CL	Number:	3	Reference:	A.4.4
Lead Assessor Comment:				Date: 06/08/2008	
The technical specifications and Purchase orders for equipments used in the project activity needs to be submitted by the project proponent.					
Project Participant Response:				Date: 05/09/2008	
Enclosed.					
Documentation Provided by Project Participant:					
Purchase order for WEG dated 07/06/2006					
Information Verified by Lead Assessor:					
Purchase order technical specifications for WEGs involved in project activity has been checked.					
Reasoning for not Acceptance or Acceptance and Close Out:					
The project participant has submitted the purchase order for wind turbine generators and specifications for the same are cross checked during site visit and found to be accepted. Thus CL #3 was closed out.					
Acceptance and Close out by Lead Assessor:				Date: 15/09/2008	

Date:	06/08/2008	Raised by:	Vikrant Badve / Ramkrishna Patil		
Type:	CAR	Number:	4	Reference:	B.4.2
Lead Assessor Comment:				Date: 06/08/2008	

Supporting as mentioned in the PDD is required to be submitted.	
Kindly clarify how Para 40, EB 40 has been considered while selecting the benchmark.	
It is not clear what is the major barrier faced by the project activity.	
Regulatory risk is not clear, kindly clarify	
Kindly provide the supporting for Prevailing practice.	
Project Participant Response:	Date: 05/09/2008
Links are given for all the references, for the rest, hard copy will be submitted to the DOE. The PDD was web hosted for international stakeholders' consultation well before EB 40. Hence the guidelines pertaining to non acceptance of expected return on equity based on tariff order was not known to the project promoter. However, the promoter has now demonstrated additionality through Sub-step 2b: Option III of the "Tool for the demonstration and assessment of additionality" (Version 05.2) Investment barrier is the major barrier faced by the proposed project activity; same has been demonstrated in the section B.5 of the PDD. The promoter, at the time of investment in wind power sector, was aware of the MERC tariff rate that is applicable for energy generated through wind power projects. However, as per Section 2.4.9, Page 84 of the Order, the Commission feels that "it is essential that any such credits secured by a project should be shared on an equitable basis by the developer with the utility and its consumers. The Commission shall review the tariff structure for RE Projects that become eligible for CDM or similar credits, and devise a system, which will enable sharing of benefits between the consumers and the project developers at that stage". Under these circumstances the financial projections might vary significantly from the present case. This is a regulatory barrier. Web links have been given for the regulatory barriers, for rest, hard copy will be submitted to the DOE.	
Documentation Provided by Project Participant:	
Financial calculation excel spreadsheet, web links for selected benchmark ,Revised PDD	
Information Verified by Lead Assessor:	
Financial calculation excel spreadsheet has been checked for each value used in calculation along with evidences and sources for selected benchmark	
Reasoning for not Acceptance or Acceptance and Close Out:	

The benchmark selected for the equity IRR applicable for the project activity is derived based on the government bond rates increased by a suitable risk premium. The risk premium has been calculated as 8.18% which is based on the bond yield of 7.5% which is referred from RBI which can be cross-checked at (http://www.rbi.org.in/scripts/BS_ViewBulletin.aspx?Id=7549), the Dividend yield was taken as 1.67% which is based on Data of CNX index from 1st May 2005 to 30th April 2006(http://www.nse-india.com (Open >Indices/statistics/Divd Yield for CNX 100)), Project participant need to check duration for the data taken for CNX 100 The growth rate has been considered as 9% referred (http://indiabudget.nic.in/ub2006-07/frbm/frbm1.pdf (page 5 item 7)) from while inflation is accounted as 5% the same referred and cross-checked from (http://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=14623), based on the above data the risk premium has been estimated as 8.18%. The Required rate of return has been estimated as the sum of Bond Yield (7.5%), risk premium of (8.18%) and Additional risk premium for Windmill project to compensate the additional risk (1%) which comes to be 16.67%. However for additional risk, investment expert note is not submitted to validation team. Please clarify why there is delay in PDD submission for validation after start date of project activity. Project participant need to mention the chronology of event in PDD and need to mention how the project participant is serious about CDM. Project participant need to submit the loan documents for the proposed project activity. Please clarify the inconsistency for generation data in emission reduction and financial calculation. Please clarify why there is difference in electricity generation for first and second year in financial calculation. Financial calculation states that PLF considers grid non availability, then please clarify why 2% grid non availability is considered in financial calculation. Please provide the evidences for loan and owners fund involved in project activity and evidence for insurance considered in project activity. Please clarify the evidence for preliminary and administrative expenses. Thus CAR #4 is open	
Project Participant Response:	Date: 05/09/2008
Links are given for all the references, for the rest, hard copy will be submitted to the DOE. The PDD was web hosted for international stakeholders' consultation well before EB 40. Hence the guidelines pertaining to non acceptance of expected return on equity based on tariff order was not known to the project promoter. However, the promoter has now demonstrated additionality through Sub-step 2b: Option III of the "Tool for the demonstration and assessment of additionality" (Version 05.2) Investment barrier is the major barrier faced by the proposed project activity; same has been demonstrated in the section B.5 of the PDD. The promoter, at the time of investment in wind power sector, was aware of the MERC tariff rate that is applicable for energy generated through wind power projects. However, as per Section 2.4.9, Page 84 of the Order, the Commission feels that "it is essential that any such credits secured by a project should be shared on an equitable basis by the developer with the utility and its consumers. The Commission shall review the tariff structure for RE Projects that become eligible for CDM or similar credits, and devise a system, which will enable sharing of benefits between the consumers and the project developers at that stage". Under these circumstances the financial projections might vary significantly from the present case. This is a regulatory barrier. Web links have been given for the regulatory barriers, for rest, hard copy will be submitted to the DOE.	
Documentation Provided by Project Participant:	
Financial calculation excel spreadsheet, web links for selected benchmark	
Information Verified by Lead Assessor:	
Financial calculation excel spreadsheet has been checked for each value used in calculation along with evidences and sources for selected benchmark	
Reasoning for not Acceptance or Acceptance and Close Out:	

The benchmark selected for the equity IRR applicable for the project activity is derived based on the government bond rates increased by a suitable risk premium. The risk premium has been calculated as 8.18% which is based on the bond yield of 7.5% which is referred from RBI which can be cross-checked at (http://www.rbi.org.in/scripts/BS_ViewBulletin.aspx?Id=7549), the Dividend yield was taken as 1.67% which is based on Data of CNX index from 1st May 2005 to 30th April 2006(http://www.nse-india.com (Open >Indices/statistics/Divd Yield for CNX 100)), Project participant need to check duration for the data taken for CNX 100 The growth rate has been considered as 9% referred (http://indiabudget.nic.in/ub2006-07/frbm/frbm1.pdf (page 5 item 7)) from while inflation is accounted as 5% the same referred and cross-checked from (http://www.rbi.org.in/scripts/BS_PressReleaseDisplay.aspx?prid=14623), based on the above data the risk premium has been estimated as 8.18%. The Required rate of return has been estimated as the sum of Bond Yield (7.5%), risk premium of (8.18%) and Additional risk premium for Windmill project to compensate the additional risk (1%) which comes to be 16.67%. However for additional risk, investment expert note is not submitted to validation team. Please clarify why there is delay in PDD submission for validation after start date of project activity. Project participant need to mention the chronology of event in PDD and need to mention how the project participant is serious about CDM. Project participant need to submit the loan documents for the proposed project activity. Please clarify the inconsistency for generation data in emission reduction and financial calculation. Please clarify why there is difference in electricity generation for first and second year in financial calculation. Financial calculation states that PLF considers grid non availability, then please clarify why 2% grid non availability is considered in financial calculation. Please provide the evidences for loan and owners fund involved in project activity and evidence for insurance considered in project activity. Please clarify the evidence for preliminary and administrative expenses. Thus CAR #4 is open	
Project Participant Response:	Date: 26/11/2008
The additional 1 % risk has been removed, from the benchmark calculation to make it more conservative. All the data for Benchmark calculation has been taken prior to project start date i.e. release of 1st Purchase order date (07/06/2006) and prior to investment decision i.e. 22/03/2006. Loan Documents has been submitted to the DOE. Evidences related to delay justification and seriousness of CDM consideration has been submitted to the DOE. Same has been demonstrated in section B.5 of the PDD. The inconsistency for generation data in emission reduction and financial calculation has been rectified. 2% grid non availability has been removed from the financial calculation. Evidences for loan and insurance considered have been submitted to the DOE. Administrative expanses taken in the financials of the project is very conservative. Same can be verified by the DOE.	
Documentation Provided by Project Participant:	
Excel spreadsheet for financial calculation, Revised PDD	
Information Verified by Lead Assessor:	
The sources for the values used in financial calculation have been checked. The chronology of events has been checked for CDM consideration and delay for submission.	
Reasoning for not Acceptance or Acceptance and Close Out:	

Project participant has not considered the additional risk for wind project due to nature dependent and uncertainty of electricity generation for calculation of benchmark. This is conservative and is acceptable. Benchmark has been calculated in line with conceptualization of project activity and sources for values used in financial calculation are submitted.

The barriers due to prevailing practice and regulatory barrier are not project specific and not convincing barrier for the project activity. Project participant has removed this barriers and is accepted

The project participant has mentioned the chronology of events to demonstrate the prior knowledge of CDM, CDM consideration and events of project activity to secure the CDM status in parallel to implementation of project activity. The evidence for all events has been submitted and is accepted.

The project participant has calculated the benchmark by considering the Government bond rates increased by suitable risk premium. The sources of the values used in the calculation of benchmark have been checked and is acceptable. The benchmark for the project activity comes as 15.81%

The project participant has provided the sensitivity analysis and increase in electricity generation is main parameter which affects the project activity. It was found that the equity IRR of the project activity by increase in electricity generation by 10% is 15.47%. This value is below the benchmark and thus project is additional due to investment barrier..

Thus CAR #4 was closed out.

Date:	06/08/2008	Raised by:	Vikrant Badve / Ramkrishna Patil		
Type:	CAR	Number:	5	Reference:	B.5.1
Lead Assessor Comment:				Date: 06/08/2008	
The Excel spreadsheet of the calculation of emission reductions need to be provided by the project proponent.					
It is not clear why the emission reductions estimated in the first year is higher than the rest of the years.					
Project Participant Response:				Date: 05/09/2008	
The emission reduction excel sheet is enclosed. The higher generation for the first year is due to the fact that Equipment supplier has given a guarantee on generation for one year. However, this has now been addressed in the revised PDD. The generation is now consistent throughout the crediting period.					
Documentation Provided by Project Participant:					
Excel spreadsheet for emission reduction calculation, MERC order 2003 dated 24/11/2003, Revised PDD					
Information Verified by Lead Assessor:					
Evidence for each value of excel spreadsheet for emission reduction calculation has been checked , MERC order 2003 has been checked for plant load factor and transformer and auxiliary losses, Revised PDD					
Reasoning for not Acceptance or Acceptance and Close Out:					
As the generation guarantee depends on wind speed, grid and machine availability and conditions for generation guarantee are uncertain, the PLF and losses considered from MERC order are acceptable. Evidence for each value of excel spreadsheet for emission reduction calculation has been checked. The source for plant load factor and losses are from Government source, MERC order 2003 and found to be acceptable.					
The project participant has used the latest available Central Electricity Authority (CEA) version 03 data for the calculation of emission factor as these data was available at the time of PDD submission for validation purpose.					
Thus CAR #5 was closed.					
Acceptance and Close out by Lead Assessor:				Date: 15/09/2008	

Date:	06/08/2008		Raised by:	Vikrant Badve / Ramkrishna Patil		
Type:	CL	Number:	6	Reference:	B.8.3	
Lead Assessor Comment:				Date: 06/08/2008		
Project participant need to submit evidence for start date of project activity. The start date of crediting period assumed is not realistic, kindly clarify.						
Project Participant Response:				Date: 05/09/2008		
Date of release of first purchase order is considered as the start date of the project activity, same has been enclosed.						
The start date of crediting period is now updated in the revised PDD.						
Documentation Provided by Project Participant:						

Purchase order for WTGs dated 07/06/2006, Revised PDD	
Information Verified by Lead Assessor:	
Date of purchase order for WTGs and Revised PDD has been checked for start date of project activity and start date of crediting period and found to be acceptable	
Reasoning for not Acceptance or Acceptance and Close Out:	
Purchase order for WTGs dated 07/06/2006 and revised PDD has been checked for start date of project activity and start date of crediting period and found to be acceptable. Thus CL #6 was closed out.	
Acceptance and Close out by Lead Assessor:	Date: 15/09/2008

Date:	06/08/2008		Raised by:	Vikrant Badve / Ramkrishna Patil	
Type:	CL	Number:	7	Reference:	B.11.1
Lead Assessor Comment:			Date: 06/08/2008		
The ISO certificates of the EPC contractor are required to be submitted. QA/QC procedures for the project activity need to be submit.					
Project Participant Response:			Date: 05/09/2008		
The same will be submitted to the DOE.					
Documentation Provided by Project Participant:					
QA/QC procedure is not submitted					
Information Verified by Lead Assessor:					
QA/QC procedure is not submitted					
Reasoning for not Acceptance or Acceptance and Close Out:					
Project participant has not submitted the QA/QC procedure. Project participant need to mention the apportioning procedure for calculation of net electricity export to grid and need to include all parameters required for the calculation of net electricity supplied to grid in monitoring section B.7.1. CL #7 is open.					
Project Participant Response:			Date: 26/11/2008		
The ISO certificate of the EPC contractor has been submitted to the DOE. The proportioning procedure and required parameters has been included in respective section of PDD.					
Documentation Provided by Project Participant:					
Certificates for ISO 9001:2000 valid till 17/09/2009 and ISO 14001:2004 valid till 13/04/2009 for EPC contractor.					
Information Verified by Lead Assessor:					
The ISO certificates of EPC contractor has been checked					
Reasoning for not Acceptance or Acceptance and Close Out:					
The project participant has submitted the certificates for ISO 9001:2000 valid till 17/09/2009 and ISO 14001:2004 valid till 13/04/2009 for EPC contractor Suzlon. The project participant has O&M contract with EPC contractor. Thus the project activity follows the QA/QC procedure and is acceptable. Thus CL #7 was closed out.					
Acceptance and Close out by Lead Assessor:			Date: 26/11/2008		

Date:	06/08/2008		Raised by:	Vikrant Badve / Ramkrishna Patil	
Type:	CL	Number:	08	Reference:	D.1.1
Lead Assessor Comment:				Date: 06/08/2008	
The necessary government approvals and consents are required to be submitted. Approval from MEDA, commissioning letters are required.					
Project Participant Response:				Date: 05/09/2008	
All the approvals and consents are enclosed.					
Documentation Provided by Project Participant:					
Infrastructure clearances from MEDA dated 26/09/2006 and clearances for commissioning from MEDA dated 28/09/2006, Commissioning letter from MSEDCL dated 30/09/2006					
Information Verified by Lead Assessor:					

Infrastructure clearances and clearances for commissioning from MEDA have checked for ownership of projects and government approvals. Commissioning letter from MSEDCL has checked for site location, feeder location and meter number.					
Reasoning for not Acceptance or Acceptance and Close Out:					
Infrastructure clearances from MEDA dated 26/09/2006 and clearances for commissioning from MEDA dated 28/09/2006 has been checked and found to be acceptable. Commissioning letter from MSEDCL dated 30/09/2006 has been checked for site location, feeder location and found to be acceptable. All wins mills are commissioned on 29/09/2006. Thus CL #8 was closed out.					
Acceptance and Close out by Lead Assessor:				Date: 15/09/2008	

Date:	06/08/2008	Raised by:	Vikrant Badve / Ramkrishna Patil		
Type:	CL	Number:	09	Reference:	E.1.2
Lead Assessor Comment:				Date: 06/08/2008	
The Media used to communicate the stakeholders has been in form of letters as described in the PDD. Copy of the letters is required to be submitted. The minutes of meeting need to be submitted					
Project Participant Response:				Date: 05/09/2008	
Documents related to stakeholders' consultation are enclosed.					
Documentation Provided by Project Participant:					
Invitation letter dated 25/05/2007, attendance sheet, Minutes of meeting					
Information Verified by Lead Assessor:					
Invitation letter has checked for media of invitation, venue and date of stakeholders meeting. Attendance sheet and minutes of meeting are checked and found to be acceptable					
Reasoning for not Acceptance or Acceptance and Close Out:					
Project participant has submitted the evidences for media of invitation, attendance sheet and minutes of meeting for stakeholders meeting and found to be accepted, the stakeholders do not have any negative comments. Thus CL #9 was closed out.					
Acceptance and Close out by Lead Assessor:				Date: 15/09/2008	

A.4 Annex 4: Team Members Statements of Competency

Statement of Competence

Name: Vikrant Badve

SGS Affiliate: SGS India Pvt. Ltd.

Status

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

Validation

Verification

- | | | |
|-------------------------|-------------------------------------|-------------------------------------|
| - Local Assessor | ☒ | ☒ |
| - Lead Assessor | ☒ | ☒ |
| - Assessor | ☐ | ☐ |
| / Trainee Lead Assessor | | |

Scopes of Expertise

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

Approved Member of Staff by Siddharth Yadav Date: 09/07/2007

Statement of Competence

Name: Ramkrishna Patil

SGS Affiliate: SGS India Pvt. Ltd

Status

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

Validation

Verification

- Local Assessor ☒
- Lead Assessor ☐
- Assessor ☒
- / Trainee Lead Assessor

Scopes of Expertise

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

Approved Member of Staff by Shivananda Shetty

Date: 17-07-2008