VALIDATION REPORT
VISH WIND INFRASTRUCTURE LLP

VALIDATION OF THE
Wind Power Project in Tirunelveli Tamilnadu

REPORT NO. INDIA-VAL/365.49/2011

REVISION NO. 01

BUREAU VERITAS CERTIFICATION

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Vish Wind Infrastructure LLP	Mr Yogesh Mehra

Summary:

Bureau Veritas Certification has conducted the validation of the "Wind Power Project in Tirunelveli Tamilnadu" project of Vish Wind Infrastructure LLP located at Vagaikulam, Kattarankulam and Melelanthaikulam villages of Tirunelveli Taluka in Tirunelveli District, TamilNadu, India on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan; ii) follow-up interviews with project stakeholders; iii) resolution of outstanding issues and the issuance of the final validation report and opinion. The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

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

In summary, it is Bureau Veritas Certification's opinion that the project correctly applies the baseline and monitoring methodology AMS ID, version 16 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.:	Subject Group:
INDIA-val/365.49/2011	CDM

Project title:

Wind Power Project in Tirunelveli Tamilnadu

Work carried out by:

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Internal Technical Review carried out by:

H B Muralidhar – Internal Technical Reviewer

Indexing terms

Work Approved by

Mr Flavio Gomes

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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CL	Clarification Request
CO_2	Carbon Dioxide
DOE	Designated Operational Entity
GHG	Green House Gas(es)
I	Interview
IETA	International Emissions Trading Association
INR	Indian Rupees
MoV	Means of Verification
NGO	Non Government Organization
PCN	Project Concept Note
PPA	Power Purchase Agreement
PCF	Prototype Carbon Fund
PDD	Project Design Document
PO	Purchase Order
TNEB	Tamil Nadu Electricity Board
TNERC	Tamil Nadu Electricity Regulatory Commission
UNFCCC	United Nations Framework Convention for Climate Change
VVM	Validation and Verification Manual
WEG	Wind Energy Generator

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1 INTRODUCTION

Vish Wind Infrastructure LLP has commissioned Bureau Veritas Certification to validate its CDM project "Wind Power Project in Tirunelveli Tamilnadu" (hereafter called "the project") at Vagaikulam, Kattarankulam and Melelanthaikulam villages of Tirunelveli Taluka in Tirunelveli District, TamilNadu, India.

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

1.1 Objective

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

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

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations.

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

1.3 Validation team

The validation team consists of the following personnel:

FUNCTION	NAME	CODE HOLDER*	TASK PERFORMED
Lead Verifier	R S Premkumar	☒Yes ☐ No	☒DR ☐SV ☐RI

Verifier	Pratik Bhattacharya	☐**Yes** ☒ **No**	☒**DR** ☐**SV** ☐**RI**
Verifier	S Thyagaraj	☒**Yes** ☐ **No**	☒**DR** ☒**SV** ☐**RI**
Financial Specialist	Sushil Budhia Associates (For IRR)	☐**Yes** ☒ **No**	☒**DR** ☐**SV** ☐**RI**
Financial Specialist	Karthikeyan and Jayaram Associates (For Benchmark)	☐**Yes** ☒ **No**	☒**DR** ☐**SV** ☐**RI**
Internal Technical Reviewer (ITR)	H B Muralidhar	☒**Yes** ☐ **No**	☒**DR** ☐**SV** ☐**RI**
Specialist Supporting ITR	Not Applicable	☐**Yes** ☐ **No**	☐**DR** ☐**SV** ☐**RI**
Report Approval	Flavio Gomes	☐**Yes** ☒ **No**	☒**DR** ☐**SV** ☒**RI**

* DR – Document Review, SV – Site Visit, RI – Report Issuance

2 METHODOLOGY

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using Bureau Veritas Certification internal procedures.

In order to ensure transparency, a validation protocol was customized for the project, according to the version 01.2 of the Clean Development Mechanism Validation and Verification Manual, issued by the Executive Board at its 55th meeting on 30/07/2010. The protocol shows, in a transparent manner, criteria (requirements), means of validation and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details and clarifies the requirements a CDM project is expected to meet;
- It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

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

2.1 Review of Documents

The Project Design Document (PDD) submitted by Vish Wind Infrastructure LLP and additional background documents related to the project design and baseline, i.e. country Law, Guidelines for Completing the Project Design Document (CDM-PDD), Approved methodology, Kyoto Protocol, Clarifications on Validation Requirements to be Checked by a Designated Operational Entity were reviewed.

To address Bureau Veritas Certification corrective action and clarification requests, Vish Wind Infrastructure LLP revised the PDD and resubmitted it in May 2011.

The validation findings presented in this report relate to the project as described in the PDD version 03.

2.2 Follow-up Interviews

On 08/02/2011, Bureau Veritas Certification made a site visit (Mr S Thyagaraj was the team member involved in the site visit) and performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Vish Wind Infrastructure LLP (VWIL), PricewaterhouseCoopers (Project Consultants), Local stakeholders and Enercon India Ltd were interviewed (see References). The main topics of the interviews are summarized in Table 1.

Table 1 Interview topics

Interviewed organization	Interview topics
Vish Wind Infrastructure LLP	CDM Consideration Methodology applicability Baseline determination Additionality Local stakeholder consultation and resolution of their concerns Supporting data and documentation Resolution of CAR's and CL's
Local Stakeholders	Views and concerns about the Project Activity Confirmation of the local stakeholder meeting conducted by Vish Wind Infrastructure LLP.
Pricewaterhouse Coopers (Project Consultant)	Methodology application Baseline determination & emission factor Additionality Monitoring Plan GHG Calculations Supporting data, evidences and documentation Resolution of CAR's and CL's
Enercon India Limited (O&M of the WEG at site)	Monitoring System at site Metering system at site

2.3 Resolution of Clarification and Corrective Action Requests

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

Corrective Action Requests (CAR) is issued, where:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;
(b) The CDM requirements have not been met;
(c) There is a risk that emission reductions cannot be monitored or calculated.

The validation team may also use the term Clarification Request (CL), if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

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

2.4 Internal Technical Review

The validation report underwent a Internal Technical Review (ITR) before requesting registration of the project activity.

The ITR is an independent process performed to examine thoroughly that the process of validation has been carried out in conformance with the requirements of the validation scheme as well as internal Bureau Veritas Certification procedures.

The Lead Verifier provides a copy of the validation report to the reviewer, including any necessary validation documentation. The reviewer reviews the submitted documentation for conformance with the validation scheme. This will be a comprehensive review of all documentation generated during the validation process.

When performing an Internal Technical Review, the reviewer ensures that:

The validation activity has been performed by the team by exercising utmost diligence and complete adherence to the CDM rules and requirements.

The review encompasses all aspects related to the project which includes project design, baseline, additionality, monitoring plans and emission reduction calculations, internal quality assurance systems of the project participant as well as the project activity, review of the stakeholder comments and responses, closure of CARs, CLs and FARs during the validation exercise, review of sample documents.

The reviewer compiles clarification questions for the Lead Verifier and Validation Team and discusses these matters with Lead Verifier.

After the agreement of the responses on the 'Clarification Request' from the Lead Verifier as well as the PP(s) the finalized validation report is accepted for further processing such as uploading on the UNFCCC webpage..

3 VALIDATION CONCLUSIONS

In the following sections, the conclusions of the validation are stated.

The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are described in the Validation Protocol in Appendix A.

The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in 06 Corrective Action Requests and 16 Clarification Requests.

The number between brackets at the end of each section correspond to the VVM paragraph

3.1 Approval (49-50)

India is the only party involved in the project activity at this stage and is the host party. Project participants, M/s Vish Wind Infrastructure LLP have obtained approval from DNA of India and has provided a copy of the DNA approval letter (Ref /32/) to the validation team. The letter of approval clearly states that India has ratified the Kyoto Protocol and the approval is for voluntary participation in CDM project activity. The DNA approval mentions the project title as mentioned in PDD. Also, the letter of approval mentions that project contributes to sustainable development. The letter is unconditional with respect to party to the Kyoto Protocol, voluntary participation, contribution to sustainable development and title of project activity. The HCA approval refers to same project activity title as stated in the PDD. The validation team confirms that this letter is in accordance with paragraphs 45 – 48 of VVM version 1.2.

Bureau Veritas Certification received this letter from the project participant and does not doubt its authenticity since the validation team verified the original copy of the HCA approval.

The title and contents of the letter of approval refer to the precise proposed CDM project activity title in the PDD being submitted for registration.

3.2 Participation (54)

The participation for the project participant has been approved by India, which is a Party of the Kyoto Protocol. This was checked from UNFCCC website http://maindb.unfccc.int/public/country.pl?country=IN.

The participation is approved by DNA of India and is accepted. The participation for project participant has been approved by a Party of the Kyoto Protocol. The validation team concluded this by reviewing the original Host Country Approval (HCA) (Ref /32/) which describes the participation of M/s Vish Wind Infrastructure LLP being approved by the Government of India, which is a party of the Kyoto Protocol.

The project was webhosted on the UNFCCC for global stakeholder's comments as per CDM requirements. The project was webhosted from 05th January 2011 to 03rd February 2011. Seven comments were received from global stakeholders for the project activity, which has been discussed in Appendix B of this report.

3.3 Project design document (57)

The validation team confirms that the PDD complies with the latest forms and guidance documents for completion of PDD. The PDD is as per Guidelines for Completing the Simplified Project Design Document (CDM-SSC-PDD) (Version 05, EB 34, Annex 9,)

3.4 Changes in the Project Activity

The final PDD, Ver. 3 has the following changes with respect to version 01 (Ref /1/) which was webhosted

1. Description regarding the prior experience of the Project Participant in renewable energy sector projects has been provided in Section A.2 of the PDD.
2. The IRR calculations have been corrected to include different parameters of sensitivity analysis and for different range of values.
3. Description of the project boundary is corrected.
4. Identity of the local stakeholders which made comments has been included in Section E.2 of the revised PDD.
5. Monitoring plan revised to transparently describe the process of metering and monitoring at site. Archiving methods are also clearly stated.

CL 2 was raised since the webhosted PDD did not describe the prior experience of the Project Participant in renewable energy projects. The same has been described in the revised PDD and the clarification request was closed.

CL 3 was raised since the details of the identification of the WEG's of the project activity were not clear. The project participant has clarified the identification numbers indicated for the individual WEG's and hence the clarification request is closed.

The validation team hereby confirms that the PDD complies with the latest PDD format (Ref /40/) and PDD Completeness Guidelines (Ref /39/) for completion of the PDD.

3.5 Project description (64)

The process undertaken to validate the accuracy and completeness of the project description is as follows;

The project activity involves the installation of 10 Wind Energy Generator's (WEG) of capacity 0.8 MW each, thereby totaling 8 MW capacity, located at Vagaikulam, Kattarankulam and Melelanthaikulam villages of Tirunelveli Taluka in Tirunelveli District, TamilNadu, India. The entire electricity generated from the proposed project activity will be exported to the Southern grid with a firm power purchase agreement with the State Electricity Utility viz; TNEB (Ref /18/ to Ref /26/).

This project generates electricity using wind energy, which does not result in any greenhouse gas (GHG) emissions. Thus, this project activity will lead to a reduction in GHG emissions that would otherwise have occurred when using electricity generated from conventional fossil fuel based sources in the Southern regional grid.

Validation team validated the accuracy of the project description through a combination of steps consisting of review of contract and purchase orders (Ref /5/ to Ref /8/) related to the project activity, commissioning certificates for the Wind Energy Generator's (Ref /9/ to Ref /17/), site visit and interview of the project participant and their representatives. The confirmation that the electricity will only be exported to the grid is available through the PPA (Ref /18/ to Ref /26/).

The validation team reviewed the annual reports of the company and observed that the company has claimed tax depreciation benefits for the proposed CDM project activity. Hence it is confirmed that the project activity is not claiming benefits under Generation Based Incentive Scheme (GBI). Since the Project Participant has signed a long term PPA with the TNEB, the validation team confirms that the project activity is also not eligible to claim Renewable Energy Certificate (REC) benefits.

Based on site visits, document review and interviews conducted, the validation team hereby confirms that the project description in the revised PDD (Ref /2/) is accurate and complete in all respects.

3.6 Baseline and monitoring methodology

3.6.1 General Requirements (76-77)

The steps taken to assess the relevant information contained in the PDD against each applicability condition are described below.

The proposed Project Activity "Wind Power Project in Tirunelveli Tamilnadu" uses the approved methodology AMS I.D version 16 (Ref /41/).

1. The Purchase orders (Ref /5/ to Ref /8/) for the windmills and physical verification at site indicate that the project activity involves installation of windmills alone and therefore is a renewable energy project.
2. The Grid connectivity was verified through PPA (Ref /18/ to Ref /26/), samples of records of Monthly Generation Statements issued by TNEB (Ref /53/) and physical connection to the grid at site. As per CEA database Version 5 (Ref /45/), Tamil Nadu falls under the Southern grid, the geographic and system boundaries of which are clearly identified and information on the characteristics of the grid is available.
3. Physical verification at the site indicate that it is not an add up of a renewable and non-renewable component and only windmills are involved in the project activity and the capacity is 8.0 MW, which is below the threshold limit of 15 MW for small scale project activities. The project falls under Type I Renewable energy projects, category D: Electricity generation for a system.
4. The project activity does not involve any combined heat and power (cogeneration) systems and is only a wind energy based electricity generation.
5. The project activity does not involve addition of renewable energy generation units to an existing renewable power generation units at the same site. The purchase orders for the WEGs indicate that the WEGs are new and are not transferred.
6. The proposed project activity does not involve retrofit and/or modifications to the existing equipment.

The validation team therefore agrees that the project activity meets all the applicability conditions of the selected approved methodology AMS I.D, version 16 (Ref /41/).

CL 8 was raised since the justification for all the applicability conditions of the applied methodology and the tools were not discussed in the webhosted PDD. The Project Participant corrected the PDD and the revised PDD describes the justification for each of the applicability conditions. Hence the clarification request was closed.

The validation team hereby confirms that the selected baseline and monitoring methodology, AMS I.D, Version 16 is previously approved by the CDM Executive Board, and is applicable to the project activity, which

complies with all the applicability conditions therein. The small scale methodology AMS I.D version 16 (Ref /41/) is applied in conjunction with the latest version of General Guidance to SSC CDM methodologies

The validation team hereby confirms that, as a result of the implementation of the proposed CDM project activity, there are no greenhouse gas emissions occurring within the proposed CDM project activity boundary, which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

3.6.2 Project boundary (80)

The validation team validated the project boundary by:
a) The spatial extent of the project boundary is assessed through the description in the PDD and the grid structure in India as known from the official data available from the Central Electricity Authority (CEA) (Ref /45/). The project activity boundary therefore includes the project power plant (wind energy generators) and all power plants connected physically to the Southern electricity grid of India that the CDM project power plant is connected to.

The consideration of only CO_2 gas for the baseline emissions is conservative and in line with the methodology and hence appropriate. The electricity imported by the project activity is accounted in the net electricity exported by the project activity, EG_{BLy}. There are no other sources of project emissions. Hence, in line with the methodology, project participant has considered project emissions as zero for renewable energy projects. Further, it is also confirmed through the verification of purchase orders for the WEG (Ref /5/ to Ref /8/) and the commissioning certificates of the WEG's (Ref /9/ to Ref /17/) that the equipments of the Project Activity are new and does not involve any transfer of equipment from or to the project activity and thus there is no leakage accountable to the project activity.

The project design is sound and the geographical (Vagaikulam, Kattarankulam and Melelanthaikulam villages of Tirunelveli Taluka in Tirunelveli District, TamilNadu, India) and temporal (20 years) boundaries of the project are clearly defined. Project participant has taken a lifetime of 20 years for the WEG.

CAR 1 was raised by the validation team since the metering system described in the project boundary diagram was not as per the metering system observed by the validation team at site. The same has been corrected by the Project participant in the revised version of the PDD and therefore the clarification request is closed.

The validation team confirms that the only greenhouse gas relevant to the project activity is CO_2. This gas is addressed by the applied methodology.

Based on the above assessment, the validation team hereby confirms that the identified boundary and the selected sources and gases are justified for the project activity.

3.6.3 Baseline identification (87-88)

The steps taken to assess the requirement given in paragraph 80 and 81 of the VVM are described below:
Validation team assessed the baseline identification by the project participant using the provisions of the applied methodology. As per the applied methodology AMS I.D, version 16, the baseline is defined as the product of quantity of net electricity supplied to the grid as a result of the project activity, $EG_{BL, y}$ expressed in MWh multiplied by an emission factor

$BE_y = EG_{BL, y} * EF_{CO2, grid, y}$

Where, BE_y is the baseline emissions in year y (tCO_2),

$EG_{BL, y}$ is the quantity of net electricity supplied to the grid as a result of implementation of the project activity, and,

$EF_{CO2, grid, y}$ is CO_2 emission factor of the grid in year y (tCO_2/MWh)

As per AMS I.D version 16, the Emission Factor can be calculated in a transparent and conservative manner in either of the following two options:

(a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system', Version 2.1.0.
OR
(b) The weighted average emissions (in Kg CO_2/kWh) of the current generation mix. The data of the year in which the project generation occurs must be used.

Project participant has adopted the first option and used the official published data on operating and build margin emission factors (Ref /45/) which is calculated as per the "Tool to calculate emission factor for an electricity system". The version of the CEA database used is Version 5, which was available on the start date of validation viz; webhosting date of the PDD. This data is published by Central Electricity Authority (CEA), who is the sole authority for the publication of such data in India. This data is based on Version 1.1 of the 'Tool to calculate the emission factor for an electricity system'. However the project participant has used the latest available version (Version 2.1.0) of the tool which indicates in Step 1 that the tool is not applicable in case the project electricity system is located partially or fully in a Annex 1 country. Further it also includes an optional step, Step 2 which provides an option to project participant to

exclude off-grid plants in the project electricity system. Since the Indian Electricity system, wherein the proposed project activity is located in, is well defined and is not located partially or fully in any Annex 1 country, the Step 1 of the tool is still applicable to the project activity. Further since step 2 is optional, the project participant have not considered Step 2 in the estimation of the operating margin and build margin, since the CEA database version 5 calculates the values of operating margin and build margin considering data for grid power plants only. Hence CEA database can still be used (Ref /45/). Project participant has applied weight factors for the OM and BM [75% & 25% respectively] as specified in the tool to arrive at the emission factor for the combined margin. The years considered for OM are 2006-07 to 2008-09 and for the BM it is 2008-09. Accordingly, the combined margin emission factor is 0.94515 tCO_2/MWh.

Validation team agrees to this emission factor since it is based on the official background data published by CEA. The validation team further notes that the emission factor is not provided by DNA but by the competent authority. The provisions of para 64 of EB 43 in this regard therefore are not applicable.

It is noted that the selected baseline scenario is in line with the selected approved methodology. Validation team therefore confirms that the selected baseline scenario reasonably represents what would happen in the absence of the project activity

Based on the above assessment, the validation team hereby confirms that:
(a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
(b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;
(c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
(d) The investment in wind power projects in India is not a mandatory obligation on any project owner. The validation team confirms this on referring the Electricity Act 2003 (http://www.cercind.gov.in/08022007/Act-with-amendment.pdf) and National Electricity Policy 2005(http://www.powermin.nic.in/whats_new/national_electricity_policy.htm) which do not restrict or empower any authority to restrict the fuel choice for power generation.
(e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

3.6.4 Algorithms and/or formulae used to determine emission reductions (92-93)

The steps taken to assess the requirement outlined in paragraph 88 of the VVM are described below:
As per AMS ID, version 16, paragraph 10, the baseline is defined as the product of quantity of net electricity supplied to the grid as a result of the project activity, $EG_{BL, y}$ expressed in MWh multiplied by an emission factor

$BE_y = EG_{BL, y} * EF_{CO2, grid, y}$

Where, BE_y is the baseline emissions in year y (tCO_2),

$EG_{BL, y}$ is the quantity of net electricity supplied to the grid as a result of implementation of the project activity, and,

$EF_{CO2, grid, y}$ is CO_2 emission factor of the grid in year y (tCO_2/MWh).

The project participant has calculated the baseline emissions by multiplication of the net electricity supplied by the project activity to the grid and the grid emission factor. The detailed algorithms are transparently described under sections B.6.3 of the revised PDD (Ref /2/).

The algorithm to calculate the emission reductions from the project activity are described as;

$ER_y = BE_y – PE_y – L_y$ where,

ER_y = emission reductions from the project activity

PE_y = project emissions from the project activity

L_y = leakage emissions from the project activity

As described in AMS I.D, the project emissions are considered to be zero for most renewable energy projects. Project participant has however, indirectly accounted for project emissions by subtracting the measured electricity imported from the electricity exported by the project activity.

With reference to this methodology, project does not lead to any leakage, as the equipments in the project activity are not transferred from another activity.

Validation team assessed the calculations of estimated Emission Reductions as provided by project participant in a spreadsheet (Ref /36/). The assumptions in this spreadsheet were validated as follows -

Parameter, Value	Source of information	Validation justification
Project Capacity, 8.0 MW	Purchase Order's & PPA	The project activity is as per the documents verified and seen at

		site.
Number of machines, 10	Purchase Order's, commissioning certificates	The numbers of machines are as per the documents provided and seen at site.
PLF, 24.70%	As per the third party study report	The PLF value is based on the 3rd party study report, which is as per EB 48, Annex 11 requirement. Refer section 3.7.3 of this report.
Baseline EF, 0.94515 tCO_2e/MWh for Southern Grid	CEA database Version 5	CEA database is an official source of data and hence acceptable.

The estimated annual average of emission reductions is approximately 16,360 tCO_2e over the 10 year crediting period of emission reduction represents a reasonable estimation using the assumptions given by the project. All the assumptions for this estimate either come from the assumptions used for investment analysis or grid emission factor as taken from CEA website. These are already validated in section 3.6.3 of this report. The validation team confirms that the estimates of baseline emissions can be replicated using the information provided. It also can be verified using the spreadsheet (Ref /36/) for calculations of Emission Reductions.

Based on the above assessment, the validation team hereby confirms that:
(a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;
(b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;
(c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
(d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage emissions and emission reductions;
(e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

3.7 Additionality of a project activity (97)

The steps taken and sources of information used, to cross-check the information contained in the PDD on this matter are described below:

The steps taken by the validation team to assess the additionality of the Project Activity include review of documents indicated in the assumptions

in the IRR excel sheet (Ref /35/). The detailed steps are described in Sections 3.7.1 through 3.7.5 below.

3.7.1 Prior consideration of the clean development mechanism (104)

The validation team validated the project activity start date provided in the PDD as follows;

Project participant provided copies of all the Purchase orders placed (Ref /5/ to Ref /8/) for the project activity. Since for wind energy generators, there cannot be any other real action before the Purchase order, the validation team accepted the corresponding date as the starting date for the project activity. Accordingly, 10/07/2010, which is the date of all the purchase orders (Ref /5/ to Ref /8/) for the wind turbines in the project activity, is accepted as the start date of the project activity.

Since the start date of the project activity was after 02 Aug 2008, the serious consideration of CDM for the project activity was assessed in line with the guidelines as specified in EB 49, Annex 22 (Ref /47/) as under;

The validation team verified the communications made by the Project Participant to the Indian DNA (Ref /28/) as well as to the UNFCCC secretariat (Ref /30/). The intimation was done to the UNFCCC secretariat on 19/10/2010 (Ref /30/) and to the Indian DNA on 27/10/2010 (Ref /28/). Since the intimation to both the entities was done within 6 months of the project activity start date (viz; 10/7/2010), the validation team concluded that CDM was seriously considered in the decision to implement the project activity. The validation team further reviewed the confirmation mail received by the Project Participant from the UNFCCC vide email dated 26/10/2010 (Ref /31/) and from the Indian DNA vide email dated 29/10/2010 (Ref /29/), confirming the receipt of the intimation. Also the validation team verified the communication made by the Project Participant to the UNFCCC on the CDM website http://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html and observed that the communication was made on 19/10/2010.

CL 11 was raised by the validation team since the dates of communication between the Project Participant and the UNFCCC and Indian DNA were not clearly described in Section B.5 of the webhosted PDD. The same has been transparently described by the Project Participant in the revised PDD and hence the clarification request is closed.

Additionally, the validation team also verified the copy of the Board resolution dated 09/07/2010 (Ref /4/) which describes the discussion of investing in the wind power projects across various states of India, including the proposed project activity (8MW in TamilNadu) and further discusses the financial non-viability of the project activity without CDM revenues. The board minutes further discusses about CDM benefits and

criticality of CER revenues in ensuring financial viability of the project activity.

Based on the above, the validation team confirms that CDM benefits were a decisive factor in the decision to proceed with the Project Activity.

The validation team verified all the evidences related to the project implementation and CDM implementation steps and observed that the project participant had initiated real action in parallel to the implementation of the project activity and that all the activities from the start date of the project activity viz; placement of the P.O for the Wind Turbine Generator (Ref /5/ to Ref /8/) until the date of webhosting of the PDD for global stakeholder comments dated 05/01/2011 are completed well within the time span of only 5 months and hence adequately meets the requirements as mandated by the Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM, Version 03, EB 49, Annex 22 (Ref /47/).

The time gap between the placement of the purchase order (Ref /5/ to Ref /8/) and the commissioning of the Wind Turbine Generator (Ref /9/ to Ref /17/) is only about 79 days. CAR 6 was raised as to how a project capacity of 8 MW (consisting 10 nos wind mills) could be commissioned within a span of only 79 days. The Project Participant has responded by describing that an equipment buyer can avail depreciation benefits in the months of September and March of a financial year (the financial year in India is from April to March) if the machine is commissioned within that time. This leads to a sudden demand for machines during this time of the financial year. The DOE is aware about this situation and is well aware of the fact that Wind Turbine Generator suppliers ensure this excessive demand is met by stocking standard machines ready for quick delivery during these months. The validation team therefore confirm the Project Proponent's statement in the PDD, since the prevailing practice in India, especially for wind projects, is that the WTG suppliers identify and develop the wind farms including obtaining all legal clearances and the basic infrastructure needed for wind mills. Upon receipt of a purchase order from a client, the only activity required to be done is to transfer the equipment to site, erect and commission, which, does not take more than 30 – 90 days in general. At times, the suppliers even erect the Wind Turbine generator's at the wind farm site in anticipation of a firm contract. However these windmills are not commissioned. Only upon receipt of a firm purchase order from a client, the Wind Turbine generator is commissioned and all the clearances are transferred to the client. Both these activities happen / could happen parallely. In such cases, the necessary formalities can be completed within a short duration of 7 days too

Based on the justification of the Project Participant and the observations of the validation team as described above, the CAR is closed.

From the above discussions, it is observed that the benefits of CDM were a decisive factor in the decision to proceed with the project activity. Further, continuing and real actions were taken by project participant to secure CDM status in parallel with the implementation of the project activity. This is in line with para 8 of Annex 22 of EB 49 (Ref /47/).

The validation team therefore agrees that project participant has proven that CDM was seriously considered in the decision to proceed with the implementation of the project activity.

Based on the above assessment, the validation team hereby confirms that the proposed CDM project activity complies with the requirements of EB49 Annex 22.

3.7.1.1 Historical information on project timeline

There is no historical information on the project activity timeline since all the activities have begun after the start date of the CDM project activity.

3.7.2 Identification of alternatives (107)

The approved methodology AMS ID version 16 prescribes the baseline, hence as per para 104 of VVM manual version 1.2, no further analysis on identification of alternatives is required.

As per Attachment A to Appendix B of Simplified modalities and procedures for small scale CDM project activities, Project participant has used investment barrier to demonstrate additionality.

3.7.3 Investment analysis (114)

The project participant has demonstrated the additionality of the project using the investment barrier, as stated in Attachment A to Appendix B of Simplified modalities and procedures for small scale CDM project activities.

The validation team validated the assumptions in the investment analysis as follows –

Parameter, Value	Source of information	Validation justification
Total project cost INR 474.70 million (inclusive of land cost)	Offer letter from M/s Enercon India Limited dated 25/06/2010	The project cost is taken from offer letter of M/s Enercon India Limited which reflects the project cost applicable at the time of decision making. The cost is indicated to be INR 47.47 million per Wind Turbine Generator. Therefore cost for 10 machines is INR 474.70 million. This is as per para 6 of Guidelines on the Assessment of Investment Analysis (EB 51 Annex 58). The actual cost of the project activity was also verified and subjected to a sensitivity analysis.
Project Capacity, 8.0 MW	Board resolution (Ref /4/), Purchase order	The project capacity is as per the discussion in the Board resolution and also the purchase order raised.
Number of machines, 10	Purchase order	The number of machines are verified from site visit, purchase orders and commissioning certificates

Parameter, Value	Source of information	Validation justification
PLF(CUF), 24.70 %	As per the PLF study report of 3rd party (Ref /27/)	The validation team verified the PLF study report prepared by an independent 3rd party M/s Ravi Enteck Limited (Ref /27/) for the project activity wherein the PLF is stated to be 24.70%. Since the PLF value is determined in line with the requirements specified in EB 48, Annex 11, the validation team accepted the same. The validation team also verified the PLF indicated in the TNERC Tariff Order dated 20/03/2009 (Ref /33/) which was applicable at the time of investment decision and noted that the PLF indicated under para 7.3 (page 16 of the tariff order) is 27.15 % for TamilNadu State. The validation team further reviewed the tariff order (Pg 190) and observed that the PLF indicated for the Shencottah pass, wherein the project activity is located, is 28.21%. Hence the Project Participant has subjected the PLF value to a sensitivity analysis to cover the PLF value of 28.21% stated in the TNERC Order of 2009 for Shencottah pass. Hence the validation team confirms that the PLF of 24.70 % considered by the Project Participant meets the requirements of EB 48, Annex 11 guidelines (Ref /48/). [Refer to discussion on sensitivity analysis of PLF below]

Parameter, Value	Source of information	Validation justification
Insurance charges@ percentage of capital cost, 0.12 %	Normative	The validation team reviewed the insurance costs provided in the TNERC Tariff Order 2009 and observed the value to be 0.75% of the machinery cost. Hence the value of 0.12% considered for the insurance cost is reasonable and conservative.
O&M Cost @ % capital cost is 1.30%	This is based on the offer of M/s Enercon India Limited dated 25/06/2010 (Ref /3/)	The O&M cost is taken from offer of M/s Enercon India Limited which reflects the cost applicable at the time of decision making. The validation team also reviewed the TNERC tariff order of 2009 and observed the value to be 1.32% of the capital cost. Hence the value assumed is conservative. Further since the O&M agreement is not yet signed between the Project Participant and the O&M contractor, the Project Participant has subjected the parameter of O&M to a sensitivity of upto -50%. Please refer discussion on sensitivity analysis below.
Escalation in O&M cost, 6.0% from the 2nd year	This is based on the offer of M/s Enercon India Limited dated 25/06/2010	The escalation in the O&M cost is taken from the offer of M/s Enercon India Limited which reflects the cost applicable at the time of decision making. Further since the O&M agreement is not yet signed between the Project Participant and the O&M contractor, the Project Participant has subjected the parameter of O&M escalation to a sensitivity of 5%. Please refer discussion on sensitivity analysis below.

Parameter, Value	Source of information	Validation justification
Power Tariff, INR 3.39/kWh	TNERC Tariff Order 2009	This is the applicable tariff order for the state of TamilNadu dated 20/03/2009 (which is valid for a period of 5 years) is valid at the time of decision making, which indicates the power tariff to be INR 3.39/kWh. Further the validation team also reviewed the Power Purchase Agreements (PPA) signed by the Project Participant with the TNEB and observed that power tariff is indicated to be INR 3.39/kWh for all the wind turbines and is fixed for the entire life of the project activity. However the Project Participant has still subjected the parameter of tariff to a sensitivity analysis of ± 10%.
Debt equity ratio 0:100	The project activity is funded by 100 % equity component.	The project activity is funded by 100 % equity component. Hence accepted.
Baseline EF, 0.94515 tCO_2/MWh	Emission Reduction spreadsheet, PDD and the CEA database, Version 5.	CEA database is an official source of data and hence acceptable as explained in section 3.6.3 of this report. The validation team verified the values of Operating Margin and Build Margin from the CEA database, Version 5 and the Combined Margin calculations from the emission reduction excel sheet and confirms that they are correct.

The validation team hereby confirms that project participant has applied all the statutory levies and taxes as per the valid tax rules of India. Project participant has also applied incentives like accelerated depreciation, additional depreciation and provisions of section 80IA [deferred tax benefit] as per Indian Income Tax Act (Ref /49/). The validation team validated the assumptions as above and observed that

they are correct. The financial expert also verified the IRR calculations and observed them to be correct.

The PP has chosen benchmark analysis to demonstrate additionality of the project and for this purpose, has selected post tax equity IRR as the financial indicator. As per Annex 58 of EB 51 "In cases where benchmark approach is used, the applied benchmark shall be appropriate to the type of IRR calculated. Local commercial lending rates or weighted average cost of capital (WACC) are appropriate benchmarks for a project IRR". Since equity IRR has been selected as the financial indicator, as per the guidance, Cost of Equity has been chosen as the benchmark. Therefore the benchmark selected is appropriate to financial indicator chosen and is also in conformity with the EB guidance provided.

For this Project Activity, the Cost of Equity has been calculated using the Capital Asset Pricing Model (CAPM). Further, each of the parameters used in the benchmark calculation were checked for their appropriateness.

Risk free rate has been sourced from interest rate on Central Government securities from Reserve Bank of India from the publication dated 11/06/2010 and hence acceptable. Risk free rate is taken as 8.38 % as per interest rate on Central Government securities from Reserve Bank of India.

Risk premium is calculated as the difference between the market return and the risk free rate. The market return value of 15.77% is based on the BSE 200 data. The validation team also reviewed the market return value from the BSE Sensex, BSE 100 & also the BSE 500 data and observed the values to be 18.00%, 18.15% and 18.72% respectively for the same time frame viz; up to 30/06/2010. Hence the validation team accepted the value of 15.77% for market return from the BSE 200 data as conservative.

As explained in the PDD, the beta value for the project type is based on Beta values of power generating companies in India and listed on the stock exchange at the time of investment decision. The raw beta values has been sourced from the Bloomberg snap-shots whereas the unlevered beta value has been calculated using the data from the Bloomberg database and also from the web-link www.moneycontrol.com. The average beta value of 1.09 from 5 power generating companies for a period of 3 years is considered in the benchmark calculation. Since beta is of listed power generating companies and sourced from the Bloomberg data and from a weblink available on the public domain, this was accepted.

The validation team, along-with the financial expert engaged, also verified the correctness and authenticity of the data used for the benchmark calculation and found them to be correct and publicly available. This is also in line with the guidelines for benchmark selection stipulated in the Guidance on the Assessment of Investment Analysis, EB 51 Annex 58 and hence the validation team has accepted the same. The validation team

therefore concluded that the benchmark adopted by the Project participant to establish the additionality is 16.40% and consequently the project's additionality, is correct and valid.

CL 13 was raised by the validation team on the appropriateness of using the raw beta data for calculating the benchmark return on equity. The Project Participant has responded by stating that the raw beta is reflective of the current market risk and hence has been considered in the computation of the benchmark. The validation team, in consultation with its financial experts observed the justification to be valid and hence the clarification request is closed.

The validation team therefore confirms that the equity IRR without CDM revenues works out to be 8.14 % which is lower than the benchmark of 16.40%.

The only variables, which contribute to more than 20% of the project cost or the project revenue, are PLF, Capital Cost and tariff. However a combined sensitivity analysis is also conducted by the Project Participant for the parameter of O&M cost and the O&M escalation.

The validation team reviewed the TNERC Order of 2009, which is the applicable tariff order for the project activity and observed that the average PLF for the State of TamilNadu (wherein the proposed project activity is located) is 27.15% and the PLF indicated for the Shencottah pass, wherein the project activity is located within the State of TamilNadu, is 28.21%. Hence the validation team confirms that the sensitivity analysis on the parameter of PLF to 15% covers the PLF value of 28.21% and hence is conservative. The equity IRR value with sensitivity of +15% for PLF is 10.47 % which is below the benchmark value without CDM. Even if the value of PLF is subjected to a sensitivity to cover the highest PLF value of 32.31% (sensitivity of +31%) as described in the TNERC Order 2009 for Muppandal pass, the equity IRR comes out to be 12.79% and does not cross the benchmark. Hence the sensitivity analysis range considered for PLF is robust.

The actual cost of the project activity was lower than the cost indicated in the initial offer by the WEG supplier by 7.30%. The project cost indicated in the initial offer by M/s Enercon India Limited (which was available at the time of decision making) was INR 474.70 million whereas the actual project cost (based on the purchase orders raised) worked out to be INR 440.00 million only, which is around 7.30% lower than the offer project cost. Hence the sensitivity analysis was conducted at the rate of -10% and the equity IRR was observed to be 10.17% which is lower than the benchmark.

The power tariff in TamilNadu is fixed for the entire life of the project activity at INR 3.39/kWh. The Project Participant has subjected the parameter of tariff to a sensitivity analysis of $\pm$ 10% and the equity IRR

with +10% on tariff works out to be 9.72 % without CDM revenue, which is below the benchmark.

The Project Participant has also conducted a sensitivity analysis on the parameter of Operation and Maintenance cost since the O&M agreement between the Project Participant and the O&M contractor (viz; Enercon India Ltd) is not yet executed. In order to ensure conservativeness, a combined sensitivity analysis of -50% on the O&M cost and the escalation value of 5% has been conducted and it is observed that the equity IRR comes out to be 9.56% without CDM revenues, which is below the benchmark.

The validation team raised CL 14 since the parameter of tariff was not subjected to a sensitivity analysis in the webhosted PDD. Further the justification for subjecting the parameter of PLF to only $\pm$ 10% sensitivity was not accepted by the validation team. The Project Participant in response to the clarification has subjected the tariff to a sensitivity analysis of $\pm$ 10% and also subjected the parameter of PLF to a sensitivity of 15 % to meet the PLF value indicated in the TNERC Order 2009. Further the Project Participant has subjected the O&M cost to a sensitivity analysis of -50% along with the O&M escalation of 5 %. The validation team reviewed the revised IRR sheet and observed them to be correct. Hence the clarification request was closed.

The validation team, based on the assessment result by the financial expert engaged, hereby confirms that the underlying assumptions are appropriate and the financial calculations are correct.

The validation team therefore confirms that the equity IRR for the project activity without CDM revenues is 8.14% and even with sensitivity analysis, the values do not cross the benchmark and hence it can be considered that the project is not viable without CDM revenues. Thus the project is additional.

3.7.4 Barrier analysis (118)

Project participant has not conducted barrier analysis to prove the additionality.

3.7.5 Common practice analysis (121)

Common practice analysis has not been used to demonstrate additionality. As per Attachment A to Appendix B of Simplified modalities and procedures for small scale CDM project activities, additionality can be demonstrated by any one of the four barriers listed. Project participant has demonstrated additionality using investment barrier only.

3.8 Monitoring plan (124)

The Project uses the approved consolidated monitoring methodology AMS I.D Version 16. Please refer discussions on the applicability of the methodology at section 3.6.1above.

The steps taken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design are described below.

Validation team considers the monitoring plan to be complying with the requirements of the methodology for the following reasons –

1. According to the methodology, there is only one variable to be monitored viz; $EG_{BL,\ y}$, the net electricity exported to the grid by the proposed Project Activity in year y.
2. $EF_{CO2,grid,y}$, the emission factor is fixed ex-ante based on CEA database, Version 5. This is in line with the latest version of the emission factor tool as required by the methodology.(Ref /43/)
3. For the emission reduction calculations, net electricity exported to the grid is considered, which is in line with the applied methodology.
4. Project participant has provided provision for monitoring these parameters and for electronic archiving of the monitored data. This is stated in Section B.7.1 and B.7.2 of the revised PDD.
5. Project participant has provided for archiving the data for 2 years after the end of the crediting period.
6. The monitoring plan includes requirements for calibrating the meters of the project activity on an annual basis, which are used for monitoring the project activity variable, $EG_{BL,\ y}$. The calibration is conducted by the TNEB.
7. The monitoring frequency for $EG_{BL,\ y}$ matches with that of the applied methodology, viz. hourly measurement and monthly recording. The cross checking is provided with the sales receipts either in the form of a cheque or the bank statements of the Project Participant which indicates the payment made by the TNEB for the net electricity delivered by the Project Activity to the grid.
8. Project participant has included another variable, $EG_{controllerproject}$ in the monitoring plan to provide for an apportioning procedure wherein the dates of the recorded data do not coincide with the dates of the verification period.(Procedure for apportioning)

9. Under section B.7.2 of the PDD, project participant has provided the detailed measurement procedure, procedures to deal with data uncertainty, procedure for apportioning of the measured data, organizational structure etc.
10. The validation team validated the metering system at site as follows viz;
    a. There is a bi-directional tri-vector energy meter (also called as Cluster Meter) of accuracy class 0.5% adjacent to the individual wind turbine. At one location, 2 wind turbines of the same investor are connected to a single meter too. Thus there are 9 meters connected to the 10 WEG of the project activity.
    b. Apart from the individual cluster meter, there is a main and check meter of accuracy class 0.2s located at the Enercon pooling station. The main and check meter connected at this pooling station has both, the project activity as well as the non-project activity wind turbines connected to it.
    c. The electricity export as well as the electricity imported by the project activity are recorded at the cluster meter as well as at the main and check meter of the Enercon pooling station on a monthly basis, in the presence of representatives of TNEB and the Project Participant. Based on this monthly recording, the TNEB representatives apportion the transmission line losses amongst the various wind turbines (project activity as well as non-project activity) to deduce the net electricity supplied by the individual wind turbines to the grid. The net electricity supplied to the grid, so deduced, is indicated in the 'Monthly Statement of Energy' issued by TNEB. The validation team confirms that the procedure for such apportioning is conducted and controlled by the TNEB and neither the Project Participant nor the Project Participant representatives have any role to play in the same.
    d. The metering equipment is duly approved, calibrated and sealed by TNEB and is in complete control of TNEB only.
    e. Based on the 'Monthly Statement of Energy' issued by TNEB, the Project Participant prepares the invoice and submits it to the TNEB for payment.
    f. The payment is made by the TNEB to the Project Participant either in the form of a cheque or online transfer (RTGS transfer).
    g. The cheque or the bank statement (indicating the online transfer) would be used to cross-check the net electricity exported value indicated in the 'Monthly Statement of Energy' issued by TNEB.

The validation team physically verified the metering system installed at the site of the project activity.

Monitoring plan was not correctly described in the webhosted PDD and hence CAR 4, 5 and CL 16 were raised. Project participant revised the monitoring plan in the PDD and has now described the metering system in

details in section B.7.1 & B.7.2 of the revised PDD. Validation team confirms that the description now correctly represents the metering system available at the project activity site.

The validation team also interacted with the team of the O&M service provider; M/s. Enercon India Limited, who are the equipment supplier's also. The agency is experienced in the monitoring system and is managing O&M of numerous other wind farm CDM projects.

The validation team therefore is of the opinion that the project participant through the O&M agency is capable of implementing the monitoring plan in the context of the project activity.

CAR 4, 5 & CL 16 raised in respect of monitoring were satisfactorily resolved as stated in Appendix A.

The validation team hereby confirms that the monitoring plan described in the revised PDD complies with the requirements of the methodology.

3.9 Sustainable development (127)

The host Party's DNA confirmed the contribution of the project activity to the sustainable development of the host Party. Refer to item 3.1 of this report. The project participant described the contribution of the project activity to sustainable development as per four indicators of sustainable development stipulated by Ministry of Environment & Forests in India.

The host country legislation does not require any environmental impact assessment to be carried out for wind energy projects. Project participant has obtained approval (Ref /32/) from DNA of India and it is confirmed by the Authority that the project contributes to sustainable development in India. The project activity is in compliance with all current applicable legislations. As the project activity does not lead to generation of liquid or gaseous effluents and it will partly displace fossil fuel based electricity generation, there are only benefits derived out of the project and no adverse effects are envisaged. Moreover, the location of the project activity is in remote and economically backward region and hence largely contributes to the social well being of the region.

During site visit it was noticed that the project activity provided employment to local people. The host Party's DNA confirmed the contribution of the project to the sustainable development of the host Party. Please refer to section 3.1 of this report.

3.10 Local stakeholder consultation (130)

The steps taken to assess the adequacy of the local stakeholder consultation are described below.

Local stakeholder consultation meeting to discuss stakeholder concerns on the Project Activity was held on 29/10/2010 at the local office of the

O&M contractor at Manur village, Tirunelveli District, TamilNadu, India (Ref /52/). The method of invitation to the local stakeholders was through an advertisement in the local language newspaper on 14/10/2010 (Ref /51/)

The validation team feels that the time provided [about 15 days] to the local stakeholders for providing comments on the Project Activity is adequate.

The attendance list of participants, newspaper cutting -inviting participation to interested stakeholders, and minutes of the stakeholder meeting proceedings, maintained by the project participants (Ref /52/) were verified by the validation team. The stakeholders viewed this project as contributing to local environmental benefits and socio-economy. Overall, there was agreement that the project activity was a beneficial project from the local sustainable development.

During the validation site visit, the validation team also interviewed few of the local stakeholders for their views about the project activity. The villagers confirmed that the stakeholder consultation meeting was held at the office of M/s Enercon India Limited (O&M contractor) at Manur Village. The villagers expressed satisfaction over the windmill project activity in the region and confirmed that due to the project, there is no adverse effect or damage to land, vegetation etc. It was expressed that the project activity gives employment opportunity for the local public and thus contributes to the economical growth of the region. The validation team also observed that the local people have been provided employment as security guards and helpers in the site office.

CAR 3 was raised by the validation team since the webhosted PDD did not transparently describe the local stakeholder process as mandated by the PDD Completeness guideline. Further the identity of the local stakeholders that made comments were not described in the webhosted PDD. The CAR was closed based on the corrections made by the Project participant in the revised PDD in Section E.1 & E.2. The validation team hereby confirms that the process of local stakeholder consultation is observed to be adequate.

3.11 Environmental impacts (133)

As per the Schedule of the EIA notification (Ref /50/), given by the Ministry of Environment and Forests (Government of India) EIA is not a regulatory requirement in India for wind energy projects. Thus the project activity doesn't require EIA. The project activity does not involve any negative environmental impacts, as the WEGs are installed for generation of power using wind which is a clean source of energy.

Project participant has obtained HCA approval (Ref /32/) from DNA of India and it is confirmed by the Authority that the project contributes to sustainable development in India. The project activity is in compliance with all current applicable legislations.

4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD using methodology AMS ID was webhosted on the UNFCCC for global stakeholder's comments as per CDM requirements. The project was webhosted from 05/01/2011 to 03/02/2011. 07 comments were received from 01 stakeholder. The project participant provided response to each of these comments. Validation team took due account of these comments and the respective responses while making the validation opinion. The details of the comments received, responses by the project participant/s and the explanation of how due account of these is taken by the validation team are attached as Appendix B with this validation report.

5 VALIDATION OPINION

Bureau Veritas Certification has performed a validation of the "Wind Power Project in Tirunelveli Tamilnadu" Project in India. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

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

Project participant/s used the Attachment A to Appendix B for demonstration of the additionality. In line with this tool, the PDD provides analysis of investment to determine that the project activity itself is not the baseline scenario.

By synthetic analysis of the description of the project, the project is likely to result in reductions of GHG emissions. An analysis of the investment barrier demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project is implemented and maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

The review of the revised project design documentation (Ref /2/) and the subsequent follow-up interviews have provided Bureau Veritas Certification with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the

relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Bureau Veritas Certification thus requests registration of "Wind Power Project in Tirunelveli Tamilnadu" as a CDM project activity.

6 REFERENCES

Category 1 Documents:
Documents provided by Type the name of the company that relates directly to the GHG components of the project.

/1/ Webhosted PDD, Version 01, dated 21/12/2010

/2/ Final revised PDD, Version 03, dated 13/05/2011

/3/ Offer letter from M/s Enercon (India) Limited dated 25/06/2010, for 10 nos Wind Energy Generator of 0.8 MW capacity each (Total 8 MW) to the Project Participant

/4/ Certified True Copy of the Minutes of Meeting of the Partners of M/s Vish Wind Infrastructure LLP dated 09/07/2010

/5/ Purchase Order by the Project Participant to WEG supplier, vide reference no. VWILLP/EIL/10-11/04 dated 10/07/2010 for supply of 10 numbers WEG's of 0.8 MW capacity each. Also order for supply of Concrete Tower and Transformers.

/6/ Purchase Order by the Project Participant to WEG supplier, vide reference no. VWILLP/EIL/10-11/04-1 dated 10/07/2010 for Civil works and Electrical Work for 10 numbers WEG's of 0.8 MW capacity each.

/7/ Purchase Order by the Project Participant to WEG supplier, vide reference no. VWILLP/EIL/10-11/04-2 dated 10/07/2010 for installation, testing and commissioning of 10 numbers WEG's of 0.8 MW capacity each.

/8/ Purchase Order by the Project Participant to WEG supplier, vide reference no. VWILLP/EIL/10-11/04-3 dated 10/07/2010 for transfer of development rights for the installation of 10 numbers WEG's of 0.8 MW capacity each.

/9/ Commissioning certificate for 02 nos of 0.8 MW capacity each WEG of Vish Wind Infrastructure LLP on 30/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3402/R.No. 3270/10, dated 23/10/2010.

/10/ Commissioning certificate for 01 no of 0.8 MW capacity WEG of Vish Wind Infrastructure LLP on 30/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3401/R.No. 3269/10, dated 23/10/2010.

/11/ Commissioning certificate for 01 no of 0.8 MW capacity WEG of Vish Wind Infrastructure LLP on 30/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3400/R.No. 3268/10, dated 23/10/2010.

/12/ Commissioning certificate for 01 no of 0.8 MW capacity WEG of Vish Wind Infrastructure LLP on 30/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3399/R.No. 3267/10, dated 23/10/2010.

/13/ Commissioning certificate for 01 no of 0.8 MW capacity WEG of Vish Wind Infrastructure LLP on 30/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3398/R.No. 3266/10, dated 23/10/2010.

/14/ Commissioning certificate for 01 no of 0.8 MW capacity WEG of Vish Wind Infrastructure LLP on 30/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3397/R.No. 3265/10, dated 23/10/2010.

/15/ Commissioning certificate for 01 no of 0.8 MW capacity WEG of Vish Wind Infrastructure LLP on 30/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3396/R.No. 3264/10, dated 23/10/2010.

/16/ Commissioning certificate for 01 no of 0.8 MW capacity WEG of Vish Wind Infrastructure LLP on 29/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3372/R.No. 3260/10, dated 27/10/2010.

/17/ Commissioning certificate for 01 no of 0.8 MW capacity WEG of Vish Wind Infrastructure LLP on 29/09/2010 – Lr No. SE/TIN/AEE/DVT/AE-2/F.WEG HT SC. No. 3371/R.No. 3259/10, dated 27/10/2010.

/18/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 2 WEG of capacity 0.8 MW each (Total 1.6 MW) dated 30/09/2010

/19/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 1 WEG of capacity 0.8 MW dated 29/09/2010

/20/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 1 WEG of capacity 0.8 MW dated 29/09/2010

/21/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 1 WEG of capacity 0.8 MW dated 30/09/2010

/22/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 1 WEG of capacity 0.8 MW dated 30/09/2010

/23/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 1 WEG of capacity 0.8 MW dated 30/09/2010

/24/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 1 WEG of capacity 0.8 MW dated 30/09/2010

/25/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 1 WEG of capacity 0.8 MW dated 30/09/2010

/26/ Power Purchase Agreement between TNEB and M/s Vish Wind Infrastructure LLP for 1 WEG of capacity 0.8 MW dated 30/09/2010

/27/ Third party Report on the generation and PLF estimate for 8 MW capacity wind project of M/s Vish Wind Infrastructure LLP, prepared by M/s Ravi Enteck Limited, Chennai dated 24/11/2010

/28/ E-mail communication dated 27/10/2010 from the project participant to the Indian DNA intimating the DNA regarding the proposed project activity – Prior Consideration of CDM

/29/ E-mail confirmation from the Indian DNA to the project participant dated 29/10/2010 confirming the receipt of the intimation for prior consideration of CDM.

/30/ E-mail communication dated 19/10/2010 from the project participant to the UNFCCC intimating the DNA regarding the proposed project activity – Prior Consideration of CDM

/31/ E-mail confirmation from the UNFCCC secretariat to the project participant dated 26/10/2010 confirming the receipt of the intimation for prior consideration of CDM.

/32/ Host Country Approval vide reference No. 4/17/2010-CCC dated 14/03/2011

/33/ TNERC Tariff Order, Order No 1 dated 20/03/2009

/34/ Benchmark excel sheet

/35/ IRR Excel sheet

/36/ Emission Reduction Excel sheet

/37/ IRR Certificate by the Financial expert

/38/ Certificate by financial expert for benchmark calculations

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

/39/ PDD completion guidance - Guidelines for completing the simplified project design document (CDM-SSC-PDD) and the form for proposed new small scale methodologies (CDM-SSC-NM), version 05

/40/ PDD Form, CDM-SSC-PDD, Version 3

/41/ AMS I.D, Version 16 - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories – Grid connected renewable energy generation

/42/ Guidelines On Assessment Of Debundling For SSC Project Activities, version 3, EB 54, Annex 13

/43/ Emission Factor tool - Tool to calculate the emission factor for an electricity system, version 2.0, EB 50, Annex 14

/44/ Validation and Verification Manual, version 1.2, EB 54; [VVM]

/45/ CEA baseline database, version 05 dated November 2009 [http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm]

/46/ Guidance on the Assessment of Investment Analysis, Version 03, EB 51

/47/ Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM, Version 03, EB 49

/48/ Guidelines for the reporting and validation of PLF's, EB 48 Annex 11

/49/ Income Tax Act, Government of India [http://law.incometaxindia.gov.in/DIT/Income-tax-acts.aspx]

/50/ EIA notification, S.O. 1533 dated 14th September, 2006

/51/ Notice in local newspaper dated 14/10/2010 inviting local stakeholder comments on the Project Activity.

/52/ Minutes of meeting of local stakeholder consultation process, attendance sheet and photographs of the local stakeholder meeting conducted by the Project Participant.

/53/ Sample copies of the TNEB authorized 'Monthly Statement of Energy Generated'

/54/ Snapshots from Bloomberg website indicating the Beta values – For benchmark calculations

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

/1/ Mr S Jeyaprakash, Engineer, Enercon (India) LImited

/2/ Mr D Muthuraman, Executive – Projects, Enercon (India) LImited

/3/ Mr K Esakipandian, Technician, M M Engineers Limited (Sub-contractors)

/4/ Mr Saujanya Kumar, Executive, Enercon (India) Limited

/5/ Mr A Chelliah, Ex-President, Manur Village Panchayat – Local Stakeholder

/6/ Mr V Karuppasamy, Vice Chairman, Manur Village Union – Local Stakeholder

/7/ Mr I Siddique, Farmer, Village Kuruchikulam – Local Stakeholder

/8/ Mr A Narayanan, Farmer, Village Melapillayarkulam – Local Stakeholder

7. CURRICULA VITAE OF THE DOE'S VALIDATION TEAM MEMBERS

R S Prem Kumar:

Bureau Veritas Certification, Team Leader, Climate Change Verifier

Lead auditor in Bureau Veritas Certification for Environment Management System, Quality Management System and Occupational Health and Safety Management System. Graduate in the field of Environmental Engineering and has more than 14 years of Industrial work experience in the field of environmental and occupational safety management systems. He has undergone training on Clean Development Mechanism. He is involved in the Validation/verification for more than 35 CDM/VCS projects.

Pratik Bhattacharya (Team Member)

Graduate in Mechanical Engineering from Kavikulguru Institute of Technology and Science (Nagpur University) and Post graduate Diploma in Energy Management from Indian Institute of Social Welfare and Business Management (Calcutta University) and Certified Energy Auditor under Bureau of Energy Efficiency (Government of India, Ministry of Power). He has around 4 years of experience in System Designing (HVAC) and Energy Auditing. He has undergone intensive training on Clean Development Mechanism and Environment Management System. He is involved in validation and Verification of more than 10 CDM projects.

S Thyagaraj

Bureau Veritas Certification, Team Member, Climate Change Verifier

He has a Bachelors of Technology degree in Chemical Engineering and over 7 years of experience in Technical services covering various functions like Production management, Energy conservation and Environment protection measures in the manufacturing industry including ISO 14001 based quality management systems. He is a certified Energy Manager from Bureau of Energy Efficiency. Working for the last 18 months in Bureau Veritas Certification (India) Pvt. Ltd. as Verifier - Climate change. Has undergone training related to Clean Development Mechanism and is currently involved in validation and verification of CDM project activities.

Sushil Budhia Associates (Financial Expert)

Services from Sushil Budhia Associates were delivered by Mr. Sushil Budhia and Ms. Usha Gopalan who are both Chartered Accountants, for validating the IRR of the project activity. Mr. Sushil Budhia has been practicing as Chartered Accountant for 25 years and he has very wide experience on project finance, taxation and financial auditing. Ms Usha Gopalan has over 15 years of experience in Project finance, taxation and

auditing. Mr. Sushil Budhia and Ms. Usha Gopalan have undergone training on Clean Development Mechanism They have conducted verification of financial indicators like IRR for more than 70 CDM projects

Karthikeyan and Jayaram Associates (Financial Expert)

Services from Jayaram & Karthikeyan Associates was delivered by Mr. Jayaram, who is a Chartered Accountant, for the validation of the benchmark calculations. He possesses in depth understanding and experience in Assurance services relating to financial appraisals & analyses, those specially related to CDM projects. He is empanelled with other DOE's for scrutinizing the financial additionality aspects of the CDM projects handled by them and expressing opinions on the financials of the project participant. Has appraised over 50 CDM projects for financial additionality on behalf of CDM validators of repute.

H B Muralidhar (Internal Technical Reviewer)

Graduate in Electrical engineering with 25 years of experience power generation and distribution related fields as well as in management system auditing. He is the Lead auditor for Environmental Management System, Quality Management system and Occupational Health and Safety Management System. He has undergone intensive training on Clean Development Mechanism. He is the technical expert & conducted Validation / Verification for more than 50 CDM Projects.

APPENDIX A : VALIDATION PROTOCOL

Table 1 Validation requirements based on the Clean Development Mechanism Validation and Verification Manual (Version 01.2) and methodology AMS I.D (version 16) - "Grid connected renewable electricity generation"

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
1. Approval			*COUNTRY A (insert the country name)*	*COUNTRY B (insert the country name)*		
a. Have all Parties involved approved the project activity?	VVM	44	There is only one party involved in the project activity as per the webhosted PDD viz; India. Project participant to provide the copy of the HCA issued by the Indian DNA.	--	CL 1	OK
b. Has the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD provided a writTen letter of approval? (If yes, provide the reference of the letter of approval, any supporting documentation, and specify if the letter was received from the project participatn or directly from the DNA)	VVM	45	The project participant has applied to the DNA for an HCA. The copy of the HCA, when received from the Indian DNA, to be provided to the validation team.	--	--	OK
c. Does the letter of approval from DNA of each Party involved:	VVM	45				
i. confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	The HCA from the Indian DNA is yet to be received by the project participant.	--	--	OK
ii. confirm that participation is voluntary?	VVM	45.b	The HCA from the Indian DNA is yet to be	--	--	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
			received by the project participant.			
iii. confirm that, in the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country?	VVM	45.c	The HCA from the Indian DNA is yet to be received by the project participant.	--	--	OK
iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	The HCA from the Indian DNA is yet to be received by the project participant.	--	--	OK
d. Is(are) the letter(s) of approval unconditional with respect to (i) to (iv) above?	VVM	46	The HCA from the Indian DNA is yet to be received by the project participant.	--	--	OK
e. Has(ve) the letter(s) of approval been issued by the respective Party's designated national authority (DNA) and is valid for the CDM project activity under validation?	VVM	47	To be reviewed after the receipt of the HCA from the project participant.	--	--	OK
f. Is there doubt with respect to the authenticity of the letter of approval?	VVM	48	To be reviewed after the receipt of the HCA from the project participant.	--	--	OK
g. If yes, was verified with the DNA that the letter of approval is authentic?	VVM	48	To be reviewed after the receipt of the HCA from the project participant.	--	--	OK
2. Participation			*PP1 (insert PP1 name)*	*PP2 (insert PP2 name)*		
a. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	The project participant listed in Section A.3 of the webhosted PDD is M/s Vish Wind	--	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
			Infrastructure LLP and is described as private party. The same name is also indicated in Annex 1 of the PDD.			
b. Has the participation of the project participants in the project activity been approved by a Party to the Kyoto Protocol?	VVM	51	The Project Participant has applied for an HCA to the Indian DNA. Project Participant to provide a copy of the HCA, once received from the DNA.	--	--	OK
c. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	Yes, the Project Participant is listed in a tabular form in Section A.3 of the PDD.	--	OK	OK
d. Is the information in section A.3 consistent with the contact details provided in annex 1 of the PDD?	VVM	52	Yes, the information provided in Section A.3 and in Annex 1 is consistent with each other.	--	OK	OK
e. Has the participation of each of the project participants been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation? (Provide reference of the approval document for each of the project participants)	VVM	52	To be verified after receipt of the HCA from the Indian DNA.	--	--	OK
f. Are any entities other than those approved as project participants included in these sections of	VVM	52	No, there is only one Project Participant listed in Sections A.3 and Annex 1 of the PDD.		OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
the PDD?						
g. Has the approval of participation issued from the relevant DNA?	VVM	53	Yes, the approval of participation is issued by the Indian DNA.	--	OK	OK
h. Is there doubt with respect to (g) above? I	VVM	53	To be verified after receipt of the HCA from the Indian DNA.	--	--	OK
i. If yes, was verified with the DNA that the approval of participation is valid for the proposed project participant?	VVM	53	To be verified after receipt of the HCA from the Indian DNA.	--	--	OK
3. Project design document						
a. Is the PDD used as a basis for validation prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website?	VVM	55	Yes, the PDD used as the basis for validation is in accordance with the latest template available on the UNFCCC website viz; Version 3 of the PDD template.		OK	OK
b. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	Yes, the PDD is in accordance with the latest applicable CDM guidelines.		OK	OK
c. In CDM-SSC-PDD section A.1 are following provided?	EB 34	Ann 09				
i. Title of project	EB 34	Ann 09	Yes, the title of the project activity is indicated as “Wind power project in Tirunelveli Tamilnadu” in the webhosted PDD.		OK	OK
ii. Current version number and date of document	EB 34	Ann 09	Yes, the current version number of the PDD is 01 and the date of the document is 21/12/2010.		OK	OK
d. In CDM-SSC-PDD section A.2 are following provided (max. one page)?	EB 34	Ann 09				
i. A brief description of the project activity covering purpose which includes the scenario existing prior to the start of project, present	EB 34	Ann 09	The purpose of the proposed project activity is described in Section A.2 of the webhosted PDD. However description relating to the prior experience		CL 2	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
scenario and baseline			of the Project Participant in renewable energy projects of not transparently described in the webhosted PDD.		
ii. Explanation how the GHG emission reductions are effected	EB 34	Ann 09	Yes, description of how the GHG emission reductions are effected because of the proposed CDM project activity is provided under Section A.2 of the PDD.	OK	OK
iii. The PP's view on the contribution of project activity to sustainable development	EB 34	Ann 09	Yes, the Project Participant views on the 4 parameters of sustainable development as indicated by the Indian DNA are described in Section A.2 of the webhosted PDD.	OK	OK
iv. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	Yes, there would be some changes / modifications, based on the Project Participant response to the CAR/CL raised in the section above.	OK	OK
e. In CDM-SSC-PDD section A.3 are following provided in the tabular format?	EB 34	Ann 09			
i. List of project participants and Party(ies)	EB 34	Ann 09	Yes	OK	OK
ii. Identification of host party	EB 34	Ann 09	Yes, India is identified as the host party.	OK	OK
iii. Indication whether the Party wishes to be considered as project participant	EB 34	Ann 09	Yes, it is identified that India does not wish to be considered as the Project Participant in the project activity.	OK	OK
f. In CDM-SSC-PDD section A.4.1 are following provided?	EB 34	Ann 09			
i. Technical description, location, host party(ies) and address as required?	EB 34	Ann 09	Yes, the location of the project activity and details of the host party etc is provided in the PDD.	OK	OK
ii. Detailed physical location with unique identification of the project activity (eg.	EB 34	Ann 09	Yes, the detailed physical location with the unique identification of the project activity (lat-long) is	CL 3	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
Longitude/latitude) – not to exceed one page			provided in the PDD. However Project Participant to provide supporting evidences for the location numbers indicated for the 10 WEG's in the table in Section A.4.1.4.		
iii. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	There are no changes envisaged in this section.	OK	OK
g. In CDM-SSC-PDD section A.4.2 are following provided	EB 34	Ann 09			
i. the list of categoreis of project activities as per the latest categorization of Appendix B to to the simplified modalities and procedures for small-scale CDM project activities, hereafter referred to as Appendix B. (refer http://cdm.unfccc.int/methodologies/SSCmethodologies	EB 34	Ann 09	Yes, the category of the project activity as per the latest EB guideline is described in Section A.4.2 of the webhosted PDD.	OK	OK
ii. A description of how environmentally safe and sound technology and know how is being applied by the project activity interalia technology transfer to the Host Party(ies) for application in the project activity	EB 34	Ann 09	The description of environmentally safe and sound technology used in the project activity is explained, further it is stated that there is no technology transfer in the project activity.	OK	OK
h. In CDM-SSC-PDD section A.4.3 is the estimation of emission reductions provided, as requested, in a tabular format?	EB 34	Ann 09	Yes, the estimation of emission reductions are provided in a tabular format in Section A.4.3 of the webhosted PDD.	OK	OK
i. In CDM-SSC-PDD section A.4.4 is information regarding Public funding provided?	EB 34	Ann 09	Yes, it is indicated that there is no public funding or ODA available to the project participant for this project activity. Project participant to provide an undertaking regarding the non-availability of public funding in the project activity.	CL 4	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
j. In CDM-SSC-PDD section A.4.5 are following provided?	EB 34	Ann 09			
i. Confirmation that the small-scale project activity is not a debundled component of another small scale project	EB 34	Ann 09	Yes, the confirmation that the small scale project activity is not a debundled component of another small scale project is indicated in Section A.4.5. However Project participant to provide copies of the annual reports of the company for 3 years, prior to the investment decision.	CL 5	OK
ii. Indication if there is a registered small-scale project activity under the CDM or an application to register another small-scale project activity under the CDM	EB 34	Ann 09			
a. With the same project participants	EB 34	Ann 09	Project participant to provide copies of the annual reports of the company for 3 years	--	OK
b. Registered within the period of 2 years	EB 34	Ann 09	Project participant to provide copies of the annual reports of the company for 3 years	--	OK
c. Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity under the CDM at the closest point.	EB 34	Ann 09	Project participant to provide copies of the annual reports of the company for 3 years	--	OK
iii. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	Yes, there would be some changes / modifications, based on the Project Participant response to the CAR/CL raised in the section above.	--	OK
k. In CDM-SSC-PDD section B.1 is the approved baseline and monitoring methodology and version no provided?	EB 34	Ann 09	Yes, description of the approved methodology and version number is provided. However Project Participant to correct the methodology title to clearly indicate the term “AMS”	CL 6	OK
l. In CDM-SSC-PDD section B.2 are the following	EB	Ann			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
provided?	34	09			
i. Justification of the choice of project activity and category?	EB 34	Ann 09	Yes, the justification of the choice of the project activity and category is stated.	OK	OK
ii. Demonstration that the project activity qualifies as a small-scale project activity and that it will remain under the limits of small-scale project activity types during every year of the crediting period as per the following:For Type I : the capacity of the proposed project activity will not exceed 15 MW (or an appropriate equivalent); For Type II: the annual energy savings on account of efficiency improvements will not exceed 60 GWh (or an appropriate equivalent) in any year of the crediting period; For Type III: the estimated emission reductions of the project activity will not exceed 60 ktCO2e in any year of the crediting period.	EB 34	Ann 09	Yes, the project activity is a Type I, small scale project with a total installed capacity of 8 MW, which is lower than the threshold values of 15 MW for small scale project activity.	OK	OK
m. In CDM-SSC-PDD section B.3 is the project boundary of the project activity, based on the guidance of the applciable project category, provided?	EB 34	Ann 09	The project boundary described in the webhosted PDD is incomplete, as the metering system indicated is incorrect. During the site visit, the validation team observed that there are 2 sub-stations at the site for metering, one Enercon pooling station and the other is the TNEB sub-station. However the project boundary diagram in the PDD does not indicate the Enercon pooling station.	CAR 1	OK
n. In CDM-SSC-PDD section B.4 are following provided?	EB 34	Ann 09			
i. The baseline for the proposed project activity	EB	Ann	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
with reference to the chosen project category	34	09			
ii. Justification of key assumptions and rationales	EB 34	Ann 09	Yes	OK	OK
iii. Transparent illustration of all data used to determine the baseline emissions (variables, parameters, data sources etc)	EB 34	Ann 09	Yes, the illustration of all data is provided in Sections B.6.3 & Annex 3 of the PDD.	OK	OK
iv. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	Yes, there would be some changes to the webhosted PDD based on the CAR/CL raised above.	--	OK
o. In CDM-SSC-PDD section B.5 are following provided?	EB 34	Ann 09			
i. Explanation that the proposed project activity is additional as per options provided under attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities	EB 34	Ann 09	Yes, description on how the proposed project activity is additional is described in the PDD.	OK	OK
ii. National policies and circumstances relevant to the baseline of the proposed project activity	EB 34	Ann 09	It is not clear as to whether any national policies or circumstances relevant to the baseline of the proposed project activity exist.	CL 7	OK
iii. Evidence that the incentive from the CDM was seriously considered in the decision to proceed with the project activity, if the starting date of the project activity is before the date of validation. (this is part of the large scale project guidelines. It is better to be retained)	EB 34	Ann 09	Yes	OK	OK
p. In CDM-SSC-PDD section B.6.1 are following provided?	EB 34	Ann 09			
i. Explaination on how the procedures, in the approved project category to calculate project	EB 34	Ann 09	Yes, explanation of the various algorithms used to calculate the baseline emissions, project emissions	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity.			and leakage emissions are described in the PDD which are in line with the algorithms indicated in the applied methodology.		
ii. Clearly stating of which equations will be used in calculating emission reductions.	EB 34	Ann 09	Yes	OK	OK
iii. Explaination and justification of all relevant methodological choices, including: where the category provides different options to choose from; where the category provides for different default values	EB 34	Ann 09	Yes, justification of choices has been provided in the PDD.	OK	OK
q. In CDM-SSC-PDD section B.6.2 are following provided?	EB 34	Ann 09			
i. A compilation of information on the data and parameters that are not monitored but determined upfront so as to be available for validation	EB 34	Ann 09	Yes, the data that are not monitored but are available at validation is described in Section B.6.2 of the PDD.	OK	OK
ii. The actual value applied	EB 34	Ann 09	Yes, the actual value applied for the operating margin, build margin and the combined margin are indicated.	OK	OK
iii. Explanation and justification for the choice of the source of data	EB 34	Ann 09	Yes, explanation of the choice of the data is provided. The data is taken from the CEA database, Version 5, which is an official source from the Government of India. Since the data for determining emission factor is considered from the publicly available data, the same is accepted.	OK	OK
iv. Clear and transparent references or additional documentation in Annex 3	EB 34	Ann 09	Yes, additional documentation is provided in Annex 3 on the emission factor calculations.	OK	OK
v. Where values have been measured, a description of the measurement methods and	EB 34	Ann 09	Not applicable.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
procedures (e.g. which standards have been used), indicated the responsible person/entity having undertaken the measurement, the date of measurement(s) and the measurement results					
r. In CDM-SSC-PDD section B.6.3 are following provided?	EB 34	Ann 09			
i. A transparent ex ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations provided in the approved methodology	EB 34	Ann 09	Yes, a transparent ex-ante calculation of the baseline, project and leakage emissions are provided in Section B.6.3 of the PDD.	OK	OK
ii. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 34	Ann 09	Yes	OK	OK
iii. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 34	Ann 09	Yes, the CER excel sheet is provided.	OK	OK
iv. Emission reduction calculations for each component are provided separately if more than one component activity is applied	EB 34	Ann 09	Not applicable	OK	OK
s. In CDM-SSC-PDD section B.6.4 are the results of the ex ante estimation of emission reductions for all years of the crediting period, in a tabular format, provided?	EB 34	Ann 09	Yes	OK	OK
t. In CDM-SSC-PDD section B.7.1 are following provided?	EB 34	Ann 09			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. Specific information on how the data and parameters that need to be monitored would actually be collected during monitoring for the project activity	EB 34	Ann 09	Yes	OK	OK
ii. For each below parameter the following information, using the table provided:	EB 34	Ann 09			
a. The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics). Where several sources may be used, explain and justify which data sources should be preferred	EB 34	Ann 09	Yes	OK	OK
b. Where data or parameters are supposed to be measured, specify the measurement methods and procedures, including a specification which accepted industry standards or national or international standards will be applied, which measurement equipment is used, how the measurement is undertaken, which calibration procedures are applied, what is the accuracy of the measurement method, who is the responsible person/entity that should undertake the measurements and what is the measurement interval; (i) A description of the QA/QC procedures (if any) that should be applied; (ii) Where relevant: any further comment. Provide any relevant further background documentation	EB 34	Ann 09	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
in Annex 4.					
iii. A detailed description of the monitoring plan.	EB 34	Ann 09	The description of the monitoring plan is incomplete in the webhosted PDD. Please refer to the section on monitoring plan below, for further details.	--	OK
a. The operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity	EB 34	Ann 09	Yes	OK	OK
b. Thes responsibilities for and institutional arrangements for data collection and archiving	EB 34	Ann 09	Yes	OK	OK
c. Does the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 34	Ann 09	Refer to comment in iii above.	--	
d. Relevant further background information in Annex 4	EB 34	Ann 09	Yes	OK	OK
u. In CDM-SSC-PDD section B.8 are following provided	EB 34	Ann 09			
i. Date of completion of the application of the methodology to the project activity study in DD/MM/YYYY	EB 34	Ann 09	Yes	OK	OK
ii. Contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity	EB 34	Ann 09	Yes	OK	OK
iii. Indicated if the person/entity is also a project participant listed in Annex 1	EB 34	Ann 09	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
v. In CDM-SSC-PDD section C.1.1 are following provided?	EB 34	Ann 09			
i. The starting date of a CDM project activity is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun (EB33, Para 76/CDM Glossary of terms/EB41, Para 67)	EB 34	Ann 09	Yes	OK	OK
ii. A description of how this start date has been determined, and a description of the evidence available to support this start date	EB 34	Ann 09	No, description of how the start date has been determined and the description of the evidence to support the same is not provided in Section C.1.1 of the PDD	CAR 2	OK
iii. If this starting date is earlier than the date of publication of the CDM-SSC-PDD for global stakeholder consultation by a DOE, does Section B.5 above contain a description of how the benefits of the CDM were seriously considered prior to the starting date (EB41, Para 68).? (though this is in guideline for large scale projects, it is advisable to maintain this for small scale projects as well)	EB 34	Ann 09	Yes	OK	OK
w. In CDM-SSC-PDD section C.1.2 is the expected operational lifetime of the project activity in years and months provided?	EB 34	Ann 09	Yes	OK	OK
x. In CDM-SSC-PDD section C.2 is it statet whether the project activity will use a renewable or a fixed crediting period and completed C.2.1 or C.2.2 accordingly?	EB 34	Ann 09	Yes, it is stated that the project participant has chosen the fixed crediting period of 10 years	OK	OK
y. In CDM-SSC-PDD section C.2.1 is it indicated thath each crediting period shall be at most 7	EB 34	Ann 09	Not applicable	OK	OK

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years and may be renewed at most two times, provided that, for each renewal, a designated operational entity determines and informs the Executive Board that the original project baseline is still valid or has been updated taking account of new data where applicable?					
z. In CDM-SSC-PDD section C.2.1.1 are the dates in the following format: (DD/MM/YYYY) provided?	EB 34	Ann 09	Not applicable	OK	OK
aa. In CDM-SSC-PDD section C.2.1.2 is the length of the first crediting period in years and months?	EB 34	Ann 09	Not applicable	OK	OK
bb. In CDM-SSC-PDD section C.2.2 is it indicated fixed crediting period at most ten (10) years	EB 34	Ann 09	Yes	OK	OK
cc. In CDM-SSC-PDD section C.2.2.1 are the dates in the format (DD/MM/YYYY) provided?	EB 34	Ann 09	Yes	OK	OK
dd. In CDM-SSC-PDD section C.2.2.2 is the length of the crediting period in years and months provided?	EB 34	Ann 09	Yes	OK	OK
ee. In CDM-SSC-PDD section D.1 is the documentation on the analysis of the environmental impacts, if required by Host Party, provided?	EB 34	Ann 09	The analysis of enivironmental impacts due to the project activity is not required as per Indian legislation. The same is described in the PDD.	OK	OK
ff. In CDM-SSC-PDD section E.1 are following provided?	EB 34	Ann 09			
i. The process by which comments by local stakeholders have been invited and compiled. An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilities comments to be received from local	EB 34	Ann 09	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
stakeholders and allows for a reasonable time for comments to be submitted					
ii. The project activity is described in a manner, which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures	EB 34	Ann 09	Yes	OK	OK
iii. The local stakeholder process has been completed before submitting the proposed project activity to the DOE for validation	EB 34	Ann 09	Yes, the lcoal stakeholder process was completed prior to submitting the PDD for validation.	OK	OK
gg. In CDM-SSC-PDD section E.2 are following provided?	EB 34	Ann 09			
i. Local stakeholders that have made comments identified	EB 34	Ann 09	The identity of the local stakeholders who made comments are not indicated in Section E.2 of the PDD.	CAR 3	OK
ii. Asummary of these comments	EB 34	Ann 09	Yes, asummary of the comments is provided	OK	OK
hh. In CDM-SSC-PDD section E.3 is and explanation of how due account have been taken of comments received from local stakeholders provided?	EB 34	Ann 09	There were no negative comments, hence not applicable.	OK	OK
ii. In CDM-SSC-PDD Annex 1 are following provided?	EB 34	Ann 09			
i. Contact information of project participants	EB 34	Ann 09	Yes	OK	OK
ii. For each organisation listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail	EB 34	Ann 09	There is only one organization listed in Section A.3 of the PDD. The contact details and all other details of this organization is provided in Annex 1.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
jj. In CDM-SSC-PDD Annex 2 is information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties provided?	EB 34	Ann 09	It is described in Annex 2 that there is no public funding for the project activity.	OK	OK
kk. In CDM-SSC-PDD Annex 3 is the background information used in the application of the baseline methodology provided?	EB 34	Ann 09	Yes	OK	OK
ll. In CDM-SSC-PDD Annex 4 is the background information used in the application of the monitoring methodology provided?	EB 34	Ann 09	Yes	OK	OK
4. Project description					
a. Does the PDD contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation?	VVM	58	Yes, the PDD indicates that the project activity involves the installation of 10 WEG of 800 kW each, totalling 8 MW project capacity. The electricity generated from the project activity would be sold to the State Electricity Utility viz; TNEB. However the prior experience of the project participant in renewable energy sector projects is not clearly described. Refer CL 2 above	--	OK
b. Is the description of the proposed CDM project activity as contained in the PDD:	VVM	59			
i. sufficiently covering all relevant elements?	VVM	59	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. acurate?	VVM	59	Yes	OK	OK
iii. providing the reader with a clear understanding of the nature of the proposed CDM project activity?	VVM	59	Yes	OK	OK
iv. Are there any changes/modifications compared to the webhosted PDD?	VVM	59	Yes, there would be changes to include the prior experience of the project participant in rebewable energy sector projects.	--	OK
c. Is the proposed CDM project activity in existing facilities or or utilizing existing equipments?	VVM	60	No	OK	OK
d. Is the CDM project activity one of the following types:	VVM	60			
i. Large scale?	VVM	60	No	OK	OK
ii. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	Yes, the total emission reductions claimed are 16360 tCO2e per year.	OK	OK
iii. Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes?	VVM	60	No	OK	OK
e. If yes to (c) and (d) above, was a physical site inspection conducted to confirm that the description in the PDD reflects the proposed CDM project activity, unless other means are specified in the methodology?	VVM	60	Yes, a site visit was conducted on 08/02/2011 to confirm that the description in the PDD reflects the actual project activity at site.	OK	OK
f. If yes to (d.iii) above, was the number of physical site visits base on samping?	VVM	60	Not applicable	OK	OK
g. If yes is the sampling size appropriately justified through statistical analysis?	VVM	60	Not applicable	OK	OK
h. For other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year, was a	VVM	61	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
physical site inspection conducted?					
i. For all other proposed CDM project activities not referred to in paragraphs 59 – 61, was a physical site inspection conducted?	VVM	62	Not applicable	OK	OK
j. If no, was it appropriately justified?	VVM	62	Not applicable	OK	OK
k. Does the proposed CDM project activity involve the alteration of an existing installation or process?	VVM	63	No	OK	OK
l. If yes, does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	VVM	63	Not applicable	OK	OK
5. Baseline and monitoring methodology					
a. General requirement					
a. Do the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?	VVM	65	Yes, AMS ID is applied by the project participant in the proposed project activity, which is previously approved by the CDM EB.	OK	OK
b. Is the selected methodology applicable to the project activity?	VVM	66	Refer to (5.b.a) below	-	OK
c. Had the PP correctly applied the selected methodology?	VVM	66	Refer to (5.b.d) below	-	OK
d. Had the selected methodology been correctly applied with respect to project boundary?	VVM	67	Refer to (5.c) below	-	OK
e. Had the selected methodology been correctly applied with respect to baseline identification?	VVM	67	Refer to (5.d) below	-	OK
f. Had the selected methodology been correctly applied with respect to Algorithms and/or formulae used to determine emission reductions?	VVM	67	Refer to (5.e) below	-	OK
g. Had the selected methodology been correctly	VVM	67	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
applied with respect to additionality?					
i. Has the general guidance to the small scale CDM methodologies, information on additionality (attachment A to appendix B) been applied correctly?	AMS	I.D	Yes	OK	OK
h. Had the selected methodology been correctly applied with respect to monitoring methodology?	VVM	67	Refer to (7) below	OK	OK
b. Applicability of the selected methodology to the project activity					
a. Is the selected baseline and monitoring methodology, previously approved by the CDM Executive Board, applicable to the project activity including that the used version is valid?	VVM	68	Yes, AMS ID, Version 16, is applied by the project participant in the proposed project activity, which is previously approved by the CDM EB.	OK	OK
b. Has the DOE applied specific guidance provided by the CDM Executive Board in respect to the applicable approved methodology?	VVM	69	No	OK	OK
c. Is the methodology correctly quoted?	VVM	70	Yes, the methodology is correctly quoted as AMS ID, Version 16 in the webhosted PDD	OK	OK
d. Are the applicability conditions of the methodology met?	VVM	71			
i. Does the project activity comprises renewable energy generation units, such as photovoltic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to a national or a regional grid? Note: Project activities that displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit shall apply AMS-I.F.	AMS	I.D	The project activity in the installation of a wind based renewable energy generation units totaling to 8 MW in the State of TamilNadu, India. The entire electricity generated from the project activity is supplied to the TNEB, under a PPA.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ii. Does the project activity (a) install a new power plant at site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition (c) involve a retrofit of (an) existing plant(s) or (d) involve a replacement of (an) existing plant(s)	AMS	I.D	It is not clear from the description of the project activity in Section A.2 whether the pp has any prior installations in wind mills in the region. Please refer to CL 2 above.	--	OK
iii. For Hydro power plants with reservoirs, does it satisfy at least one of the following conditions (a) the project activity is implemented in an exisitng reservoir with no change in the volume of reservoir (b) the project activity is implemented in an exisitng reservoir, where the volume of reservoir is increased and the power density of the project activity, is greater than 4 W/m2 (c) the project activity results in new reservoirs and the power density of the power plant is greater than 4 W/m2.	AMS	I.D	The proposed project activity is a wind project totaling 8 MW, hence this condition is not applicable.	OK	OK
iv. For biomass power plants, does the project plant uses any other biomass type other than renewable biomass? Note: refer Annex 18, EB 23 for the definition of renewable biomass.	AMS	I.D	The proposed project activity is a wind project totaling 8 MW, hence this condition is not applicable.	OK	OK
v. Is the following guideline followed: (a) If the new unit has both renewable and non-	AMS	I.D	The proposed project activity is a wind project totaling 8 MW, hence this condition is not	OK	OK

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renewable components (eg., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. (b) If the new unit co-fires fossil fuels, the capacity of the entrie unit shall not exceed the limit of 15 MW.			applicable.		
vi. Is the following guideline followed: Combined heat and power (co-generation) systems are not eligible under this category	AMS	I.D	The proposed project activity is a wind project totaling 8 MW, hence this condition is not applicable.	OK	OK
vii. Is the following guideline followed: In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct6 from the existing	AMS	I.D	It is not clear from the description of the project activity in Section A.2 whether the pp has any prior installations in wind mills in the region. Please refer to CL 2 above.	--	OK
viii. Is the following guideline followed: In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	AMS	I.D	There is no retrofit or replacement in the project activity.	OK	OK
e. Is the project activity expected to result in emissions other than those allowed by the methodology?	VVM	71	No	OK	OK
f. Is the choice of the methodology justified?	VVM	71	Yes, since the justification to all the applicability conditions of the applied methodology are appropriately described, the choice of the applied methodology, AMS ID, Version16 is justified.	OK	OK

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g. Have the project participants shown that the project activity meets each of the applicability conditions or the approved methodology?	VVM	71	Refer to (5.b.d) above	-	OK
h. Have the project participants shown that the project activity meets each of the applicability conditions of any tool or other methodology component referred to the methodology?	VVM	71	No, the Project Participant has not justified the applicability to the tool, applied for calculating the emission factor.	CL 8	OK
i. Is the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD?	VVM	71	No	OK	OK
j. If yes, was the PDD cross checked agains the other sources to confirm that the project activity meets the applicability conditions of the methodology? (provide the reference to these choices)	VVM	71	Not applicable	OK	OK
k. Can a determination regarding the applicability of the selected methodology to the proposed CDM project activity be made?	VVM	72	Yes	OK	OK
l. If no, clarification of the methodoloy was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	72	Not applicable	OK	OK
m. If answer to (5.b.d) above is “no”, revision or deviation from the methodology was requested, in accordance with the guidance provided by the CDM Executive Board?	VVM	73	Not applicable	OK	OK
n. If yes to (5.b.l) and (5.b.m) above, a request for registration was submited before the CDM Executive Board has approved the proposed	VVM	74	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
deviation or revision?					
c. Project boundary					
a. Does the PDD correctly describe the project boundary, including the physical delineation of the proposed CDM project activity included within the project boundary for the purpose of calculating project and baseline emissions for the proposed CDM project activity?	VVM	78	The project boundary described in the webhosted PDD is incomplete, as the metering system indicated is incorrect. During the site visit, the validation team observed that there are 2 sub-stations at the site for metering, one Enercon pooling station and the other is the TNEB sub-station. However the project boundary diagram in the PDD does not indicate the Enercon pooling station.	--	OK
i. Does the physical, geographical site of the renewable generation source delineates the project boundary ?	AMS	I.D	Yes	OK	OK
b. Is the delineation in the PDD of the project boundary correct and include identification of all locations, processes and equipment including secondary equipment and associated processes such as logistics etc.?	VVM	79	Please refer to CAR described in 5.c.a above.	--	OK
c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	79	Yes	OK	OK
d. Have changes been made to the project boundary in comparison to the webhosted PDD. If yes please comment on the reason for the changes.	VVM	79	Yes, there would be changes in the project boundary, based on the response to CAR above.	--	OK
e. Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	79	Yes, CO2 is included within the project boundary.	OK	OK

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f. Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary?	VVM	79	No	OK	OK
g. If yes, have the project participants justified that choice?	VVM	79	Not applicable	OK	OK
h. If yes, is the justification provided reasonable? (provide reference to the supporting documented evidence provided by the project participants)	VVM	79	Not applicable	OK	OK
d. Baseline identification					
a. Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?	VVM	81	Yes	OK	OK
b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	82	Yes	OK	OK
i. Is the following guideline followed: If the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.	AMS	I.D	Yes, the PDD indicates that the proposed project activity is a greenfield project and describes the baseline in line with the applied methodology, AMS ID, version 16 viz; the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.	OK	OK
ii. Is the baseline emissions calculated as the product of electrical energy baseline EGBL, y expressed in MWh of electricity produced by	AMS	I.D	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
the renewable generating unit multiplied by the grid emission BE y = EG BL y* EF CO2 grid y					
iii. Is the Emission Factor calculated in a transparent and conservative manner as follows: (a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the .Tool to calculate the Emission Factor for an electricity system.. OR (b) The weighted average emissions (in t CO2/MWh) of the current generation mix. The data of the year in which project generation occurs must be used. Calculations shall be based on data from an official source (where available) and made publicly available.	AMS	I.D	The Project Participant has used Option (a) viz to calculate the emission factor as a combined margin consisting of a combination of the operating margin and the build margin. The emission factor is fixed ex-ante. The emission factor estimations are derived from the publicly available source from the CEA database, which is an official government source in India.	OK	OK
iv. Is the following guideline followed: - In the case of landfill gas, waste gas, wastewater treatment and agro-industries projects, recovered methane emissions are eligible under a relevant Type III category. - If the recovered methane is used for electricity generation for supply to a grid then the baseline shall be calculated in accordance with paragraphs below else use other applicable type I methodologies such as AMS-IA or AMS-I.F.	AMS	I.D	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
- If the recovered methane is used for heat generation or cogeneration it is eligible under category I.C.					
v. Is the following guideline followed for project activities that involve retrofits or replacements of an existing facility for renewable energy generation: - The baseline scenario is the continuing operation of the existing plant. - The methodology uses historical electricity generation data to determine the electricity generation of the existing plant in the baseline scenario, assuming that the historical situation observed prior to the implementation of the project activity would continue. In the absence of the CDM project activity, the existing facility would continue to provide electricity to the grid BL retrofit y EG, at historical average levels EGhistorical, y until the time at which the electrical generation facility would be likely to be replaced or retrofitted in the absence of the CDM project activity (BaselineRretrofit DATE). From that point of time onwards, the baseline scenario is assumed to correspond to the project activity, and baseline electricity production is assumed to equal the project.s net electricity production and no emission reductions are assumed to occur.	AMS	I.D	There is no retrofit or replacement in the project activity. The validation team reviewed the purchase orders raised for the project activity and observed during the site visit that the equipments are new and are not transferred.	OK	OK
vi. Is the following guideline followed for	AMS	I.D	It is not clear from the description of the project	--	OK

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	Retrofit/capacity addition of hydro, solar, wind, geothermal, wave and tidal plants: - Use of standard deviation for calculating baseline elecricity generation. - A minimum of 5 years (60 months) (excluding abnormal years) of historical generation data is required in the case of hydro facilities and for other facilities a minimum of 3 years (36 months) data is required. - In the case that 5 years of historical data are not available - e.g., due to recent retrofits or exceptional circumstances8 - a new methodology or methodology revision shall be proposed. - In the case of wind, solar, wave or tidal power plants, the electricity produced by the added power plant(s) or unit(s) could be directly metered and used to determine EG BL,y. provided that the electricity produced by the added power plant(s) or unit(s) addition is separately metered. - Project activities for capacity addition in hydro or geothermal shall use equation 3 replacing subscript .retrofit. with .capacity addition.			activity in Section A.2 whether the Project Participant has any prior installations in wind mills in the region to determine capacity addition.		
vii.	Is the following guideline followed for Retrofit renewable energy units other than hydro, solar, wind, geothermal, wave and tidal plants: Baseline emissions are calculated as: BEretrofit,CO2,y = (EGPJ ,retrofit,y −	AMS	I.D	Not applicable	OK	OK

	CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
	EGBL,retrofit,y)* EFCO2 EG historical - A minimum of 3 years of data is required. In the case that 3 years of historical data are not available 9- e.g., due to recent retrofits or exceptional circumstances - a new methodology or methodology revision shall be proposed					
viii.	Is the requirements concerning demonstration of the remaining lifetime of the replaced equipment met as described in the general guidelines to SSC methodologies? Note: If the remaining lifetime of the affected systems increases due to the project activity, the crediting period shall be limited to the estimated remaining lifetime, i.e., the time when the affected systems would have been replaced in the absence of the project activity.	AMS	I.D	Not applicable	OK	OK
ix.	Is the following guideline followed for Capacity addition with renewable energy units other than hydro, solar, wind, geothermal, wave and tidal plants: - The baseline scenario is the existing facility that would continue to supply electricity to the grid at historical levels, until the time at which the generation facility would likely be replaced or retrofitted (DATEBaselineRetrofit). - If the existing units shut down, are derated, or otherwise become limited in production, the project activity should not get credit for	AMS	I.D	Not applicable, since the project activity is a wind project.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
generating electricity from the same renewable resources that would have otherwise been used by the existing units (or their replacements).					
c. Does the selected methodology require use of tools (such as the "Tool for the demonstration and assessment of additionality" and the "Combined tool to identify the baseline scenario and demonstrate additionality") to establish the baseline scenario?	VVM	81	No	OK	OK
d. If yes, was the methodology consulted on the application of thes tools? (In such cases, the guidance in the methodology shall supersede the tool.)	VVM	82	Not applicable	OK	OK
e. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	83	No	OK	OK
f. If yes, are all scenarios that are considered by the project participants and are supplementary to those required by the methodology reasonable in the context of the proposed CDM project activity?	VVM	83	Not applicable	OK	OK
g. Has any reasonable alternative scenario been excluded?	VVM	83	Not applicable	OK	OK
h. Is the baseline scenario identified reasonably supported by:	VVM	84			
i. Assumptions?	VVM	84	Not applicable	OK	OK
ii. Calculations?	VVM	84	Not applicable	OK	OK
iii. Rationales?	VVM	84	Not applicable	OK	OK
i. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	84	The web-link to the CEA database, based on which the emission factor is calculated, is not provided in	CL 9	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Section B.4 of the PDD.		
j. Was the information provided in the PDD cross checked with other verifiable and credible sources, such as local expert opinion, if available? (idendify the sources)	VVM	84	No	OK	OK
k. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity?	VVM	85	Yes, the methodology applied for the project activity viz AMS ID, Version 16 pre-defines a baseline scenario for projects. The same has been included by the project participant in the PDD.	OK	OK
l. Have all relevatn policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	85	No, the PDD does not describe whether there are any relevant national policies or circumstances related to the baseline scenario. Refer CL 7 above	--	OK
m. Does the PDD provide a verifiable description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity?	VVM	86	Yes, the methodology applied for the project activity viz AMS ID, Version 16 pre-defines a baseline scenario for projects. The same has been included by the project participant in the PDD.	OK	OK
e. Algorithms and/or formulae used to determine emission reductions					
a. Do the steps taken and equations applied to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected baseline and monitoring?	VVM	89	Yes	OK	OK
b. Have the equations and parameters in the PDD been correctly applied with respect those in the	VVM	90	Yes	OK	OK

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select approved methodology?					
i. Have project emissions considered as described in recent version of ACM0002 followed for: - Emissions related to the operation of geothermal power plants; - Emissions from water reservoirs of hydro power plants.	AMS	I.D	Not applicable	OK	OK
ii. Is leakage considered, if the energy generating equipment is transfereed from another activity	AMS	I.D	Leakage is not considered as the project activity equipments are not transferred from another activity.	OK	OK
iii. Is emission reduction calculated as per equation ER y = BE y − PE y − LE y	AMS	I.D	Yes, the same is described in Section B.6.1 of the PDD.	OK	OK
c. Does the methodology provide for selection between different options for equations or parameters?	VVM	90	No	OK	OK
d. If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity and other evidence provided)?	VVM	90	Not applicable	OK	OK
e. If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	90	Refer to (5.e.b) above	OK	OK
f. Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	91	No, the data and parameters for emission factor are fixed ex-ante by the Project Participant.	OK	OK
g. If no, and these data and parameters will remain fixed throughout the crediting period, are all data sources and assumptions:	VVM	91			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. Appropriate and correct?	VVM	91	Yes, the data are appropriate and correct since the data is being sourced from reliable government sources viz the CEA database.	OK	OK
ii. Applicable to the proposed CDM project activity?	VVM	91	Yes	OK	OK
iii. Resulting in a conservative estimate of the emission reductions?	VVM	91	Yes	OK	OK
h. Will data and parameters be monitored on implementation and hence become available only after validation of the project activity?	VVM	91	The only parameter to be monitored upon implementation is the net electricity supplied to the grid by the project activity.	OK	OK
i. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	91	Yes, the estimates provided in the PDD are reasonable as they are based on the electricity generation dependant on the PLF identified at the time of validation.	OK	OK
6. Additionality of a project activity					
a. Does the PDD describe how a proposed CDM projet activity is additional?	VVM	94	Yes, the PDD describes how the proposed project activity is additional in Section B.5.	OK	OK
b. Were the following steps of the tool to assess additionality used:	EB 39	Ann 10			
i. Identification of alternatives to the project activity?	EB 39	Ann 10	The applied methodology viz AMS ID, Version 16 defines a pre-defined baseline and hence identification of alternatives to the project activity is not required.	OK	OK
ii. Investment analysis to determine that the proposed project activity is either: 1) not the most economically or financially attractive, or 2) not economically or financially feasible?	EB 39	Ann 10	Yes, the Project Participant has applied investment analysis to demonstrate additionality.	OK	OK
iii. Barriers analysis?	EB 39	Ann 10	Not applicable	OK	OK

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iv. Common practice analysis?	EB 39	Ann 10	Not applicable	OK	OK
c. In step 1 (i) have all the sub-steps as below been followed?	EB 39	Ann 10			
i. Sub-step 1a: Define alternatives to the project activity	EB 39	Ann 10	Not applicable	OK	OK
ii. Sub-step 1b: Consistency with mandatory laws and regulations	EB 39	Ann 10	Not applicable	OK	OK
d. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 39	Ann 10			
i. (a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 39	Ann 10	Not applicable	OK	OK
ii. (b) Other realistic and credible alternative scenario(s) to the proposed CDM project activity scenario that deliver outputs services or services with comparable quality, properties and application areas, taking into account, where relevant, examples of scenarios identified in the underlying methodology;	EB 39	Ann 10	Not applicable	OK	OK
iii. (c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 39	Ann 10	Not applicable	OK	OK
e. Has the project participant included the technologies or practices that provide outputs or services with comparable quality, properties and application areas as the proposed CDM project activity and that have been implemented previously or are currently being introduced in the	EB 39	Ann 10	Not applicable	OK	OK

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relevant country/region?					
f. Has the outcome of Step 1a: Identified realistic and credible alternative scenario(s) to the project activity done correctly? Please briefly mention the outcome.	EB 39	Ann 10	Not applicable	OK	OK
g. Is the alternative(s) in compliance with all mandatory applicable legal and regulatory requirements, even if these laws and regulations have objectives other than GHG reductions, e.g. to mitigate local air pollution.?	EB 39	Ann 10	Not applicable	OK	OK
h. If an alternative does not comply with all mandatory applicable legislation and regulations, has it been shown that, based on an examination of current practice in the country or region in which the law or regulation applies, those applicable legal or regulatory requirements are systematically not enforced and that noncompliance with those requirements is widespread in the country?	EB 39	Ann 10	Not applicable	OK	OK
i. Has the outcome of Step 1b: Identified realistic and credible alternative scenario(s) to the project activity that are in compliance with mandatory legislation and regulations taking into account the enforcement in the region or country and EB decisions on national and/or sectoral policies and regulations done correctly? Please state the outcome.	EB 39	Ann 10	Not applicable	OK	OK
j. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 39	Ann 10	The Project Participant has applied investment analysis to demonstrate additionality.	OK	OK

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			Please refer to discussion in Section c below.		
k. In step 2, have all the sub-steps as below been followed?	EB 39	Ann 10			
i. Sub-step 2a: Determine appropriate analysis method;	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
ii. Sub-step 2b: Option I. Apply simple cost analysis;	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
iii. Sub-step 2b: Option II. Apply investment comparison analysis;	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
iv. Sub-step 2b: Option III. Apply benchmark analysis;	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
v. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
vi. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
l. In sub-step 2a has the determination of appropraite method of analysis done as per the guidance as below?	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
i. Simple cost analysis if the CDM project activity and the alternatives identified in Step 1 generate no financial or economic benefits other than CDM related income (Option I).	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
ii. Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
m. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK

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the costs associated with the CDM project activity and the alternatives identified in Step1 and demonstrate that there is at least one alternative which is less costly than the project activity.					
n. Has the below guideline followed for sub-step 2b Option II. Apply investment comparison analysis? Identify the financial indicator, such as IRR, NPV, cost benefit ratio, or unit cost of service most suitable for the project type and decision-making context. Please specify	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
o. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
i. Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
ii. When applying Option II or Option III, the financial/economic analysis shall be based on parameters that are standard in the market, considering the specific characteristics of the project type, but not linked to the subjective profitability expectation or risk profile of a particular project developer. Only in the particular case where the project activity can be implemented by the project participant, the specific financial/economic situation of the company undertaking the project activity can be considered.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
iii. Discount rates and benchmarks shall be derived from: (a) Government bond rates,	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK

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increased by a suitable risk premium to reflect private investment and/or the project type, as substantiated by an independent (financial) expert or documented by official publicly available financial data; (b) Estimates of the cost of financing and required return on capital (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on bankers views and private equity investors/funds' required return on comparable projects; (c) A company internal benchmark (weighted average capital cost of the company), only in the particular case referred to above in 2. The project developers shall demonstrate that this benchmark has been consistently used in the past, i.e. that project activities under similar conditions developed by the same company used the same benchmark; (d) Government/official approved benchmark where such benchmarks are used for investment decisions; (e) Any other indicators, if the project participants can demonstrate that the above Options are not applicable and their indicator is appropriately justified. Please specify benchmark and justify.					
p. Has the below guideline followed for Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III)?	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
i. Calculate the suitable financial indicator for the	EB	Ann	Please refer to discussion in Section c below	OK	OK

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proposed CDM project activity and, in the case of Option II above, for the other alternatives. Include all relevant costs (including, for example, the investment cost, the operations and maintenance costs), and revenues (excluding CER revenues, but possibly including inter alia subsidies/fiscal incentives, ODA, etc, where applicable), and, as appropriate, non-market cost and benefits in the case of public investors if this is standard practice for the selection of public investments in the host country.	39	10			
ii. Present the investment analysis in a transparent manner and provide all the relevant assumptions, preferably in the CDM-PDD, or in separate annexes to the CDM-PDD.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
iii. Justify and/or cite assumptions.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
iv. In calculating the financial/economic indicator, the project's risks can be included through the cash flow pattern, subject to project-specific expectations and assumptions.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
v. Assumptions and input data for the investment analysis shall not differ across the project activity and its alternatives, unless differences can be well substantiated.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
vi. Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity.Please specify details for above.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK

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q. Has the below guideline followed for Sub-step 2d: Sensitivity analysis (only applicable to Options II and III)? Include a sensitivity analysis that shows whether the conclusion regarding the financial/economic attractiveness is robust to reasonable variations in the critical assumptions.	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
r. Has the outcome of Step 2 clearly mentioned with justification?	EB 39	Ann 10	Please refer to discussion in Section c below	OK	OK
s. In step 3: Barrier analysis have all the sub-steps as below been followed?	EB 39	Ann 10	Not applicable	OK	OK
i. Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity;	EB 39	Ann 10	Not applicable	OK	OK
ii. Sub-step 3 b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity).	EB 39	Ann 10	Not applicable	OK	OK
t. Has the below guideline followed for Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project?	EB 39	Ann 10			
i. (a) Investment barriers: For alternatives undertaken and operated by private entities: Similar activities have only been implemented with grants or other non-commercial finance terms. No private capital is available from domestic or international capital markets due to real or perceived risks associated with investment in the country where the proposed CDM project activity is to be implemented, as	EB 39	Ann 10	Not applicable	OK	OK

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demonstrated by the credit rating of the country or other country investments reports of reputed origin.					
ii. (b) Technological barriers: Skilled and/or properly trained labour to operate and maintain the technology is not available in the relevant country/region, which leads to an unacceptably high risk of equipment disrepair and malfunctioning or other underperformance; Lack of infrastructure for implementation and logistics for maintenance of the technology, Risk of technological failure: the process/technology failure risk in the local circumstances is significantly greater than for other technologies that provide services or outputs comparable to those of the proposed CDM project activity, as demonstrated by relevant scientific literature or technology manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region.	EB 39	Ann 10	Not applicable	OK	OK
iii. (c) Barriers due to prevailing practice: The project activity is the "first of its kind".	EB 39	Ann 10	Not applicable	OK	OK
iv. (d) Other barriers, preferably specified in the underlying methodology as examples.	EB 39	Ann 10	Not applicable	OK	OK
u. Has the outcome from Step 3a clearly mentioned in PDD?	EB 39	Ann 10	Not applicable	OK	OK
v. Has the below guideline followed for Sub-step 3 b: Show that the identified barriers would not	EB 39	Ann 10	Not applicable	OK	OK

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prevent the implementation of at least one of the alternatives (except the proposed project activity)?					
i. If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect the proposed CDM project activity. In other words, demonstrate that the identified barriers do not prevent the implementation of at least one of the alternatives. Any alternative that would be prevented by the barriers identified in Sub-step 3a is not a viable alternative, and shall be eliminated from consideration.	EB 39	Ann 10	Not applicable	OK	OK
ii. Provide transparent and documented evidence, and offer conservative interpretations of this documented evidence, as to how it demonstrates the existence and significance of the identified barriers and whether alternatives are prevented by these barriers.	EB 39	Ann 10	Not applicable	OK	OK
iii. The type of evidence to be provided should include at least one of the following: (a) Relevant legislation, regulatory information or industry norms; (b) Relevant (sectoral) studies or surveys (e.g. market surveys, technology studies, etc) undertaken by universities, research institutions, industry associations, companies, bilateral/multilateral institutions, etc; (c) Relevant statistical data from national or international statistics; (d) Documentation of	EB 39	Ann 10	Not applicable	OK	OK

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relevant market data (e.g. market prices, tariffs, rules); (e) Written documentation of independent expert judgments from industry, educational institutions (e.g. universities, technical schools, training centres), industry associations and others. Please specify.					
w. Has the outcome from Step 3 clearly mentioned in PDD?	EB 39	Ann 10	Not applicable	OK	OK
x. In step 4: Common practise analysis have all the sub-steps as below followed?	EB 39	Ann 10	Not applicable	OK	OK
i. Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 39	Ann 10	Not applicable	OK	OK
ii. Sub-step 4b: Discuss any similar Options that are occurring.	EB 39	Ann 10	Not applicable	OK	OK
y. Has the below guideline followed for Sub-step 4a: Analyze other activities similar to the proposed project activity? Provide an analysis of any other activities that are operational and that are similar to the proposed project activity. Other CDM project activities are not to be included in this analysis. Provide documented evidence and, where relevant, quantitative information. On the basis of that analysis, describe whether and to which extent similar activities have already diffused in the relevant region.	EB 39	Ann 10	Not applicable	OK	OK
z. Has the below guideline followed for Sub-step 4b: Discuss any similar Options that are occurring? If similar activities are identified, then it is necessary to demonstrate why the existence of	EB 39	Ann 10	Not applicable	OK	OK

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these activities does not contradict the claim that the proposed project activity is financially/economically unattractive or subject to barriers. This can be done by comparing the proposed project activity to the other similar activities, and pointing out and explaining essential distinctions between them that explain why the similar activities enjoyed certain benefits that rendered it financially/economically attractive (e.g., subsidies or other financial flows) and which the proposed project activity cannot use or did not face the barriers to which the proposed project activity is subject. In case similar projects are not accessible, the PDD should include justification about non-accessibility of data/information.					
aa. Has the outcome from Step 4 clearly mentioned in PDD?	EB 39	Ann 10	Not applicable	OK	OK
bb. Has it been proved that the porject is additional?	EB 39	Ann 10			
cc. Has the PP demonstrated additionality by explaining Investment barrier, Access-to-finance barrier, Technological barrier, Barrier due to prevailing practice or other barriers?	EB 35	Ann 34	The Project Participant has demonstrated additionality by the investment barrier using the investment analysis.	OK	OK
dd. If Investment barrier has been explained, is it demonstraed that financilly more viable alternative to the project activity would have led to higher emissions? Please explain.	EB 35	Ann 34	Yes, refer to discussion in Section c below.	OK	OK
ee. If Access-to-finance has been explained, is it	EB	Ann	Not applicable	OK	OK

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demonstraed that the project activity could not access appropriate capital without consideration of the CDM revenues? Please explain.	35	34			
ff. If Technological barrier has been explained, is it demonstraed that a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertinity or low market share of the new technology adopted for the project activity and so would have led to higher emissions? Please explain.	EB 35	Ann 34	Not applicable	OK	OK
gg. If prevailing practise barrier has been explained, is it demonstrated that the prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions? Please explain.	EB 35	Ann 34	Not applicable	OK	OK
hh. If other barrier has been explained, is it demonstrated that Other barriers such as institutional barriers or limited information, managerial resources, organizational capacity, or capacity to absorb new technologies would prevent the project activity any way?	EB 35	Ann 34	Not applicable	OK	OK
ii. Have the project participants identifed the most relevant barrier?	EB 35	Ann 34	Not applicable	OK	OK

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jj. Have the project participants provided transparent and documented third party evidence such as national/international statistics, national/provincial policy and legislation, studies/surveys by independent agencies etc. to demonstrate the most relevant barrier? Please explain.	EB 35	Ann 34	Not applicable	OK	OK
a. Prior consideration of the clean development mechanism					
a. Is the project ativity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	98	Yes, the project activity start date is prior to the date of publication of PDD for global stakeholder comments.	OK	OK
b. If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	98	Yes.	OK	OK
c. Is the start date of the project activity, reported in the PDD, in accordance with the "Glossary of CDM terms", which states that "The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins."?	VVM	99	Yes, the start date of the project activity reported in Section C.1.1 is 10/07/2010. However the description of why this date is considered as the start date is not indicated in the PDD.	CL 10	OK
d. Does the project activity require construction, retrofit or other modifications?	VVM	99	Yes, the project activity requires construction of facilities.	OK	OK
e. If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	99	Yes, it is ensured that the date of commissioning is not considered as the project activity start date.	OK	OK
f. Is it a new project activity (a project activity with a start date on or after 02 August 2008) or an existing project activity (a project activity with a	VVM	100	The proposed project activity is a new project activity with a start date after 02 August 2008.	OK	OK

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start date before 02 August 2008)?					
g. For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the CDM Executive Board before the project activity start date, had the PP informed the Host Party DNA and/or the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status? (Provide reference to such confirmation from host Party DNA and/or UNFCCC secretariat).	VVM	101	Yes, the Project Participant has informed the Indian DNA and the CDM EB in writing of the commencement of the project activity within 6 months of the project activity start date. The communication to the Indian DNA was confirmed by the email sent by the Indian DNA to the Project Participant dated 29/10/2010. The communication to the CDM EB was confirmed through the email received by the Project Participant from the CDM EB dated 26/10/2010. The validation team further reviewed the CDM website for the prior intimation for the project activity and observed the same to be available on the CDM website too. However the date of such communication is not transparently explained in the webhosted PDD.	CL 11	OK
h. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, are the following evidences provided:	VVM	102	Not applicable	OK	OK
ii. evidence that must indicate that awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project, including, inter alia:	VVM	102	Not applicable	OK	OK
a. minutes and/or notes related to the	VVM	102	Not applicable	OK	OK

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consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM project activity?					
iii. reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation, including, inter alia:	VVM	102	Not applicable	OK	OK
a. contract with consultants for CDM/PDD/methodology services?	VVM	102	Not applicable	OK	OK
b. Emission Reduction Purchase Agreements or other documentation related to the sale of the potential CERs (including correspondence with multilateral financial institutions or carbon funds)?	VVM	102	Not applicable	OK	OK
c. evidence of agreements or negotiations with a DOE for validation services?	VVM	102	Not applicable	OK	OK
d. submission of a new methodology to the CDM Executive Board?	VVM	102	Not applicable	OK	OK
e. publication in newspaper?	VVM	102	Not applicable	OK	OK
f. interviews with DNA?	VVM	102	Not applicable	OK	OK
g. earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	102	Not applicable	OK	OK
h. Has the chronology of events including time lines been appropriately captured and explained/detailed in the PDD?	VVM	102	Not applicable	OK	OK
b. Identification of alternatives					

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a. Does the approved methodology that is selected by the proposed CDM project activity prescribe the baseline scenario and hence no further analysis is required?	VVM	105	The approved methodology that is selected by the proposed CDM project activity viz AMS ID, Version 16, prescribe the pre-defined baseline scenario and hence no further analysis is required.	OK	OK
b. If no, does the PDD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	VVM	105	Not applicable	OK	OK
c. Does the list of alternatives given in the PDD esure that:	VVM	106	Not applicable	OK	OK
i. the list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity?	VVM	106	Not applicable	OK	OK
ii. the list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity?	VVM	106	Not applicable	OK	OK
iii. the alternatives comply with all applicable and enforced legislation?	VVM	106	Not applicable	OK	OK
c. Investment analysis					
a. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	108	Yes, the Project Participant has used investment analysis to demonstrate additionality of the project activity.	OK	OK
b. If yes, does the PDD provide evidence that the proposed CDM project activity would not be:	VVM	108			
i. the most economically or financially attractive alternative?	VVM	108	Yes	OK	OK

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ii. economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	108	Yes	OK	OK
c. Was this shown by one of the following approaches?	VVM	109			
i. The proposed CDM project activity would produce no financial or economic benefits other than CDM-related income. Document the costs associated with the proposed CDM project activity and the alternatives identified and demonstrate that there is at least one alternative which is less costly than the proposed CDM project activity.	VVM	109	Not applicable	OK	OK
ii. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	109	Not applicable	OK	OK
iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	109	Yes, it is shown that the financial returns from the project activity is below the benchmark. Benchmark analysis has been used by the Project Participant	OK	OK
d. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 51	Ann 58	The period of financial assessment is limited to the lifetime of the project activity viz 20 years.	OK	OK
e. Does the project IRR and equity IRR calculations reflect the period of expected operation of the underlying project activity (technical lifetime), or - if a shorter period is chosen - include the fair value of the project activity assets at the end of the assessment period?	EB 51	Ann 58	The equity IRR is used as the financial indicator for the additionality discussions in the PDD. The IRR calculations reflect the period of expected operation of the project activity viz 20 years.	OK	OK

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f. Does the IRR calculation include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment?	EB 51	Ann 58	No	OK	OK
g. Do the project participants justify the appropriateness of the period of assessment in the context of the underlying project activity, without reference to the proposed CDM crediting period?	EB 51	Ann 58	The IRR calculations reflect the period of expected operation of the project activity viz 20 years.	OK	OK
h. Does the cash flow in the final year include a fair value of the project activity assets at the end of the assessment period?	EB 51	Ann 58	Yes, the salvage value of the project activity assets including the land have been considered in the cash flow.	OK	OK
i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 51	Ann 58	Yes, salvage value of the project activity assets are taken at 10 % whereas the value of land is taken as it is.	OK	OK
j. Does the fair value calculations include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets?	EB 51	Ann 58	Yes	OK	OK
k. Was depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, added back to net profits for the purpose of calculating the financial indicator (e.g. IRR, NPV)?	EB 51	Ann 58	Yes	OK	OK
l. Has taxation been included as an expense in the IRR/NPV calculation in cases where the benchmark or other comparator is intended for post-tax comparisons?	EB 51	Ann 58	Yes	OK	OK

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m. Are the input values used in all investment analysis valid and applicable at the time of the investment decision taken by the project participant?	EB 51	Ann 58	Yes, all the input values in the financial analysis are based on the offer from the WEG supplier viz; M/s Enercon which was available to the project participant at the time of investment decision. However project participant to provide the copy of the applicable TNERC Order since the assumption of the tariff is based on the TNERC order.	CL 12	OK
n. Is the timing of the investment decision consistent and appropriate with the input values?	EB 51	Ann 58	Yes, the offer letter from M/s Enercon and the TNERC Tariff Order was available with the project participant at the time of investment decision.	OK	OK
o. Are all the listed input values been consistently applied in all calculations?	EB 51	Ann 58	Yes	OK	OK
p. Does the investment analysis reflect the economic decision making context at point of the decision to recomence the project in the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM?	EB 51	Ann 58	Not applicable	OK	OK
q. Have project participants supplied the spreadsheet versions of all investment analysis?	EB 51	Ann 58	Yes	OK	OK
r. Are all formulas used in this analysis readable and all relevant cells be viewable and unprotected?	EB 51	Ann 58	Yes	OK	OK
s. In cases where the project participant does not wish to make such a spreadsheet available to the public has the PP provided an exact read-only or PDF copy for general publication?	EB 51	Ann 58	Not applicable	OK	OK

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t. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB 51	Ann 58	Not applicable	OK	OK
u. Was the cost of financing expenditures (i.e. loan repayments and interest) included in the calculation of project IRR?	EB 51	Ann 58	Not applicable, as there is no debt component in the project activity. The project activity is funded through 100 % equity.	OK	OK
v. In the calculation of equity IRR, has only the portion of investment costs which is financed by equity been considered as the net cash outflow?	EB 51	Ann 58	Yes, the project activity is financed through 100 % equity only.	OK	OK
w. Has the portion of the investment costs which is financed by debt been considered a cash outflow in the calcualtion of equity IRR? (this is not allowed)	EB 51	Ann 58	No	OK	OK
x. Was a pre-tax benchmark be applied?	EB 51	Ann 58	No	OK	OK
y. In cases where a post-tax benchmark is applied, is actual interest payable taken into account in the calculation of income tax?	EB 51	Ann 58	Not applicable, as there is no debt component.	OK	OK
z. In such situations, was interest calculated according to the prevailing commercial interest rates in the region, preferably by assessing the cost of other debt recently acquired by the project developer and by applying a debt-equity ratio used by the project developer for investments taken in the previous three years?	EB 51	Ann 58	Not applicable	OK	OK
aa. In cases where a benchmark approach is used is the applied benchmark appropriate to the type of IRR calculated?	EB 51	Ann 58	Yes, the cost of equity has been considered as the benchmark and then compared with the equity IRR. This is in line with the Guidance on Investment Analysis, EB 51.	CL 13	OK

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			However the project participant to clarify the following w.r.t the benchmark excel sheet viz; 1. The beta values are sourced from the Bloomberg database. However the data for all the companies are considered only for 3 years. Please clarify why other data periods of 5 years, 7 years etc are not considered and why the beta value of 3 years is conservative. 2. Why is the adjusted beta value from the Bloomberg snapshots not considered in the benchmark calculations ?		
bb. Has local commercial lending rates or weighted average costs of capital (WACC) selected as appropriate benchmarks for a project IRR?	EB 51	Ann 58	The project participant has used equity IRR as the financial indicator.	OK	OK
cc. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB 51	Ann 58	Yes, the required returns on equity (ROE) is selected as the appropriate benchmark for the project activity.	OK	OK
dd. In case benchmarks supplied by relevant national authorities selected is it applicable to the project activity and the type of IRR calculation presented?	EB 51	Ann 58	Not applicable	OK	OK
ee. In the cases of projects which could be developed by an entity other than the project participant is the benchmark applied based on publicly available data sources which can be clearly validated?	EB 51	Ann 58	Yes, all the data used in the benchmark calculations are based on publicly available data sources.	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
ff. Have internal company benchmarks/expected returns (including those used as the expected return on equity in the calculation of a weighted average cost of capital - WACC) been applied in cases where there is only one possible project developer?	EB 51	Ann 58	No	OK	OK
gg. In such cases, have these values been used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used for similar projects in the same sector in the country/region?	EB 51	Ann 58	Not applicable	OK	OK
hh. Has a minimum clear evidence of the resolution by the company's Board and/or shareholders been provided to the effect as above?	EB 51	Ann 58	Not applicable	OK	OK
ii. Has a thorough assessment of the financial statements of the project developer - including the proposed WACC - to assess the past financial behavior of the entity during at least the last 3 years in relation to similar projects been conduted?	EB 51	Ann 58	Not applicable	OK	OK
jj. Does the risk premiums applied in the determination of required returns on equity reflect the risk profile of the project activity being assessed, established according to national/international accounting principles? (It is not considered reasonable to apply the rate general stock market returns as a risk premium for project activities that face a different risk profile than an investment in such indices.)	EB 51	Ann 58	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
kk. Has an investment comparison analysis and not a benchmark analysis used when the proposed baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services?	EB 51	Ann 58	Not applicable, as a benchmark analysis is used since the project participant has various other choices other than the project activity	OK	OK
ll. Have variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues been subjected to reasonable variation (positive and negative) and the results of this variation been presented in the PDD and be reproducible in the associated spreadsheets?	EB 51	Ann 58	Yes, the project participant has subjected the parameters of project cost, O&M cost and the PLF to a sensitivity analysis. However the following points needs to be clarified viz; 1. Justification provided for not subjecting the tariff to a sensitivity analysis is not reasonable as it is seen that tariff in the State of Tamil Nadu increases as can be seen from the various tariff orders of the state over the years. 2. The justification for why 10 % variations in the project cost, O&M cost and PLF is conservative is also not clear. Please provide the difference in the actual cost and the cost indicated in the offer for the parameters of project cost & O&M cost. Further provide the copy of the applicable TNERC tariff Order for the PLF	CL 14	OK
mm. Have a corrective action been raised for a variable to be included in the sensitivity analysis which constitute less than 20% and have a material impact on the analysis ?	EB 51	Ann 58	Yes, refer to above CL w.r.t tariff.	--	OK
nn. Is the range of variations selected is reasonable	EB	Ann	It is not clear whether the range of 10 % selected	--	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
in the project context?	51	58	for conducting sensitivity analysis is appropriate. Please refer CL 14 above		
oo. Dos the variations in the sensitivity analysis at least cover a range of +10% and -10%, unless this is not deemed appropriate in the context of the specific project circumstances?	EB 51	Ann 58	Please refer CL 14 above	--	OK
pp. In cases where a scenario will result in the project activity passing the benchmark or becoming the most financially attractive alternative, is an assessment done of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy context of the project activity?	EB 51	Ann 58	There is no scenario where the IRR with sensitivity crosses the benchmark.	OK	OK
qq. Was the plant load factor defined ex-ante in the CDM-PDD according to one of the following options:	EB 51	Ann 58			
i. The plant load factor provided to banks and/or equity financiers while applying the project activity for project financing, or to the government while applying the project activity for implementation approval?	EB 51	Ann 58	There is no debt component in the project activity. Hence not applicable	OK	OK
ii. The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)?	EB 51	Ann 58	Yes, the PLF determined by a third party contracted by the project participant is used in the investment analysis.	OK	OK
rr. Was a thorough assessment of all parameters and assumptions used in calculating the relevant	VVM	111	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices conducted?					
ss. Were the parameters cross-checked agains third-party or publicly available sources, such as invoices or price indices?	VVM	111	Project participant to provide the copy of the latest version of the TNERC tariff order.	--	OK
tt. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	111	Yes, the annual financial reports of the project participant for the previous 3 years from the date of investment decision was reviewed.	OK	OK
uu. Was the correctnes of computations carried out and documented by the project participants assessed?	VVM	111	Yes, the benchamrk and the IRR analysis was assessed by the financial expert engaged by the DOE.	OK	OK
vv. Was the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions assessed?	VVM	111	Yes, however there are some gaps identified in the sensitivity analysis. Please refer to CL 14 above.	--	OK
ww. Is the type of benchmark applied is suitable for the type of financial indicator presented?	VVM	112	Yes, return on equity (ROE) is the appropriate benchmark for the equity IRR and the same has been considered by the project participant for the proposed project activity.	OK	OK
xx. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	112	Yes	OK	OK
yy. To determine this, was it assessed whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark by:	VVM	112			

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. assessing previous investment decisions by the project participants involved?	VVM	112	Project participant to provide details regarding previous investments of the project participant in renewable energy sectors.	CL 15	OK
iv. determining whether the same benchmark has been applied?	VVM	112	To be verified based on project participant response to above CL.	--	OK
v. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	112	To be reviewed after response to above CL	--	OK
zz. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed CDM project activities?	VVM	113	No	OK	OK
xx. If yes:	VVM	113			
i. has the FSR been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short for the DOE to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed?	VVM	113	Not applicable	OK	OK
ii. Are the values used in the PDD and associated annexes fully consistent with the FSR?	VVM	113	Yes	OK	OK
iii. If not, was the appropriateness of the values validated?	VVM	113	Not applicable	OK	OK
iv. On the basis of its specific local and sectoral expertise, is confirmation provided,	VVM	113	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
by cross-checking or other appropriate manner, that the input values from the FSR are valid and applicable at the time of the investment decision?					
d. Barrier analysis					
a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	115	No, the project activity is a small scale project activity and does not require barrier analysis to be conducted.	OK	OK
b. If yes, does the PDD demonstrate that the proposed CDM project activity faces barriers that:	VVM	115	Not applicable	OK	OK
i. prevent the implementation of this type of proposed CMD project activity?	VVM	115	Not applicable	OK	OK
ii. do not prevent the implementation of at least one of the alternatives?	VVM	115	Not applicable	OK	OK
c. Are there any issues that have a clear direct impact on the financial returns of the project activity, other than: risk related barriers, for example risk of technical failure, that could have negative effects on the financial performance; or barriers related to the unavailability of sources of finance for the project activity? {If yes, these issues cannot be considered barriers and shall be assessed by investment analysis. [Refer to (6.c) above]}	VVM	116	Not applicable	OK	OK
d. Were the barriers determined as real by:	VVM	1167	Not applicable	OK	OK
i. asssing the available evidence and/or undertaking interviews with relevant individuals (including members of industry associations, government officials or local	VVM	117	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
experts if necessary) to determine whether the barriers listed in the PDD exist?					
ii. ensuring that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics?	VVM	117	Not applicable	OK	OK
iii. Is existence of a barrier substantiated only by the opinions of the project participants? (If yes, this barrier cannot be considered as adequately substantiated)	VVM	117	Not applicable	OK	OK
e. Were the barriers determined as preventing the implementation of the project activity but not the implementation of at least one of the possible alternatives by applying local and sectoral expertise to judge whether a barrier or set of barriers would prevent the implementation of the proposed CDM project activity and would not equally prevent implementation of *at least one of* the possible alternatives, in particular the identified baseline scenario?	VVM	117	Not applicable	OK	OK
e. Common practice analysis					
a. Is this a proposed large-scale, or first-of-its kind small-scale project activity?	VVM	118	No	OK	OK
b. If yes, was common practice analysis carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality?	VVM	118	Not applicable	OK	OK
c. Was it assessed whether the geograpphical	VVM	120	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
scope (e.g. defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type? (For certain technologis the relevatn region for assessment will be local and for others it may be transnational/global.					
d. Was a region other than the entire host country chosen?	VVM	120	Not applicable	OK	OK
e. If yes, was the explanation why this region is more appropriate assessed?	VVM	120	Not applicable	OK	OK
f. Using official sources and local and industry expertise, was it determined to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, have been undertaken in the defined region?	VVM	120	Not applicable	OK	OK
g. Are similar and operational projects, other than CDM project activities, already "widely observed and commonly carried out" in the defined region?	VVM	120	Not applicable	OK	OK
h. If yes, was it assessed whether there are essential distinctions between the proposed CDM project activity and the other similar activities?	VVM	120	Not applicable	OK	OK
7. Monitoring plan					
a. Does the PDD include a monitoring plan?	VVM	122	Yes, the monitoring plan is included in Section B.7.1, B.7.2 & Annex 4.	OK	OK
b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	122	Yes, the monitoring plan is based on AMS ID, version 16	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
c. Were the list of parameters required by the the selected methodology identified?	VVM	123	Yes, as per the methodology, only the net electricity supplied to the grid by the project activity is required to be monitored for wind projects.	OK	OK
d. Does the monitoring plan contains all necessary parameters?	VVM	123	No, the following deficiencies are identified in the monitoring plan as defined in Sections B.7.1, B.7.2 & Annex 4. 1. The source of data indicated is incorrectly named. 2. Description of measurement methods does not indicate the Enercon pooling station and the metering system available at the Enercon pooling station. 3. Further how the meter readings at the Enercon pooling station are used in the overall project activity monitoring is not clear. 4. The description of the metering system at site is not transparently described in the monitoring plan in the PDD. 5. Procedures due to data uncertainty of the monitored data due to failures, defects in the meters at the Enercon pooling station and the TNEB sub-station are not addressed. 6. Procedures for apportioning the measured data are incompletely described in Annex 4. 7. The parameter of LCS controller reading is not included as a monitoring parameter. 8. During the site visit, it was observed that the CMS, encompassing the SCADA system, is not yet ready for the project activity wind turbines.	CAR 4	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			Project Participant to provide a timeline for the completion of construction activity of the CMS at site.		
e. Are the parameters clearly described?	VVM	123	Refer CAR 4 above	--	OK
f. Does the means of monitoring described in the plan comply with the requirements of the methodology?	VVM	123	The description of monitoring in the PDD does not transparently describe the measurement frequency for the parameters. E.g Continuous monitoring Refer CAR 4 above	--	OK
g. Have all relevant parameters been monitored as indicated in the table of the methodology? Pl state any deviations/omissions.	AMS	I.D	The parameter of LCS controller reading which is stated to be utilized in the apportioning procedure is not included in Section B.7.1 of the PDD. Refer CAR 4 above	--	OK
h. Has the CO2 emission factor of the grid electircity measured either by Combined Margin or by the Weighted Average emission?	AMS	I.D	The CO2 emission factor is measured by the Combined margin method.	OK	OK
i. Has the CO2 emission factor of fossil fuel type i measured as per the .Tool to calculate project or leakage CO2 emissions from fossil fuel combustion."	AMS	I.D	Not applicable	OK	OK
j. Has the Net calorific value of fossil fuel type i measured as per the .Tool to calculate project or a leakage CO2 emissions from fossil fuel combustion.	AMS	I.D	Not applicable	OK	OK
k. Has the Quantity of fossil fuel consumed in year y measured as per the .Tool to calculate project or a leakage CO2 emissions from fossil fuel	AMS	I.D	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
combustion.					
l. Has the Quantity of net electricity supplied to the grid in year y measured using energy meters.	AMS	I.D	Yes, however the description of the metering system at site is not transparently described in the monitoring plan in the PDD.	--	OK
m. Is the quantity of net electricity supplied to the grid in year y monitored/recorded - Continuous monitoring, hourly measurement and at least monthly recording? Notes on measurement method: - Calibration should be undertaken as prescribed in the relevant paragraph of General Guidelines to SSC Methodologies. - If applicable, measurement results shall be cross checked with records for sold/purchased electricity (e.g., invoices/receipts) - The net electricity export/supplied to a grid is the difference between the measured quantities of the grid electricity export and the import. If applicable, cross check net electricity supplied to a grid as gross energy generation in the project activity power plant minus the auxiliary/station electricity consumption, technical losses and electricity import from the grid to the project power plant measured at the grid interface/connection used for billing purposes	AMS	I.D	1. The description regarding the monitoring and measurement of data parameter is not clearly stated in Section B.7.1 of the PDD. 2. The method of cross-checking the primary data is not indicated in the PDD.	CL 16	OK
n. Is the Quantity of biomass consumed in year y monitored/recorded Continuously or estimate using annual energy/mass balance? Notes on measurement method:	AMS	I.D	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
- Use mass or volume based measurements. - Adjust for the moisture content in order to determine the quantity of dry biomass. - And/or perform an annual energy/mass balance that is based on purchased quantities and stock. - For projects consuming biomass and fossil fuel to produce electricity, a specific energy consumption11 of each type of fuel (biomass or fossil) to be used should be specified ex ante. The consumption of each type of fuel (biomass or fossil)shall be monitored. If fossil fuel is used, the electricity generation metered should be adjusted by deducting the electricity generation from fossil fuels using the specific energy consumption and the quantity of fossil fuel consumed The amount of electricity generated using biomass fuels calculated then shall be compared with the amount of electricity generated calculated using specific energy consumption and amount of each type of biomass fuel used. The lower of the two values should be used to calculate emission reductions					

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
o. Is the Moisture content of the biomass residues monitored atleast on a monthly basis?	AMS	I.D	Not applicable	OK	OK
p. Is the weighted average of the moisture content calculated for each monitoring period and used in the calculations? Notes on measurement method: On-site measurements In case of dry biomass, monitoring of this parameter is not necessary	AMS	I.D	Not applicable	OK	OK
q. Is Net calorific value of biomass residue type k monitored annually? Notes on measurement method: Measurement in laboratories according to relevant national/international standards. Measure the NCV based on dry biomass. Check the consistency of the measurements by comparing the measurement results with measurements from previous years, relevant data sources (e.g. values in the literature, values used in the national GHG inventory) and default values by the IPCC. If the measurement results differ significantly from previous measurements or other relevant data sources, conduct additional measurements	AMS	I.D	Not applicable	OK	OK
r. Is the Standard deviation of the annual average historical net electricity generation delivered to the grid by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity calculated	AMS	I.D	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
from data used to establish Eghistorical?					
s. Is the parameters relevant to reservoir based hydro and geothermal plants monitored following the most recent version of ACM0002?	AMS	I.D	Not applicable	OK	OK
t. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	VVM	123	Yes	OK	OK
u. Does the monitoring plan provide details regarding calibration of monitoring equipments/ instruments or does it include zero check as a substitute for calibration? (zero check can not be considered as a substitute for calibration)	EB 24	37	Yes, the frequency of calibration is stated to be annual in Annex 4 of the PDD.	OK	OK
v. Are the following means of implementation of the monitoring plan sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified:	VVM	123			
i. data management procedures?	VVM	123	The data archiving methods are not described in the PDD.	CAR 5	OK
ii. quality assurance procedures?	VVM	123	Refer to CAR 4 above.	--	OK
iii. quality control procedures?	VVM	123	Refer to CAR 4 above	--	OK
8. Sustainable development					
a. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	125	Yes	OK	OK
b. Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party?	VVM	126	Project participant to provide the copy of the HCA for the project activity.	--	

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
9. Local stakeholder consultation					
a. Were local stakeholders (public, including individuals, groups or communities affected, of likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity) invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?	VVM	128	Yes, the local stakeholders were invited through an advertisement in the local newspaper and also through personal invitation done by the project participant representatives at site. The local stakeholder meeting was conducted by the project participant on 29/10/2010.	OK	OK
b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	129	Yes, the representation of local stakeholders from the government offices is considered relevant for the project activity.	OK	OK
c. Is the summary of the comments received as provided in the PDD complete?	VVM	129	Yes, however the identity of the stakeholders who have made comments is not indicated.	--	
d. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	129	There were no negative comments received from the local stakeholders.	OK	OK
10. Environmental impacts					
a. Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	131	As per the Indian environmental legislations, an analysis on the environmental impacts of the project activity is not necessary to be submitted.	OK	OK
b. Have the project participants undertaken an analysis of environmental impacts?	VVM	132	No	OK	OK
c. Does the host Party require an environmental impact assessment?	VVM	132	No	OK	OK
d. If yes, have the project participants undertaken an environmental impact assessment?	VVM	132	Not applicable	OK	OK

Table 2 Specific validation activities

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
1. Project design of small-scale clean development mechanism project activities *(delete this table if the project activity is not a small scale project activity)*					
a. Does the proposed small-scale project activity meet the requirements of the simplified modalities and procedures for small-scale CDM project activities?	VVM	135	Yes	OK	OK
b. Does the project activity qualify within the thresholds of the three prossble types of small scale project activities? [Type (i) project activities: renewable energy project activities with a maximum output capacity equivalent to up to 15 megawatts; Type (ii) project activities: energy efficiency improvement project activities which reduce energy consumption, on the supply and/or demand side, by up to the equivalent of 15 gigawatt hours per year; Type (iii) project activities: other project activities that both reduce anthropogenic emissions by sources and directly emit less than 15 kilotonnesof carbon dixide equivalent annually.]	VVM	136	Yes, the proposed project activity is an 8 MW wind project in the State of Tamil Nadu. Hence the project activity qualifies within the threshold for Type 1 project activities.	OK	OK
c. Does the project activity conform to one of the approved small-scale categories?	VVM	136	Yes, the project activity conforms to the category “Electricity generation for a system”	OK	OK
d. Does the project activity apply the relevant tool and methodology?	VVM	136	Refer to (5.b.h) above	-	OK
e. Are the small-scale methodologies applied in conjunction with the general guidelines to SSC	VVM	136	Yes	OK	OK

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
CDM methodologies, which provide guidelines on equipment capactiy, equipment performance/lifetime, baseline identification for type-II/III greenfield project activities, sampling and other monitoring-related issues?					
f. Is the project activity a debundled component of a large-scale project, i.e., is there a registered small-scael CDM project activity or an application to register another CDM project actifity: (a) with the same project participants; (b) in the same project category and technology/measure; and (c) registered within the previous 2 years; and (d) whose project boundary is within 1 km of the proposed boudary of the proposed small-scale activity at the closest point?	VVM	136	No, the project activity is not a debundled component of a large scale project.	OK	OK
g. Is and assessment of the environmental impacts of the proposed CDM project activity required by the host Party?	VVM	136	Refers to 10 above	OK	OK
h. Is the project additional?	VVM	137	Refer to 6 above	OK	OK

Table 3 Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
CL1 There is only one party involved in the project activity as per the webhosted PDD viz; India. Project participant to provide the copy of the HCA issued by the Indian DNA.	Refer 1.a in Table 1 above	HCA has been provided to DoE for verification.	The copy of the HCA received from the Indian DNA is provided to the validation team. Hence the clarification request is closed.
CL 2 The purpose of the proposed project activity is described in Section A.2 of the webhosted PDD. However description relating to the prior experience of the Project Participant in renewable energy projects of not transparently described in the webhosted PDD.	Refer 3.d.i of Table 1 above	PP has no prior experience in renewable energy project and same explanation has been added in PDD. Same explanation has been added in revised PDD.	The validation team reviewed the annual reports of the project participant for the previous 3 years from the investment decision date and observed that there has been no prior installation in renewable energy sector projects. Hence the clarification request is closed.
CL 3 Project Participant to provide supporting evidences for the location numbers indicated for the 10 WEG's in the table in Section A.4.1.4.	Refer 3.f.ii of Table 1 above	We like to submit to DOE that these location numbers are provided by Enercon WRD department for internal purpose only to identify the location of each WEGs. Project participant Response 2 : The supporting evidence for the location numbers is provided to the DOE.	Please provide the internal document to support the location numbers indicated in the PDD. DOE 2nd Response: The validation team noted that the location numbers of the WEG's are indicated by the O&M contractor for ease of identification at site.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
			Hence the clarification request is closed.
CL 4 Project participant to provide an undertaking regarding the non-availability of public funding in the project activity.	Refer 3.h.i of Table 1 above	The project is 100% equity financed and therefore there is no debt or public funding envisaged for the project activity. Project participant 2nd Response : The project participant has provided the undertaking on the company letterhead stating that the project activity does not have any public funding.	Project participant to provide an undertaking on the company letterhead, indicating the same. DOE 2nd Response : An undertaking on the company's letterhead stating that there is no public funding in the project activity is provided to the validation team. Hence the clarification request is closed.
CL 5 Project participant to provide copies of the annual reports of the company for 3 years, prior to the investment decision.	Refer 3.j.i of Table 1 above	The copies of the last 3 years annual report has been provided to DoE for verification.	The annual reports of the previous 3 years viz; 2008, 2009 & 2010 has been provided to the validation team. Hence the clarification request is closed.
CL 6 Project Participant to correct the methodology title to clearly indicate the term "AMS" in Section B.1	Refer 3.k of Table 1 above	Correction has been made in revised PDD.	The project participant has corrected the title and reference to the applied methodology in Section B.1 of revised PDD. Hence the clarification request is closed.
CAR 1	Refer	The bulk main and check meters	The project boundary description

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
The project boundary described in the webhosted PDD is incomplete, as the metering system indicated is incorrect. During the site visit, the validation team observed that there are 2 sub-stations at the site for metering, one Enercon pooling station and the other is the TNEB sub-station. However the project boundary diagram in the PDD does not indicate the Enercon pooling station.	3.m of Table 1 above	(common metering point) are located at Enercon pooling substation. The electricity pooled at Enercon substation is transferred to TNEB substation. The Correction has been made in revised PDD as per DOE comment.	has been corrected in the revised PDD to transparently describe the metering system at site. Hence the CAR is closed.
CL 7 It is not clear as to whether any national policies or circumstances relevant to the baseline of the proposed project activity exist.	Refer 3.o.ii of Table 1 above	There are no national policies or circumstances which mandate to install the proposed activity.	The validation team observed that there are no national policies or circumstances that are relevant to the baseline of the proposed project activity. Hence the clarification request is closed.
CAR 2 Description of how the start date has been determined and the description of the evidence to support the same is not provided in Section C.1.1 of the PDD	Refer 3.v.ii of Table 1 above	We would like to submit to DOE that as per the CDM –PDD guideline "The starting date of a CDM project activity is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun". The PP placed the purchased order dated 10/07/2010 on Enercon and therefore has been selected as the project start date.	The validation team reviewed all the purchase orders placed by the project participant on the suppliers and observed that all the purchase orders for the project activity were placed on 10/07/2010. Hence the validation team accepts the start date of the project activity as 10/07/2010.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
			Based on the above, the CAR is closed.
CAR 3 The identity of the local stakeholders who made comments are not indicated in Section E.2 of the PDD.	Refer 3.gg.i of Table 1 above	The name of the person who made comments during the stakeholder meeting has been incorporated in the PDD.	The identity of the local stakeholders, which includes the names of the persons and the villages to which they belong have been mentioned in Section E.2 of the revised PDD. Hence the CAR is closed.
CL 8 The Project Participant has not justified the applicability to the tool, applied for calculating the emission factor.	Refer 5.b.h of Table 1 above	The project activity is located in the state of Tamilnadu which falls under southern grid. Therefore as per the paragraph 12 of the applied methodology, the baseline emission factor is calculated as combined margin consisting of a combination of operating margin and build margin factors according to the procedures prescribed in the latest tool for calculating the emission factor for an electricity system, version 2.0. The step by step procedure to compute the emission factor is described in B.6.1 of the PDD.	The Tool to calculate the emission factor of the electricity system is used by the project participant to calculate the emission factor for grid. A detailed step wise approach is provided in Section B.6.1 of the revised PDD. Hence the clarification request is closed.
CL 9 The web-link to the CEA database, based on which the emission factor is calculated, is not provided in Section B.4 of the PDD.	Refer 5.d.i of Table 1 above	Web-link of CEA database version 5.0 has been added in section B.4 of revised PDD.	The weblink of the CEA database has been referenced in Section B.4 of the revised PDD. Hence the clarification request is

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
			closed.
CL 10 The start date of the project activity reported in Section C.1.1 is 10/07/2010. However the description of why this date is considered as the start date is not indicated in the PDD.	Refer a.c of Table 1 above	We would like to submit to DOE that as per the CDM –PDD guideline "The starting date of a CDM project activity is the earliest of the date(s) on which the implementation or construction or real action of a project activity begins/has begun". The PP placed the purchased order dated 10/07/2010 on Enercon and therefore has been selected as the project start date. The above explanation has been provided in the PDD section C.1.1.	The validation team reviewed all the purchase orders placed by the project participant on the suppliers and observed that all the purchase orders for the project activity were placed on 10/07/2010. Hence the validation team accepts the start date of the project activity as 10/07/2010. Based on the above, the clarification request is closed.
CL 11 The date of communication of the Project Participant to the DNA and UNFCCC regarding the prior intimation of the project activity is not transparently explained in the webhosted PDD.	Refer a.g of Table 1 above	Explanation on UNFCCC & DNA communication has been added in revised PDD as per DOE comment in section B.5.	The validation team reviewed the UNFCCC website and observed that the date of receipt of the communication from the project participant regarding the project activity is 19/10/2010. Further the team also reviewed the communication sent to the Indian DNA regarding prior intimation of the proposed CDM project activity and observed the date of communication to the DNA as 27/10/2010.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
			Since both the communications as described above has occurred within 6 months of the project activity start date of 10/07/2010, the same is accepted by the validation team. Section B.5 of the revised PDD indicates the same. Based on the above, the clarification request is closed.
CL 12 Project participant to provide the copy of the applicable TNERC Order since the assumption of the tariff is based on the TNERC order.	Refer c.m of Table 1 above	Copy of TNERC Tariff Order dated 20/03/2009 has been provided to DOE.	The copy of the TNERC Order 2009 is provided to the validation team. Hence the clarification request is closed.
CL 13 However the project participant to clarify the following w.r.t the benchmark excel sheet viz; 1. The beta values are sourced from the Bloomberg database. However the data for all the companies are considered only for 3 years. Please clarify why other data periods of 5 years, 7 years etc are not considered and why the beta value of 3 years is conservative. 2. Why is the adjusted beta value from the Bloomberg snapshots not considered in the	Refer c.aa of Table 1 above	1. We have considered the beta values for 3 years prior to decision making date so that the beta is reflective of the recent market risk. 2. The adjusted beta is reflective of future beta which is computed based on the assumption that beta in long term will move towards one. In cases where, (1) raw beta is more than one; adjusted beta will be less than	1. Since the most recent 3 year data reflects the recent market risk, the same is accepted. 2. The raw beta is accepted in the computation of the benchmark for the project activity. Based on the above, the clarification request is closed.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
benchmark calculations ?		raw beta (2) where raw beta is less than one; ; adjusted beta will be more than raw beta. However for computation of benchmark, the values that are used shall be available at the time of decision making. Therefore PP has use raw beta for computation of benchmark that is reflective of current market risk.	
CL 14 However the following points needs to be clarified viz; 1. Justification provided for not subjecting the tariff to a sensitivity analysis is not reasonable as it is seen that tariff in the State of Tamil Nadu increases as can be seen from the various tariff orders of the state over the years.	Refer c.ll of Table 1 above	1. We would like to clarify to DOE that as per the TNERC Tariff Order dated 20/03/09, tariff is fixed at INR. 3.39/ kWh for 20years. Further PP has signed the PPA with TNEB at preferential tariff for 20years which is not applicable to be change in 20 year tenure. Though as per DOE comment we have done the 10% sensitivity analysis on tariff.	1. The validation team reviewed the TNERC tariff order of 2009 and observed that as per para 9 of the order, the tariff for wind projects commissioned after 01/04/2009 is indicated to be INR 3.39/kWh. Further the validation team reviewed the tariff indicated in the PPA signed between the project participant and TNEB and observed the value to be INR 3.39/kWh. Hence the validation team is of the opinion that a sensitivity analysis of ±10 % on the tariff is reasonable.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
2. The justification for why 10 % variations in the project cost, O&M cost and PLF is conservative is also not clear. Please provide the difference in the actual cost and the cost indicated in the offer for the parameters of project cost & O&M cost.		2. The actual project cost is 7.30% lower than the offer provided by the supplier. The sensitivity is conducted at +/-10% of the capital cost provided in offer letter which covers the range beyond the actual project cost. The O&M agreement has yet not been executed; therefore being conservative we have done sensitivity on ±50% in O&M and 5% escalation in O&M yearly. The PLF of 24.70% is based on the third party assessment report which is in line with Annex 11 of EB 48. As per the TNERC tariff order dated 20/03/09, for Shencottah Pass under which our project activity falls the PLF is 28.21% which is 14.21% higher than the PLF of 24.70% used in investment analysis sheet. However to check the robustness of the financial model, sensitivity on PLF is conducted at ±15%. The sensitivity beyond this range will not be	2. The validation team cross-checked the project cost with the purchase orders placed by the project participant on the equipment supplier and observed a difference of 7.30% lower than the project cost as indicated in the initial offer. However the project participant has subjected the project cost to a sensitivity of ±10%, which is reasonable. Since the O&M agreement is not yet executed between the project participant and the O&M contractor, as on the date of validation, the validation team accepted the combined sensitivity range of ± 50% on the O&M cost along with a 5 % escalation on O&M cost. The validation team accepted this approach since the team does not expect the O&M cost to drop by 50%, The sensitivity

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
		reasonable assumption to make as the PLF is taken from third party assessment report.	analysis with a -50 % drop in the O&M cost and 5 % escalation in O&M cost also does not make the IRR to cross the benchmark. Hence accepted by the validation team. The validation team reviewed the PLF indicated in the TNERC Tariff Order of 2009, which is the applicable tariff order for the project activity and observed the average CUF in the State of Tamil Nadu to be indicated as 27.15%. Further CUF for the various passes in the State of Tamil Nadu are also provided. The CUF for the Shencottah pass, wherein the project activity wind turbines falls, is stated to be 28.21%. Hence the validation team accepts the sensitivity analysis for tariff upto 28.12%, which is around at -15 % for sensitivity analysis and observe that the IRR does not

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
3. Further provide the copy of the applicable TNERC tariff Order for the PLF		3. As per Annex 11 of EB 48, PLF provided under TNERC order will not be applicable as the PLF provided in TNERC order is not site specific. Further as per Annex 11 EB 48, the PLF provided by the third party can be used for assessment of additionality. We will like to submit that PP has used the PLF provided by third party in investment analysis of the project activity for demonstration of additionality. Copy of TNERC Tariff Order dated 20/03/2009 has been provided to DOE.	cross the benchmark. 3. The validation team reviewed the PLF indicated in the TNERC Tariff Order of 2009, which is the applicable tariff order for the project activity and observed the average CUF in the State of Tamil Nadu to be indicated as 27.15%. Further CUF for the various passes in the State of Tamil Nadu are also provided. The CUF for the Shencottah pass, wherein the project activity wind turbines falls, is stated to be 28.21%. The validation team observed that the project participant has subjected the parameter of PLF to a sensitivity to cover the range of 28.21% as stated in the TNERC order. Hence the validation team accepts the sensitivity analysis for tariff upto 28.21%. Based on the above discussions, the clarification request is closed.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
CL 15 Project participant to provide details regarding previous investments of the project participant in renewable energy sectors.	Refer c.yy.iii of Table 1 above	PP has no prior experience in renewable energy project and same explanation has been added in PDD.	The validation team reviewed the annual reports of the project participant for the previous 3 years from the investment decision date and observed that there has been no prior installation in renewable energy sector projects. Hence the clarification request is closed.
CAR 4 No, the following deficiencies are identified in the monitoring plan as defined in Sections B.7.1, B.7.2 & Annex 4. 1. The source of data indicated is incorrectly named. 2. Description of measurement methods does not indicate the Enercon pooling station and the metering system available at the Enercon pooling station. 3. Further how the meter readings at the Enercon pooling station are used in the overall project activity monitoring is not clear. 4. The description of the metering system at site is not transparently described in the monitoring plan in the PDD.	Refer 7.d of Table 1 above	1. Data will be sourced from monthly statement showing the electricity generated through windmills given by Tamil Nadu Electricity Board (TNEB)/ Tirnunelveli Electricity Distribution Circle, Tirunelveli (TANGEDCO). 2. Correction has been made. Bulk metering (Common metering Point) will be done at Enercon Pooling sub-station Therkupatti. 3. Meter readings at the Enercon pooling station will be used by state electricity	1. The name of the data source has been changed in the revised PDD. 2. The description of the metering system and the measurement methods have been corrected in the revised PDD under Section B.7.1. 3. The description of how the meter readings at the Enercon pooling station shall be used in the overall project activity monitoring is now described transparently in the revised PDD. 4. The detailed metering system at the project activity site as well as

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
5. Procedures due to data uncertainty of the monitored data due to failures, defects in the meters at the Enercon pooling station and the TNEB sub-station are not addressed. 6. Procedures for apportioning the measured data are incompletely described in Annex 4. 7. The parameter of LCS controller reading is not included as a monitoring parameter. 8. During the site visit, it was observed that the CMS, encompassing the SCADA system, is not yet ready for the project activity wind turbines. Project Participant to provide a timeline for the completion of construction activity of the CMS at site.		board to calculate the net electricity exported to gird by the wind miils of individual customers. Monitoring plan has been revised based on DOE comment. 4. Metering system has been described in details in section B.7.1 & B.7.2 in revised PDD. 5. Procedure to handle data uncertainty has been explained in section B.7.2 of revised PDD. 6. The detailed procedure for apportioning has been detailed in Section B.7.2 of the revised PDD. There is no further information provided in Annex 4 of the revised PDD. 7. The parameter of LCS controller reading has been included in PDD. 8. CMS system is expected to be ready by 31 March 2011.	at the Enrcon pooling station has been transparently described in the revised PDD in Section B.7. 5. Procedures to deal with data uncertainty has been detailed in Section B.7.2 of the revised PDD. 6. The project participant has now included the detailed procedure for apportioning the measured data in cases wherein the verification period dates do not match with the dates of the billing cycle. 7. The parameter of LCS controller readings have been included in the revised PDD. 8. The project participant has submitted photographic evidence of the operational CMS at site. However the same needs to be verified during the subsequent verifications too. Hence accepted by the validation team.

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
			Based on the above clarifications, the CAR is closed.
CL 16 1. The description regarding the monitoring and measurement of data parameter is not clearly stated in Section B.7.1 of the PDD. **2.** The method of cross-checking the primary data is not indicated in the PDD.	Refer 7.m of Table 1 above	1. Description regarding the monitoring and measurement of data parameter has been revised in section B.7.1 2. Data can be cross checked from invoices raised on TNEB and same has been incorporated in revised PDD.	1. The detailed description of the monitoring system at site is now described in the revised PDD, in Sections B.7.1 & B.7.2 2. The method of cross-checking the primary data from invoices raised by project participant on TNEB has been described in the revised PDD in Section B.7.1 Based on the above discussions, the clarification request is closed.
CAR 5 The data archiving methods are not described in the PDD.	Refer 7.v.i of Table 1 above	The data will be archived both in electronic and hard paper format for crediting period + 2 years and same has been incorporated in revised PDD.	The data archiving method has been described as electronic as well as in paper format in Section B.7.1 of the revised PDD. Hence the CAR is closed.
CAR 6 The time gap between the placement of purchase orders for the project activity (viz 10/07/2010) and the commissioning of the wind turbines (viz; 29/09/2010) is only 79 days. Project participant to		Project Participant had placed its purchase order on 10th July 2010 and Project was commissioned on 29th September 2010 within the 79days of project start date.	The validation team noted that an equipment buyer (investor) can avail depreciation benefits in the months of September and March of a financial year (the financial year in

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
explain in details as to how the wind turbines could be commissioned in such a short span of time.		In India wind power project installation takes comparatively less time to install than the other renewable projects such as Biomass and hydro. In India almost all WTG manufacturers offer the wind energy projects on turnkey basis right from arranging land to equipment supply including erection and commissioning, obtaining clearance from nodal agencies and grid connection etc. Since the basic project related infrastructure and legal clearances for these wind farms are already developed by the WTG suppliers, the only activity which involves time is getting nodal agency permission, transportation and installation. These activities are taken up simultaneously and it takes a time of around 30 to 90 days to erect and commission a windmill from the project start date. The present project activity involved installation and commissioning of 10WTGs with total capacity of 8.0MW. Enercon's E-53 model is a standard model which is manufactured at Daman plant and Enercon has a faster	India is from April to March) if the machine is commissioned within that time. This leads to a sudden demand for machines during this time of the financial year. The DOE is aware about this situation and is well aware of the fact that Wind Turbine Generator suppliers ensure this excessive demand is met by stocking standard machines ready for quick delivery during these months. The validation team therefore confirm the Project Proponent's statement in the PDD, since the prevailing practice in India, especially for wind projects, are that the WTG suppliers identify and develop the wind farms including obtaining all legal clearances and the basic infrastructure needed for wind mills. Upon receipt of a purchase order from a client, the only activity required to be done is to transfer the equipment to site, erect and commission, which, does not take more than 30 – 90 days in general. At times, the suppliers even

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 1 and 2	Summary of project owner response	Validation team conclusion
		delivery period. Enercon had supplied the WTG on turnkey basis right from arranging land, laying roads and constructing foundations to equipment supply, erection and commissioning, nodal agency clearance, Grid Connection, HV/ Substation creation and Electrical (Reticulation). Enercon had already developed the wind farm, obtained all clearances in advance and had WTGs in ready stock. Hence, no sooner was the purchase/work order placed for the Wind Turbine generator by the Project Proponent; it was shifted to the site and erected. The project proponent was therefore able to operationalize the WTG in around 79 days time from the date of the purchase/work order (start date). Actual Purchase order and commissioning certificates has also been furnished to DOE for verification.	erect the Wind Turbine generator's at the wind farm site. However these windmills are not commissioned. Only upon receipt of a firm purchase order from a client, the Wind Turbine generator is commissioned and all the clearances are transferred to the client. Both these activities happen / could happen parallely. In such cases, the necessary formalities can be completed within a short duration of 7 days too. Based on the above dicsussions, the CAR is closed.

Appendix B – Validation of Global Stakeholder Comments

Sr. No.	Details of the commenter	Date of the comment	Comment	Response by the project participants	Explanation on how account is taken by the DOE
1.	Johan pereira, ranga.rajan.reddy @gmail.com on behalf of Johan pereira	03/02/2011	The PLF considered for the project activity is very low. The PLF stated in the TNERC order is27.46%. Why the PP haven't considered the PLF as given in the TNERC order. Looking into the TNERC recent order with Capacity wise and pass-wise PLF, the PLF taken for investment analysis is highly underrated. DOE is requested to examine this carefully and without any impartiality	We would like to submit to DOE that as per the "Guidelines for the reporting and validation of plant load factors", EB 48-Annex11, plant load factor shall be determined by a third party contracted by the project participants. The third party estimated PLF of 24.70% for the project activity and same has been used in investment analysis for demonstrating additionality. As per the TNERC tariff order dated 20/03/09, for Shencottah Pass under which our project activity falls the PLF is 28.21% which is 14.21% higher than the PLF of 24.70% used in investment analysis. However to check the robustness of the financial model, sensitivity on PLF is conducted at ±15%. The sensitivity	The Project Participant has engaged a third party to assess the PLD of the wind farm region and observed the same to be 24.70%. However the validation team further reviewed the applicable tariff order viz TNERC Tariff Order of 2009 which states that the average PLF for the State of Tamil Nadu is 27.15% and the PLF for the Shencottah pass, wherein the project activity wind turbines are located, as 28.21%. Hence the Project Participant has applied a sensitivity of 15% to cover the PLF value of 28.21% and it is seen that the equity IRR does not

Sr. No.	Details of the commenter	Date of the comment	Comment	Response by the project participants	Explanation on how account is taken by the DOE
				beyond this range will not be reasonable assumption to make as the PLF is taken from third party assessment report. The IRR for the project activity is less than the benchmark even at the PLF of 28.41% and IRR comes out 10.47%.	cross the benchmark. Even if the PLF is subjected to a sensitivity to cover the maximum PLF value of 32.31% (sensitivity of +31%) as described in the TNERC Order 2009 for Muppandal pass, the equity IRR comes out to be 12.79% and does not cross the benchmark. Hence the sensitivity analysis range considered for PLF is robust and the same is accepted by the validation team.

Sr. No.	Details of the commenter	Date of the comment	Comment	Response by the project participants	Explanation on how account is taken by the DOE
2.	Johan pereira, ranga.rajan.reddy @gmail.com on behalf of Johan pereira	03/02/2011	Since O&M contract is signed for most of the WEGS and all the maintenance related activitiesare covered by the service providers themselves, PP is requested to provide the rationale behindtaking the administrative cost. This is just to decrease the IRR I guess.	The O&M contract is not signed as of now. Therefore O&M cost has been taken from offer provided by the supplier dated 25 Jun 2010. No administrative cost apart from O&M cost has been taken by the PP in the investment analysis.	The validation team noted that administrative costs are not considered by the Project Participant in the webhosted PDD. Further since the O&M contract is not yet signed between the Project Participant and the O&M contractor, the Project Participant has subjected the parameter of O&M cost to a sensitivity of 50% and it is observed that the equity IRR does not cross the benchmark. Hence the same is accepted by the validation team.

Sr. No.	Details of the commenter	Date of the comment	Comment	Response by the project participants	Explanation on how account is taken by the DOE
3.	Johan pereira, ranga.rajan.reddy @gmail.com on behalf of Johan pereira	03/02/2011	It is a well known fact that the wind projects are mainly installed considering CDM revenues and offsetting of tax liability of the company as a result of accelerated depreciation of 80%.	PP has already included the tax shield in cash inflows to account for benefit of offsetting tax liability of the company as a result of accelerated depreciation.	The Project Participant has included all the tax shield as applicable in India. The IRR working has also been reviewed by the financial expert engaged by the DOE and a certificate to the same is also available. The Project Participant has considered the tax depreciation of 80% and has also considered the additional tax depreciation of 20% available to investors. Hence the comment is considered to be closed by the validation team.

Sr. No.	Details of the commenter	Date of the comment	Comment	Response by the project participants	Explanation on how account is taken by the DOE
4.	Johan pereira, ranga.rajan.reddy @gmail.com on behalf of Johan pereira	03/02/2011	Benchmark calculation is not as per WACC tool (EB53 Annex 8)	We would like to submit to DOE that WACC tool (EB53 Annex 8) is a draft guideline under the review by EB meth panel and not finally approved and therefore not being used while computing the benchmark	The validation team observed that the WACC tool as specified in EB 53, Annex 8 is not yet approved as a guideline by the EB. Hence the same is not used in the financial analysis. However the benchmark working is considering the requirement specified in the Investment Analysis Tool. Hence the same is accepted by the validation team.

Sr. No.	Details of the commenter	Date of the comment	Comment	Response by the project participants	Explanation on how account is taken by the DOE
5.	Johan pereira, ranga.rajan.reddy @gmail.com on behalf of Johan pereira	03/02/2011	The selection of option for calculating OM is not adequately documented with justification. CEA calculation is based on net electricity generation, the average efficiency of each power unit and the fuel types used in each power unit.	PP has taken simple operating margin since percentage of total grid generation by low cost/must run plants (on the basis of average of five most recent years) for the southern regional grid is less than 50 % of the total generation. The cumulative margin has been taken directly from the CEA database published by CEA, Ministry of Power, Government of India. The CEA has computed the grid emission factor as per "Tool to calculate emission factor from the electricity system, version 1.1". Therefore we have sourced the values from CEA database.	The selection of the option of the Operating margin viz; the simple operating margin is documented and adequately justified in the revised PDD by the Project Participant. Hence the same is accepted by the validation team.
6.	Johan pereira, ranga.rajan.reddy @gmail.com on behalf of Johan pereira	03/02/2011	Percentage of Escalation in O&M Charges in Each Year is not adequately justified, DOE has to check.	The escalation percentage has been taken from Offer provided by the supplier that was available to PP at the time of decision making. The offer letter has been submitted to DoE for verification. Further being conservative at a decrease of 50% in O&M and 5% escalation in O&M yearly, the IRR for the project activity is 9.56% which is	The escalation in the O&M cost is indicated to be 6 % in the initial offer, which has been considered in the IRR working. However the validation team noted that the O&M agreement is not yet signed and hence the actual escalation in the O&M cost is not clear. However the

Sr. No.	Details of the commenter	Date of the comment	Comment	Response by the project participants	Explanation on how account is taken by the DOE
				below than the benchmark.	validation team, based on its experience in validation of wind power projects has observed the escalation in the O&M cost as 5 %. Further the escalation in O&M cost as per the applicable TNERC Order of 2009 also indicates the escalation to be 5%. Hence the Project Participant has conservatively applied a combined sensitivity analysis of -50% in the O&M cost and 5 % escalation in the O&M cost and it is observed that the equity IRR even with this sensitivity does not cross the benchmark. Hence the same is accepted by the validation team.

Sr. No.	Details of the commenter	Date of the comment	Comment	Response by the project participants	Explanation on how account is taken by the DOE
7.	Johan pereira, ranga.rajan.reddy @gmail.com on behalf of Johan pereira	03/02/2011	The justification of negligible project emissions for wind project is not as per AMS. I. D ver 16.0 EB 54).	As per para 19 of AMS ID version 16, the project emissions are to be considered for geothermal and hydro power plants. For other categories the project emissions can be neglected. Therefore we have not included project emissions for wind power project.	As per the applied methodology, project emissions are considered as zero for most of the renewable projects, except geothermal or hydro. Since the proposed project activity is a wind power project, the Project Participant has not considered any project emissions. The justification provided by the Project Participant is accepted by the validation team.