



**BUREAU  
VERITAS**

# VALIDATION REPORT

## ZENITH SILK MILLS PVT. LTD.

VALIDATION OF THE  
“1.5 MW WIND POWER PLANT OF ZENITH  
SILK MILLS AT KOSHA VILLAGE, IN KUTCH  
DISTRICT OF GUJARAT STATE, INDIA.”

REPORT No. **INDIA-val/479.49/2012**  
REVISION No. 01

**BUREAU VERITAS CERTIFICATION**

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## VALIDATION REPORT

<b>Date of first issue:</b> 12/10/2012	<b>Organizational unit:</b> Bureau Veritas Certification Holding SAS
<b>Client:</b> Zenith Silk Mills Pvt Ltd	<b>Client ref.:</b> Mr Paresh Jariwala
<p>Summary:</p> <p>Bureau Veritas Certification has conducted the validation of the “1.5 MW Wind Power Plant of Zenith Silk Mills at Kosha Village, in Kutch district of Gujarat state, India” project of Zenith Silk Mills Pvt Ltd located at Kosha village of Abdasa Taluka in Kutch District, Gujarat State, 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.</p> <p>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 &amp; Opinion, was conducted using Bureau Veritas Certification internal procedures.</p> <p>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.</p> <p>In summary, it is Bureau Veritas Certification’s opinion that the project correctly applies the baseline and monitoring methodology AMS I.D, version 17 and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.</p>	

<b>Report No.:</b> INDIA-val/479.49/2012	<b>Subject Group:</b> CDM
<b>Project title:</b> 1.5 MW Wind Power Plant of Zenith Silk Mills at Kosha Village, in Kutch district of Gujarat state, India	
<b>Work carried out by:</b> R S Premkumar – Team Leader Rakesh Tripathi - Team Member Sushil Budhia Associates – Financial Expert Karthikeyan Associates – Financial Expert	
<b>Internal Technical Review carried out by:</b> Mr Sanjay Patankar	
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**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 <sub>2</sub>	Carbon Dioxide
DOE	Designated Operational Entity
GEDA	Gujarat Electricity Development Agency
GETCO	Gujarat Electricity Transmission Company Limited
GERC	Gujarat Electricity Regulatory Commission
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
UNFCCC	United Nations Framework Convention for Climate Change
VVM	Validation and Verification Manual
WEG	Wind Energy Generator
WTG	Wind Turbine Generator



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## 1 INTRODUCTION

Zenith Silk Mills Pvt Ltd has commissioned Bureau Veritas Certification to validate its CDM project “1.5 MW Wind Power Plant of Zenith Silk Mills at Kosha Village, in Kutch district of Gujarat state, India” (hereafter called “the project”) at Kosha village of Abdasa Taluka in Kutch District, Gujarat State, 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	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI



<b>Verifier</b>	Rakesh Tripathi	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input checked="" type="checkbox"/> SV <input type="checkbox"/> RI
<b>Financial Specialist</b>	Sushil Budhia Associates (For IRR)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI
<b>Financial Specialist</b>	Karthikeyan Associates (For Benchmark)	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI
<b>Internal Technical Reviewer (ITR)</b>	Sanjay Patankar	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input type="checkbox"/> RI
<b>Report Approval</b>	Flavio Gomes	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	<input checked="" type="checkbox"/> DR <input type="checkbox"/> SV <input checked="" type="checkbox"/> 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 55<sup>th</sup> 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 Zenith Silk Mills Pvt Ltd 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, Zenith Silk Mills Pvt Ltd revised the PDD and resubmitted it in November 2012.



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

## 2.2 Follow-up Interviews

On 26/06/2012, Bureau Veritas Certification made a site visit and performed interviews with project stakeholders to confirm selected information and to discuss issues identified in the document review. Representatives of Zenith Silk Mills Pvt Ltd, Deloitte India [Project Consultants], Local stakeholders and Suzlon Energy Limited [O&M contractors for the project activity] were interviewed [see References]. The main topics of the interviews are summarized in Table 1.

**Table 1 Interview topics**

Interviewed organization	Interview topics
Zenith Silk Mills Pvt Ltd	<ul style="list-style-type: none"> <li>④ CDM Consideration</li> <li>④ Methodology applicability</li> <li>④ Baseline determination</li> <li>④ Additionality</li> <li>④ Local stakeholder consultation and resolution of their concerns</li> <li>④ Supporting data and documentation</li> <li>④ Resolution of CAR's and CL's</li> </ul>
Local Stakeholders	<ul style="list-style-type: none"> <li>④ Views and concerns about the Project Activity</li> <li>④ Confirmation of the local stakeholder meeting conducted by Zenith Silk Mills Pvt Ltd.</li> </ul>
Deloitte India [Project Consultant]	<ul style="list-style-type: none"> <li>④ Methodology application</li> <li>④ Baseline determination &amp; emission factor</li> <li>④ Additionality</li> <li>④ Monitoring Plan</li> <li>④ GHG Calculations</li> <li>④ Supporting data, evidences and documentation</li> <li>④ Resolution of CAR's and CL's</li> </ul>
Suzlon Energy Ltd [O&M of the WEG's at site]	<ul style="list-style-type: none"> <li>④ Monitoring System at site</li> <li>④ Metering system at site</li> </ul>

## 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 validation process, the concerns raised are documented in more detail in the validation protocol in Appendix A.

## 2.4 Internal Technical Review

The validation report underwent an 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 11 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 Zenith Silk Mills Pvt Ltd have obtained approval from DNA of India and have provided a copy of the DNA approval letter (Ref /3/) 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 /3/) which describes the participation of M/s Zenith Silk Mills Pvt Ltd `being approved by the Government of India, which is a party of the Kyoto Protocol.

The project was webhosted on the UNFCCC website for global stakeholder's consultation process as per CDM requirements. The project activity was webhosted from 11/04/2012 to 10/05/2012. No comments were received from global stakeholders during the webhosting.

### 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. 03 (Ref /2/) has the following changes with respect to version 00 (Ref /1/) which was webhosted

1. Description of the Project Participant name has been made consistent in the revised PDD.
2. Description regarding the captive use of the electricity generated from the project activity has been provided in Section A.2 of the PDD.
3. The IRR calculations have been corrected to include different parameters of sensitivity analysis and for different range of values.
4. Monitoring plan revised to transparently describe the process of metering and monitoring at site. Archiving methods are also clearly stated.
5. Sections E.1 and E.2 has been updated to reflect sufficient details on the local stakeholder consultation meeting.



CAR 1 was raised since the webhosted PDD was not consistent with the names of the Project Participant in Sections A.3 and Annex 1. The same has now been made consistent and hence the CAR is closed.

The validation team hereby confirms that the PDD complies with the latest PDD format (Ref /24/) and PDD Completeness Guidelines (Ref /23/) 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 1 no. Wind Energy Generator (WEG) of capacity 1.5 MW, thereby totaling 1.5 MW capacity, located at Kosha village of Abdasa Taluka in Kutch District, Gujarat, India. The entire electricity generated from the proposed project activity will be wheeled to the captive unit of the Project Participant, located at Surat, Gujarat using the transmission lines of the State Electricity Utility. Thus the proposed project activity is grid connected. The Project Participant has signed a wheeling agreement with GETCO (Ref /4/) for wheeling the power generated from the project activity to the captive unit.

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 NEWNE regional grid.

Validation team validated the accuracy of the project description through a combination of steps consisting of review of purchase orders (Ref /5/ to /12/) related to the project activity, commissioning certificate for the Wind Energy Generator (Ref /13/), site visit and interview of the project participant and their representatives. The confirmation that the proposed project activity is grid connected is available through the wheeling agreement (Ref /4/).

The validation team reviewed the balance sheets (Ref /20/) 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).

CAR 2 was raised by the validation team since the description regarding the captive consumption of the electricity generated from the project activity was not described transparently. The Project Participant has now provided a clear description of the same in the revised PDD and hence the CAR was closed.

CAR 3 was raised since the description in Section A.4.1.4 was more than one page which is not in accordance with the requirements of PDD Completion guidelines. The same has now been corrected by the Project Participant in one page and hence the CAR is closed.

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 “1.5 MW Wind Power Plant of Zenith Silk Mills at Kosha Village, in Kutch district of Gujarat state, India” uses the approved methodology AMS I.D version 17 (Ref /25/).

1. The Purchase orders (Ref /5/ to /12/) 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 the wheeling agreement (Ref /4/) and physical connection to the grid at site. As per CEA database Version 7 (Ref /29/), Gujarat falls under the NEWNE 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 1.5 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 I.D: Grid connected renewable electricity generation.
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 energy 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 reviewed the electricity bills of the captive unit to which the entire electricity generated from the proposed project activity would be wheeled to and observed that the data for the 3 years preceding the investment decision date viz; from June 2007 to September 2010

indicates that the captive unit was dependant only on grid for its power supply requirements, a part of which would be displaced due to the intake of electricity from the project activity. Therefore the validation team concluded that the proposed project activity displaces grid electricity that would have otherwise been generated in fossil fuel based grid power plants. Therefore the baseline of the project activity is still the grid.

The validation team hereby confirms that the selected baseline and monitoring methodology, AMS I.D, Version 17 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 17 (Ref /25/) 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 /29/). The project activity boundary therefore includes the project power plant (wind energy generator) and all power plants connected physically to the NEWNE grid of India that the CDM project power plant is connected to.

The consideration of only CO<sub>2</sub> 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,  $EG_{BL,y}$ . 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 /12/) and the commissioning certificate of the WEG (Ref /13/) 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 (Kosha village of Abdasa Taluka in Kutch District, Gujarat, India) and temporal (20 years)



boundaries of the project are clearly defined. Project participant has taken a lifetime of 20 years for the WEG.

The validation team confirms that the only greenhouse gas relevant to the project activity is CO<sub>2</sub>. 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 17, the baseline is defined as the electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.

As explained above, the validation team reviewed the electricity bills of the captive unit to which the entire electricity generated from the proposed project activity would be wheeled to and observed that the data for the 3 years preceding the investment decision date viz; from June 2007 to September 2010 indicates that the captive unit was dependant only on grid for its power supply requirements, a part of which would be displaced due to the intake of electricity from the project activity. Therefore the validation team concluded that the proposed project activity displaces grid electricity that would have otherwise been generated in fossil fuel based grid power plants. Therefore the baseline of the project activity is still the grid.

The baseline emissions are defined as a product of the 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

$$BE_y = EG_{BL, y} * EF_{CO_2, grid, y}$$

Where,  $BE_y$  is the baseline emissions in year  $y$  (tCO<sub>2</sub>),

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

$EF_{CO_2, grid, y}$  is CO<sub>2</sub> emission factor of the grid in year  $y$  (tCO<sub>2</sub>/MWh)

As per AMS I.D version 17, the Emission Factor can be calculated in a transparent and conservative manner in either of the following two options:

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(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 2.2.1.

OR

(b) The weighted average emissions (in Kg CO<sub>2</sub>/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 /29/) which is calculated as per the "Tool to calculate emission factor for an electricity system". The version of the CEA database used is Version 7, 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 2.2.1 of the 'Tool to calculate the emission factor for an electricity system', which is the latest version of the tool at the time of validation. 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 2008-09 to 2010-11 and for the BM it is 2010-11. Accordingly, the combined margin emission factor is 0.9534 tCO<sub>2</sub>/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.

CAR 4 was raised by the validation team since the justification and references of sources of data were not provided in Section B.4 of the PDD. The same has now been provided and hence the CAR is closed.

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](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 I.D, version 17, paragraph 11, the baseline emissions 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 a grid emission factor

$$BE_y = EG_{BL, y} * EF_{CO_2, grid, y}$$

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,

$EF_{CO_2, grid, y}$  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;

$$ER_y = BE_y - PE_y - LE_y \text{ where,}$$

$ER_y$  = emission reductions from the project activity

$PE_y$  = project emissions from the project activity

$LE_y$  = leakage emissions from the project activity




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As described in AMS I.D, the project emissions are considered to be zero for most renewable energy projects.

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. Hence the emissions due to leakage are considered to be zero.

Validation team assessed the calculations of estimated Emission Reductions as provided by project participant in a spreadsheet (Ref /22/). The assumptions in this spreadsheet were validated as follows -

Parameter, Value	Source of information	Validation justification
Project Capacity, 1.5 MW	Purchase Order's & PPA	The project activity is as per the documents verified and seen at site.
Number of machines, 1	Purchase Order's, commissioning certificate	The numbers of machines are as per the documents provided and seen at site.
PLF, 23.76%	As per the letter from the financing bank dated 25/01/2012 (Ref /17/)	The PLF value is based on the letter from the financing bank for the proposed project activity, which is as per EB 48, Annex 11 requirement. Please refer section 3.7.3 of this report for detailed justification.
Baseline EF, 0.9534 tCO <sub>2</sub> e/MWh for NEWNE Grid	CEA database Version 7	CEA database is an official source of data and hence acceptable.

The estimated annual average emission reductions of approximately 2,977 tCO<sub>2</sub>e 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 /22/) 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 /21/). 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 /12/) 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 earliest date of the purchase orders as the starting date for the project activity. Accordingly, 26/10/2010, which is the date of all the purchase orders (Ref /5/ to /12/) raised 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 August 2008, the serious consideration of CDM for the project activity was assessed in line with the guidelines as specified in EB 62, Annex 13 (Ref /31/) as under;

The validation team verified the communications made by the Project Participant to the Indian DNA as well as to the UNFCCC secretariat. The intimation was done to the Indian DNA & the UNFCCC secretariat on 04/03/2011 (Ref /14/). Since the intimation to both the entities was done within 6 months of the project activity start date (viz; 26/10/2010), the validation team concluded that CDM was seriously considered in the decision to implement the project activity. Further 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](http://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html) and observed that the communication was made to the UNFCCC on 2 different dates viz; 19/02/2010 & 08/03/2011.



CL 2 was raised by the validation team in this regard. The Project Participant has responded to state that the prior consideration form was sent to the UNFCCC and the DNA on 04/03/2011 only and no communication prior to this date was done to these entities. The Project Participant further sent an email to the UNFCCC dated 06/10/2012 (Ref /18/) regarding the duplicacy of Form F [Prior consideration of CDM form] to which the UNFCCC responded vide an email to state that the duplicate Prior Consideration Form [Form F] dated 19/02/2010 is erroneous and has been removed from the UNFCCC website. The validation team verified the email communications done by the Project Participant to the UNFCCC and the reply email from the UNFCCC to the Project Participant and concluded that the Prior consideration date of 19/02/2010 was an erroneous entry on the UNFCCC website. Thus CL was closed.

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 /12/) until the date of webhosting of the PDD for global stakeholder comments dated 11/04/2012 are completed well within the time span of only 06 months and hence adequately meets the requirements as mandated by the Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM, Version 04, EB 62, Annex 13 (Ref /31/).

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 13 of EB 62 (Ref /31/).

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 EB 62 Annex 13.

### **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 I.D version 17 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 Project Participant has used the latest EB guideline for demonstrating additionality for micro-scale projects since the project activity capacity is lower than 5 MW (Ref /40/). However it was observed that none of the applicability conditions are fulfilled viz;

1. The geographic location of the project activity is in LDCs/SIDs or in a special underdeveloped zone of the host country identified by the Government before 28 May 2010.

**Validation Opinion** - The geographic location of the project activity is in the state of Gujarat in India which has not been identified as an LDC/SID by the host country, India.

2. The project activity is an off grid activity supplying energy to households/communities (less than 12 hrs grid availability per 24 Hrs/day is also considered as off grid for this assessment).

**Validation Opinion** - The proposed project activity is a grid connected activity supplying energy to the regional grid viz; NEWNE grid. Hence this condition is not fulfilled.

3. The project activity is for distributed energy generation with both conditions (i) and (ii) satisfied (see below);

- (i) Each of the independent subsystem/measure in the project activity is smaller than or equal to 750 kW electrical installed capacity;

- (ii) End users of the subsystem or measure are households/communities/SME.

**Validation Opinion** – The independent sub-system /measure in the project activity is larger than 750 kW viz; 1500 kW. Hence this condition is not fulfilled.

4. The project activity employs specific renewable energy technologies/measures recommended by the host country DNA and approved by the Board to be additional in the host country

**Validation Opinion** – There are no specific renewable energy technologies / measures that are recommended by the host country



DNA and approved by the Board as additional in the host country, India. Hence this condition is also not fulfilled.

Since none of the conditions of the latest EB guideline to demonstrate additionality for micro-scale projects (Ref /40/) were satisfied, the Project Participant has used the investment analysis as stated in Attachment A to Appendix B.

CL 6 was raised by the validation team since the webhosted PDD did not provide a description of the additionality justification in line with the EB guidelines for micro-scale additionality. The same has now been detailed out in the revised PDD in Section B.5 and hence the CL is closed.

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



## VALIDATION REPORT

Parameter, Value	Source of information	Validation justification
Total project cost INR 103.003 million (inclusive of land cost and applicable taxes)	Offer letter from M/s Suzlon Energy Limited dated 21/10/2010 (Ref /16/)	<p>The project cost is taken from the offer letter of M/s Suzlon Energy Limited which reflects the project cost applicable at the time of decision making. The cost is indicated separately for various components of the project activity and works out to be INR 103.003 million, inclusive of the land cost and applicable taxes.</p> <p>This is as per para 6 of Guidelines on the Assessment of Investment Analysis (EB 62 Annex 5).</p> <p>The actual cost of the project activity was also verified based on the purchase orders placed on the WEG supplier and subjected to a sensitivity analysis.</p>
Project Capacity, 1.5 MW	Offer letter from M/s Suzlon Energy Limited dated 21/10/2010 (Ref /16/)	The project capacity is as per the offer letter of Suzlon Energy Ltd. The same was cross-checked with the P.O raised for the proposed project activity.
Number of machines, 1	Offer letter from M/s Suzlon Energy Limited dated 21/10/2010 (Ref /16/)	The number of machines is verified from the offer letter of M/s Suzlon Energy Ltd and cross-checked with the site visit, purchase orders and commissioning certificate.
PLF(CUF), 23.76 %	As per the letter from the financing bank dated 25/01/2012 (Ref /17/) GERC Tariff Order 2010	<p>The validation team verified the letter from the financing bank viz; The Surat People's Co-op Bank Ltd vide letter dated 25/01/2012 (Ref /17/) which states the annual net generation as 2904000 units from the 1.5 MW project capacity. This deduces to a PLF of 22.10%.</p> <p>The validation team noted that this PLF is deduced based on the annual net generation and therefore the Project Participant has added another 7% as the transmission and wheeling charges since the</p>



## VALIDATION REPORT

Parameter, Value	Source of information	Validation justification
		<p>electricity generated from the proposed project activity would be used for captive consumption. The value of 7% charges is taken from the GERC Tariff Order dated 30/01/2010 which was available and applicable at the time of investment decision. Therefore the PLF deduces to 23.76%.</p> <p>Since the PLF value is determined in line with the requirements specified in EB 48, Annex 11 (Ref /32/), the validation team accepted the same.</p> <p>The validation team also verified the PLF indicated in the GERC Tariff Order dated 30/01/2010 (Ref /33/) which is applicable in the project location of Gujarat and also available at the time of investment decision and noted that the PLF indicated under para 3.8 [page 21 of the tariff order) is 23.00 %.</p> <p>The validation team further cross-checked the offer letter from the WEG supplier (Ref /16/) wherein the generation at the LCS controller is indicated to be 33,00,000 units which deduces to a PLF value of 25.11 % which is higher than the PLF considered in the base case IRR working. However the project participant has conducted a sensitivity analysis of upto +10% which covers a PLF value of upto 26.14%.</p> <p>Hence the validation team confirms that the PLF of 23.76 % considered by the Project Participant meets the requirements of EB 48, Annex 11 guidelines (Ref /32/). [Refer to</p>




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 VALIDATION REPORT
 

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Parameter, Value	Source of information	Validation justification
		further discussion on sensitivity analysis of PLF below]
Insurance charges, INR 0.193 million	Offer letter from M/s Suzlon Energy Limited dated 21/10/2010 (Ref /16/)	<p>The insurance charges are considered from the offer letter of Suzlon Energy Ltd dated 21/10/2010.</p> <p>Since the offer was available at the time of investment decision, the same is accepted by the validation team.</p> <p>The validation team also reviewed the actual Insurance premium paid by the PP is INR 0.0932 million only (Ref /41/) which is less than the premium considered at the time of decision making. The validation team noted that even if the cost of insurance premium is not considered in the financial working, the equity IRR of the project activity changes to 11.27%, which is also below the benchmark. Hence the validation team confirms that the insurance cost considered is reasonable.</p>



## VALIDATION REPORT

Parameter, Value	Source of information	Validation justification
O&M Cost, INR 1.70 million	Offer letter from M/s Suzlon Energy Limited dated 21/10/2010 (Ref /16/)	<p>The O&amp;M cost is taken from the offer letter of the Wind Turbine manufacturer wherein the O&amp;M cost is indicated to be free for the first 1 year and from the 2<sup>nd</sup> year it is indicated to be INR 1.70 million, excluding service tax.</p> <p>Since the offer letter was available at the time of investment decision, the same is accepted by the validation team.</p> <p>Further the validation team noted that the O&amp;M cost indicated in the P.O for WEG as well as the O&amp;M agreement signed between the Project Participant and the O&amp;M contractor is INR 1.4 million per annum, which is about 17.86% lower than the cost considered in the financial analysis. Therefore the Project Participant has subjected the parameter of O&amp;M cost to a sensitivity analysis of <math>\pm 20\%</math>. [Please refer discussion on sensitivity analysis below.]</p>



## VALIDATION REPORT

Parameter, Value	Source of information	Validation justification
Escalation in O&M cost, 5.0%	Offer letter from M/s Suzlon Energy Limited dated 21/10/2010 (Ref /16/)	<p>The escalation in O&amp;M cost is taken from the offer letter from WTG supplier, Suzlon Energy Limited dated 21/10/2010, which indicates the same to be 5%.</p> <p>Since the offer letter was available at the time of investment decision, the same is accepted by the validation team.</p> <p>Further the validation team cross-checked the escalation in O&amp;M cost from the GERC Tariff Order of 2010 as well as from the O&amp;M agreement signed between the Project Participant and the O&amp;M contractor which indicates the escalation to be 5.0%.</p> <p>Hence the validation team confirms that the O&amp;M escalation of 5% considered by the Project Participant in the financial analysis is conservative.</p>



Parameter, Value	Source of information	Validation justification
Transmission Charges, INR 1.4892 million	Offer letter from M/s Suzlon Energy Limited dated 21/10/2010 (Ref /16/)	<p>The transmission charges are the charges that are levied by the State Electricity Utility on the investor opting for captive consumption, for utilizing the transmission infrastructure of the State Utility.</p> <p>The transmission charges are considered from the offer letter of Suzlon Energy Limited, wherein the charge is indicated to be INR 2720/MW/day which deduces to INR 1.4892 million per annum [2720*1.5*365]. Since the offer letter was available at the time of investment decision, hence the same is accepted.</p> <p>The validation team reviewed the actual transmission charges paid by the Project Participant to GETCO for the months of April and May 2012 and observed the transmission charges to have increased from INR 2720/MW/day [assumed in financial calculations] to INR 2780/MW/day.</p> <p>Hence the validation team confirms that the transmission charges considered in the financial working is conservative.</p>



Parameter, Value	Source of information	Validation justification
Power Tariff, INR 5.25/kWh	Calculated based on actual bills of captive unit (Ref /34/)	<p>The electricity generated from the proposed project activity is utilized for captive consumption. Therefore the power tariff for financial analysis has been calculated based on the electricity tariff in the actual electricity bills of the captive unit of the Project Participant where the electricity from the project activity would be wheeled to.</p> <p>The validation team reviewed the electricity bills of the captive unit for 1 year preceding the investment decision viz; September 2009 to September 2010 and observed the rate to be INR 5.25/kWh.</p> <p>Therefore the validation team considered the tariff rate of INR 5.25/kWh as conservative.</p> <p>Further the validation team reviewed the electricity bills of the captive unit for the 3 years preceding the investment decision and observed that the escalation in tariff over this period to be only 0.87%, which is a minor escalation. Hence no escalation is considered on the parameter of tariff.</p> <p>However the Project Participant has subjected the parameter of tariff to a sensitivity analysis of +10%. [Please refer to sensitivity analysis section]</p>
Debt equity ratio 70:30	GERC Tariff Order 2010 (Ref /33/)	<p>This is the applicable tariff order for the state of Gujarat dated 30/01/2010 and is valid at the time of decision making, which indicates the debt equity ratio to be 70:30.</p> <p>The validation team also reviewed the actual debt equity ratio and observed the ratio to be 70:30.</p>



## VALIDATION REPORT

Parameter, Value	Source of information	Validation justification
Interest rate on loan, 11.50%	<a href="http://www.rbi.org.in/scripts/WSSView.aspx?Id=14965">http://www.rbi.org.in/scripts/WSSView.aspx?Id=14965</a>	<p>The interest rate on loan is considered as the Prime Lending rate from the RBI website, applicable at the time of the investment decision.</p> <p>Since the RBI is the Central Bank of India, the same is considered as conservative.</p> <p>The validation team also reviewed the actual loan sanction letter and observed the interest rate to be 10% and loan repayment period to be 07 years [28 quarters]. The validation team observed that the equity IRR reduces to 7.36%, if the actual rate of interest of 10% and tenure of 28 quarters was considered.</p>
Loan repayment period, 40 quarters	GERC Tariff Order 2010 (Ref /33/)	<p>This is the applicable tariff order for the state of Gujarat dated 30/01/2010 and is valid at the time of decision making, which indicates the loan repayment period to be 10 years repayable in quarterly installments. Therefore it deduces to 40 quarters.</p> <p>The validation team also reviewed the actual loan sanction letter and observed the interest rate to be 10% and loan repayment period to be 07 years [28 quarters]. The validation team observed that the equity IRR reduces to 7.36%, if the actual rate of interest of 10% and tenure of 28 quarters was considered.</p>




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 VALIDATION REPORT
 

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Parameter, Value	Source of information	Validation justification
Baseline EF, 0.9534 tCO <sub>2</sub> /MWh	Emission Reduction spreadsheet, PDD and the CEA database, Version 7.	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 7 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 and provisions of section 80IA [deferred tax benefit] as per Indian Income Tax Act (Ref /35/). Additional depreciation of 20% is not claimed by the Project Participant. The validation team validated the assumptions as above and observed that they are correct. The financial expert engaged by the DOE also verified the equity IRR calculations and observed them to be correct.

The PP has selected post-tax Equity IRR as the financial indicator therefore required return on equity is accepted as appropriate benchmark for a comparison with post-tax equity IRR for the demonstration of additionality.

In accordance with Para 15 of Guidelines on the Assessment of Investment Analysis (EB 62 Annex 5) *“If the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in Appendix A; or by (b) calculating the cost of equity using best financial practices, based on data sources which can be clearly validated by the DOE, while properly justifying all underlying factors.”* In line with the above, the cost of the equity has been considered from Appendix A as 11.75% since the project activity falls under Group I and the host country of the project activity being India.

Further, in line with para 7 of Appendix (EB 62 Annex 5), *In situations where an investment analysis is carried out in nominal terms, project participants can convert the real term values provided in the table below to nominal values by adding the inflation rate. The inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period. If this information is not available, the target inflation rate of the central bank shall be used. If this information is also not available, then the average forecasted inflation rate for the host country published by the IMF (International Monetary Fund World Economic Outlook) or the World*



*Bank for the next five years after the start of the project activity shall be used.*

Since the investment analysis for the project activity has been carried out in nominal terms, hence the cost of equity is also converted to a nominal value as follows –

$$\% \text{ ROE}_{\text{nominal}} = [(1 + \% \text{ RoE}_{\text{real}}) \times (1 + \% \text{ Inflation})] - 1$$

$$\% \text{ ROE}_{\text{nominal}} = [(1 + 11.75\%) \times (1 + 5.0\%)] - 1 = 16.75\%$$

Where the % forecasted inflation rate of 5.0% is taken from the inflation rate published by RBI, which is the Central Bank of India. The validation team confirms that the inflation rate of 5.0% was available at the time of decision making. Based on the above approach and corresponding values, the cost of equity is worked out to be 16.75% for the project activity.

The validation team verified the correctness and authenticity of the data used for the calculation of Return on Equity 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 62 Annex 5 and hence the validation team has accepted the same. The return on equity works out to be 16.75% and consequently the project's additionality, is correct and valid.

CL 7 was raised by the validation team since it was not clear as to how the fair value [salvage value] of the project activity has been accounted in line with the local taxation rules. The same has been justified in the revised IRR sheet and the revised PDD and hence the CL is closed.

CL 8 was raised by the validation team since the appropriateness of the PLF w.r.t the source of data was not clear. Also the source for the insurance cost and the transmission charges were not clear. Further the escalation on the parameter of power tariff was not considered. The Project Participant has now made the appropriateness of the PLF value used in the financial working clear, the source for the insurance costs and the transmission charges are provided and the justification for why the escalation on tariff is not considered is provided. Hence the CL is closed.

CL 9 was raised since the Project Participant had not transparently described the scenario at which the IRR crosses the benchmark. The Project Participant has now included the same in the revised IRR sheet and also the revised PDD. Hence the CL is closed.

The validation team, in consultation with its financial experts, confirms that the equity IRR without CDM revenues works out to be 10.67 % which is lower than the benchmark of 16.75%.



The only variables, which contribute to more than 20% of the project cost or the project revenue, are PLF, Capital Cost, O&M and tariff.

**PLF:** The PLF considered in the financial working is 23.76%, as explained above. The validation team cross-checked the PLF indicated in the GERC Tariff Order dated 30/01/2010 (Ref /33/) which is applicable in the project location of Gujarat and also available at the time of investment decision and noted that the PLF indicated under para 3.8 [page 21 of the tariff order) is 23.00 %. The validation team further cross-checked the offer letter from the WEG supplier (Ref /16/) wherein the generation at the LCS controller is indicated to be 33,00,000 units which deduces to a PLF value of 25.11 % which is higher than the PLF of 23.76%, considered in the base case IRR working. Hence the project participant has conducted a sensitivity analysis of upto +10% which covers a PLF value of upto 26.14%. The equity IRR value with sensitivity of +10% on PLF is 14.64 %, without CDM, which is below the benchmark.

**Project Cost:** The project cost, including all applicable taxes and land cost, indicated in the initial offer by M/s Suzlon Energy Limited (which was available at the time of decision making) was INR 103.0 million whereas the actual project cost [based on the purchase orders raised and inclusive of applicable service tax] works out to be INR 91.15 million. Thus there is a reduction of 11.5% in the project cost and as such the Project Participant has applied a sensitivity analysis of -11.5% on the parameter of project cost. The equity IRR was observed to be 14.59% @ -11.5% variation which is lower than the benchmark. The validation team based on the same could conclude that the sensitivity analysis on the project cost considering variation within range of -11.5% is conservative and the equity IRR was below the benchmark.

**Tariff:** The power tariff considered by the Project Participant in the financial working is INR 5.25/kWh, which is based on the electricity bills of the captive unit to which the generated electricity is wheeled to, for the 1 year preceding the investment decision viz; September 2009 to September 2010. Further from the data of the electricity bills of the captive unit for the 3 years preceding the investment decision, it was observed that the escalation in tariff was only about 0.87%, which is a minor escalation. Hence no escalation is considered on the parameter of tariff.

However the Project Participant has subjected the parameter of tariff to a sensitivity analysis of +10%. The equity IRR with +10% sensitivity on tariff works out to be 14.64% without CDM revenue, which is below the benchmark.

**O&M Cost:** A review of the purchase order placed for the project activity WEG and the O&M agreement signed between the Project Participant and the O&M contractor indicates the O&M cost to be INR 1.4 million with an annual escalation of 5%. Thus the O&M cost indicated in the purchase order [INR 1.4 million] is lower than the O&M cost indicated in the offer letter [INR 1.7 million] by 17.86%. Thus a sensitivity analysis of -20% on the O&M cost has



been conducted and it is observed that the equity IRR comes out to be 11.88%, without CDM revenues, which is below the benchmark.

CAR 6 was raised by the validation team since the Project Participant had no provided the rational for applying only 10% sensitivity analysis for all the parameters. Further justification for why the tariff is not subjected to a sensitivity analysis was not provided. The Project Participant has now considered 10% sensitivity on the parameter of PLF and power tariff whereas the sensitivity on the parameters of O&M cost and the project cost is more than 10%. Hence the CAR is 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 10.67% 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 17. Please refer discussions on the applicability of the methodology at section 3.6.1 above.

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 that a windmill project needs to monitor, i.e.,  $EG_{BL,y}$ , the net electricity supplied to the grid by the proposed Project Activity.
2.  $EF_{grid,CM,y}$ , the emission factor is fixed ex-ante based on CEA database, Version 7. This is in line with the EF tool as required by the methodology.
3. Project participant has provided provision for monitoring these parameters and for electronic as well as hard copy archiving of the monitored data. This is stated in Section B.7.1 of the revised PDD.
4. Project participant has provided for archiving the data for 2 years beyond the crediting period or last issuance whichever is later.
5. The monitoring plan includes requirements for calibration of the energy meters, used for monitoring the project activity variable,  $EG_{BL,y}$ , once in a year. The calibration is conducted by the State Electricity Authority. In case during the calibration, the meter(s) is found to be outside the permissible limits of error, then the meter(s) would be replaced immediately by the Electricity Utility. The error identified in the energy meter during the calibration would be applied to all the monitored data since the date of the last calibration, in case the meter has been used in the preparation of the monthly Joint Meter reading.
6. The monitoring frequency for  $EG_{BL,y}$  matches with that of the applied methodology, viz. continuous measurement and monthly recording. The cross checking will be carried out with the electricity bills of the captive unit where the generated electricity from the proposed project activity



- is being wheeled to. The validation team noted that there would be minor difference in the electricity values due to the deduction of wheeling and transmission charges levied by the State Electricity Utility on the Project Participant for wheeling the electricity.
7. The Project Participant has included an additional parameter  $EG_{WTG,y}$  which provides the values of the net electricity supplied to the grid by the project activity Wind Turbine Generator's, as recorded by the energy meter located at the project site itself. These monthly readings, which are recorded and maintained by the Project Participant representatives [viz; the O&M contractors], would be compared with the monthly net electricity supplied readings indicated in the GEDA Share Certificate and an conservative approach would be considered for emission reduction calculations.
  8. Under section B.7.2 of the revised PDD, project participant has provided the detailed metering system, measurement procedure, procedures to deal with data uncertainty, procedure for apportioning of the measured data, organizational structure etc.

The validation team verified the monitoring system at site as follows;

- a. There is an individual trivector energy meter connected to individual Wind Turbine Generator of the project activity, at the project site, with an accuracy class of 0.2s.
- b. This energy meter is capable of continuous monitoring and hourly measurement of the electricity supplied to the grid.
- c. The electricity exported and imported by the project activity Wind Turbine Generator's are recorded at this energy meter by the representatives of the Project Participant.
- d. There is another set of meters at the GEDA sub-station to which the project as well as non project Wind Turbine Generator's are connected to.
- e. There is a main meter [ABT meter] and check meter [trivector energy meter] at the GEDA substation of accuracy class 0.2s. The net electricity supplied value is recorded at the sub-station by the representatives of the Project Participant and GEDA /GETCO. Since this recorded value at the sub-station consists generation of project as well as non project activity Wind Turbine Generator's, SLDC conducts an apportioning procedure to deduce the net electricity supplied value by the individual investors. The process of this apportioning is conducted and controlled by the State Electricity Utility and neither the Project Participant nor its representatives have a role to play in the same.
- f. Based on this apportioning procedure, Project Participant receives the GEDA Share Certificate, which provides the net electricity supplied value to the grid.
- g. Based on this GEDA Share certificate, the State Electricity Utility adjusts the electricity generated from the project activity wind



turbines [and used in the captive unit] in the electricity bills of the captive consumer.

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 10 was 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. Hence the CAR was closed by the validation team.

The validation team also interacted with the team of the O&M service provider; M/s. Suzlon Energy Limited, who is 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.

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 /3/) 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 08/11/2011 at the CMS of Suzlon Energy Ltd at Nani-Sindholi site (Ref /38/). The method of invitation to the local stakeholders was through a personal invitation to the local stakeholders dated 24/10/2011 (Ref /37/).

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 public notice inviting local stakeholders, minutes of the stakeholder meeting proceedings, photographs maintained by the project participants (Ref /38/) were verified by the validation team. The stakeholders viewed this project as contributing to local environment and socio-economic benefits. 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 CMS of the O&M contractor at Nani - Sindholi. 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, drivers and helpers at the site office.

CL 11 was raised by the validation team since the supporting documents for the conduct of the Local stakeholder consultation process was not provided to the validation team. The same has now been provided to the validation team and hence the CL is closed.

The validation team hereby confirms that the process of local stakeholder consultation is observed to be adequate and it has been sufficiently described in the PDD.

### 3.11 Environmental impacts (133)

As per the Schedule of the EIA notification (Ref /36/), 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 /3/) 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 I.D was webhosted on the UNFCCC for global stakeholder's comments as per CDM requirements. The project was webhosted from 11/04/2012 to 10/05/2012. No comments were received from global stakeholders.

#### **5 VALIDATION OPINION**

Bureau Veritas Certification has performed a validation of the "1.5 MW Wind Power Plant of Zenith Silk Mills at Kosha Village, in Kutch district of Gujarat state, India" 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 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 of 2,977 tCO<sub>2</sub>e per annum. 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 “1.5 MW Wind Power Plant of Zenith Silk Mills at Kosha Village, in Kutch district of Gujarat state, India” 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 00, dated 28/02/2012
- /2/ Final revised PDD, Version 03, dated 05/11/2012
- /3/ Host Country Approval vide reference No. 4/6/2012-CCC dated 13/06/2012
- /4/ Wheeling Agreement signed between the Project Participant and GETCO for wheeling the electricity generated from the proposed project activity to its captive plant at Surat, dated 14/03/2011
- /5/ Purchase Order by the Project Participant to M/s Suzlon Energy Ltd, vide reference no. 2010-11/01 dated 26/10/2010 for supply of 1 number WEG of 1.5 MW capacity.
- /6/ Purchase Order by the Project Participant to M/s Suzlon Towers and Structures Ltd, vide reference no. 2010-11/02 dated 26/10/2010 for supply of tubular tower for 1 number WEG of 1.5 MW capacity.
- /7/ Purchase Order by the Project Participant to M/s Suzlon Infrastructure Services Ltd, vide reference no. 2010-11/04 dated 26/10/2010 for civil work including foundation and other allied civil works for 1 number WEG of 1.5 MW capacity.
- /8/ Purchase Order by the Project Participant to M/s Suzlon Infrastructure Services Ltd, vide reference no. 2010-11/05 dated 26/10/2010 for electrical works for 1 number WEG of 1.5 MW capacity.
- /9/ Purchase Order by the Project Participant to M/s Suzlon Infrastructure Services Ltd, vide reference no. 2010-11/06 dated 26/10/2010 for erection, installation and commissioning of 1 number WEG of 1.5 MW capacity.
- /10/ Purchase Order by the Project Participant to M/s Suzlon Infrastructure Services Ltd, vide reference no. 2010-11/03 dated 26/10/2010 for supply of transformer for 1 number WEG of 1.5 MW capacity.
- /11/ Purchase Order by the Project Participant to M/s Suzlon Power Infrastructure Limited, vide reference no. 2010-11/07 dated 26/10/2010 for contribution towards power evacuation infrastructure cost for 1 number WEG of 1.5 MW capacity.
- /12/ Purchase Order by the Project Participant to M/s Suzlon Gujarat Wind Park Ltd; vide reference no. 2010-11/08 dated 26/10/2010 for purchase / lease / sub-lease rights of land for 1 number WEG of 1.5 MW capacity.
- /13/ Commissioning certificate for 01 no. WEG of 1.5 MW capacity vide letter no. GEDA/PWF/SGWPL-ZSMPL/Jamanvada/10-11/137 dated 07/04/2011 indicating the commissioning of the WEG on 31/03/2011.
- /14/ E-mail communication dated 04/03/2011 from the project participant to the Indian DNA and CDM UNFCCC intimating about the proposed project activity – Prior Consideration of CDM.
- /15/ O&M agreement signed between the project participant and the O&M contractor dated 23/06/2011



- /16/ Offer Letter from M/s Suzlon Energy Ltd for the proposed project activity components vide letter no SEL/2010-2011/5006348 dated 21/10/2010
- /17/ Letter from the financing bank viz; The Surat People's Co-op Bank Ltd dated 25/01/2012 - Used for PLF value
- /18/ E mail communication from the project participant to the UNFCCC dated 06/10/2012 regarding the duplicacy in Form F on the UNFCCC website.
- /19/ Undertaking from the project participant indicating no claim of additional depreciation issued by the Certified Auditor of the company dated 13/12/2011.
- /20/ Balance sheet for last 3 financial years
- /21/ IRR Excel sheet
- /22/ Emission Reduction Excel sheet

### Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /23/ 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
- /24/ PDD Form, CDM-SSC-PDD, Version 3
- /25/ AMS I.D, Version 17 - Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories – Grid connected renewable energy generation
- /26/ Guidelines On Assessment Of Debundling For SSC Project Activities, version 3, EB 54, Annex 13
- /27/ Emission Factor tool - Tool to calculate the emission factor for an electricity system, version 2.2.1, EB 63, Annex 19
- /28/ Validation and Verification Manual, version 1.2, EB 54; [VVM]
- /29/ CEA baseline database, version 07 dated January 2012 [[http://www.cea.nic.in/reports/planning/cdm\\_co2/cdm\\_co2.htm](http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm)]
- /30/ Guidance on the Assessment of Investment Analysis, Version 05, EB 62, Annex 5
- /31/ Guidelines on the Demonstration and Assessment of Prior Consideration of the CDM, Version 04, EB 62, Annex 13
- /32/ Guidelines for the reporting and validation of PLF's, EB 48 Annex 11
- /33/ GERC Tariff Order dated 30/01/2010
- /34/ Sample copies of the Electricity Bills of the captive unit of the project participant, wherein the entire electricity generated from the proposed project activity would be wheeled, from June 2007 to September 2010
- /35/ Income Tax Act, Government of India [<http://law.incometaxindia.gov.in/DIT/Income-tax-acts.aspx>]
- /36/ EIA notification, S.O. 1533 dated 14th September, 2006



- /37/ Invitation letters submitted to local stakeholders dated 24/10/2011 inviting local stakeholder comments on the Project Activity.
- /38/ Minutes of meeting of local stakeholder consultation process and photographs of the local stakeholder meeting conducted by the Project Participant representative.
- /39/ Sample copies of the Monthly Generation Records [GEDA Share Certificate]
- /40/ Guidelines for demonstrating Additionality of Micro-scale Project Activities, Version 03, Annex 23, EB 63
- /41/ Copy of actual insurance paid by the project participant to M/s Bajaj Allianz General Insurance Company Limited for the period 02/03/2011 to 01/03/2012 under Standard Fire and Special Perils Policy, Burglary Insurance and Public Liability Insurance

**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 Vaibhav Sosathiya, Engineer, Suzlon Infrastructure Services Ltd
- /2/ Mr P Balasubramanium, Engineer, Suzlon Infrastructure Services Ltd
- /3/ Mr Vinod K Tailar, Accountant, Zenith Silk Mills Pvt Ltd
- /4/ Mr Charu Gupta, Manager, Deloitte India, CDM Consultant
- /5/ Ms Swati Sharma, Consultant, Deloitte India.
- /6/ Mr Kirit Singh, Farmer, Village Wada Padhar – Local Stakeholder
- /7/ Mr Abdul, Farmer, Village Jakhau – Local stakeholder
- /8/ Mr Jadeja Yogendra Singh, Business, Village Naliya – 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 15 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.

### **Mr. Rakesh Tripathi:**

#### **Bureau Veritas Certification, GHG Verifier**

Mr. Rakesh Tripathi is a postgraduate in Power management with over 2 years of experience in the field of Clean Development Mechanism. Mr. Rakesh Tripathi joined Bureau Veritas as a Verifier -Climate Change (Trainee). Prior to joining Bureau Veritas, he was working with a consultant for due diligence and development of projects under CDM/VCS mechanism

### **Sushil Budhia Associates (Financial Expert – For IRR Analysis)**

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 – For Benchmark Analysis)**

Services from Jayaram & Karthikeyan Associates were 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.



**Mr. Sanjay Patankar**

**Bureau Veritas Certification, Internal Technical Reviewer**

Educational qualifications: B.E. (Mech.) M.E. (Mech.)

He has over 20 years of experience in engineering manufacturing industry covering various functions like enterprise management, product design, engineering, tool & die design, improvements in the production shop, quality assurance & control and systems planning and implementation, including ISO 9001 based quality management systems. Working for the last 2 years in Bureau Veritas Certification (India) Private Ltd. as Lead Auditor for ISO 9001, 14001 and OHSAS 18001 standards/specifications. Has undergone training related to Clean Development Mechanism and is currently involved in validation and verification of CDM project activities

## 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 17) - “Grid connected renewable electricity generation”**

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b>1. Approval</b>			<i>COUNTRY A (India)</i>	<i>COUN TRY B (Not applic able)</i>	
a. Have all Parties involved approved the project activity?	VVM	44	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	--	(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	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	--	-- OK
c. Does the letter of approval from DNA of each Party involved:	VVM	45		--	-- OK
i. confirm that the Party is a Party of the Kyoto Protocol?	VVM	45.a	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	--	-- OK



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## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS		Draft Concl	Final Concl
ii. confirm that participation is voluntary?	VVM	45.b	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	--	--	OK
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	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	--	--	OK
iv. Refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	VVM	45.d	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	--	--	OK
d. Is(are) the letter(s) of approval unconditional with respect to (i) to (iv) above?	VVM	46	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	--	--	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	The project participant has not submitted the Host Country Approval of the party involved in the project activity.	--	--	OK
f. Is there doubt with respect to the authenticity of the letter of approval?	VVM	48	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	--	--	OK
g. If yes, was verified with the DNA that the letter of approval is authentic?	VVM	48	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.		(CL-1)	OK
<b>2. Participation</b>			<i>PP1 (Zenith Silk Mills Pvt. Ltd.)</i>		<i>PP2 (Not Applicable)</i>	


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## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
a. Have all project participants been listed in a consistent manner in the project documentation?	VVM	51	The project participant is listed as "Zenith Silk Mills Pvt. Ltd." in the web hosted PDD.	OK	OK
b. Has the participation of the project participants in the project activity been approved by a Party to the Kyoto Protocol?	VVM	51	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	(CL-1)	OK
c. Are the project participants listed in tabular form in section A.3 of the PDD?	VVM	52	The project participant is "Zenith Silk Mills Pvt. Ltd." which is listed in tabular form in section A.3 of the web hosted 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	The project participant is "Zenith Silk Mills Pvt. Ltd." which is listed in tabular form in section A.3 of the PDD. The same is not consistent with contact details provided in annex 1 of the PDD.	CAR 1	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	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	(CL-1)	OK
f. Are any entities other than those approved as project participants included in these sections of the PDD?	VVM	52	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	(CL-1)	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
g. Has the approval of participation issued from the relevant DNA?	VVM	53	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	(CL-1)	OK
h. Is there doubt with respect to (g) above?	VVM	53	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	(CL-1)	OK
i. If yes, was verified with the DNA that the approval of participation is valid for the proposed project participant?	VVM	53	Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	(CL-1)	OK
<b>3. Project desing document</b>					
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	The DOE has used the web hosted PDD as a basis of for the validation. The web hosted PDD prepared is in accordance with the latest template and guidance i.e. Clean Development Mechanism Project Design Document form (CDM-SSC-PDD) Version 03 - in effect as of : 22 December 2006).	OK	OK
b. Is the PDD in accordance with the applicable CDM requirements for completing the PDD?	VVM	56	The web hosted PDD is prepared as per the applicable CDM requirements for completing the PDD i.e. Guidelines for Completing the Simplified Project Design Document (CDM-SSC-PDD) and the form for proposed new small scale methodologies (CDM-SSC-NM), version 5.	OK	OK
c. In CDM-SSC-PDD section A.1 are following provided?	EB 34	Ann 09			



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. Title of project	EB 34	Ann 09	The title of the project activity is provided as "1.5 MW Wind power Plant of Zenith Silk Mills at Kosha village, in Kutch district of Gujarat state, India" in section A.1 of the PDD.	OK	OK
ii. Current version number and date of document	EB 34	Ann 09	Current version of the web hosted PDD is mentioned as "00" and date of the PDD as "28/02/2012".	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 scenario and baseline.	EB 34	Ann 09	<p>1. In Section A.2, it is stated that the electricity generated from the proposed project activity would be utilized for captive consumption. However details of the captive consumption units in terms of numbers of such units and their locations are not provided in the webhosted PDD.</p> <p>2. Further provide supporting evidence to demonstrate that the captive consumption unit was dependant on grid alone for its electricity use. [Please provide the electricity bills of the captive unit for 3 years prior to the investment decision date of the proposed project activity ]</p>	CAR 2	OK
ii. Explanation how the GHG emission reductions are effected.	EB 34	Ann 09	Description of how the GHG emission reduction of the NEWNE grid is effected due to the project activity is provided.	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
iii. The PP's view on the contribution of project activity to sustainable development.	EB 34	Ann 09	The Project Participant's view on the four parameters of sustainable development as indicated by the Indian DNA is 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	There would be some changes / modifications, based on the Project Participant response to the CAR/CL raised in this section.	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	PDD indicates the name of "Zenith Silk Mills Pvt. Ltd. (A private Limited Company)" as project participant and "Government of India" as (host) party in section A.3 of the PDD.	OK	OK
ii. Identification of host party	EB 34	Ann 09	India has been identified as host party in section A.3 of the PDD.	OK	OK
iii. Indication whether the Party wishes to be considered as project participant	EB 34	Ann 09	It has been indicated that the party does not wish to be considered as project participant.	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	The project activity details have been provided in section A.4.1.4 of the webhosted PDD related to Location of the project activity. However, the description seems to be exceeding	CAR 3	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			more than one page.		
ii. Detailed physical location with unique identification of the project activity (eg. Longitude/latitude) – not to exceed one page	EB 34	Ann 09	Please refer 3.f.i (above)	-	OK
g. In CDM-SSC-PDD section A.4.2 are following provided	EB 34	Ann 09			
i. the list of categories of project activities as per the latest categorization of Appendix B to the simplified modalities and procedures for small-scale CDM project activities, hereafter referred to as Appendix B. (refer <a href="http://cdm.unfccc.int/methodologies/SSCmethodologies">http://cdm.unfccc.int/methodologies/SSCmethodologies</a> )	EB 34	Ann 09	The project participant has provided the project category in accordance with the latest list of categories of Appendix B of the simplified modalities and procedures for small-scale CDM project activities.	OK	OK
ii. A description of how environmentally safe and sound technology and know how is being applied by the project activity inter alia technology transfer to the Host Party(ies) for application in the project activity	EB 34	Ann 09	The project participant has provided an explicit description of how environmentally safe and sound technology and knowhow is being applied by the project activity inter alia technology transfer to the Host Party(ies) for application 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	The estimation of emission reductions provided in section A.4.3 of the PDD in tabular format	OK	OK
i. In CDM-SSC-PDD section A.4.4 is information regarding Public funding provided?	EB 34	Ann 09	It has been mentioned in section A.4.4 of the PDD that “There is no public funding involved in project activity under consideration and no	OK	OK



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## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			ODA has been used for the proposed project activity.”.		
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 a large scale project activity.	EB 34	Ann 09	The project participant has mentioned that the project activity is not a debundled component of a large scale project activity.	OK	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	Project Participant has indicated in the webhosted PDD that there is no registered small scale project under CDM with the same project participants, category, technology and with project boundary within 1 Km of the project boundary of proposed project activity, which is registered with CDM EB within the previous two years. However, while cross checking through UNFCCC website validation team has observed that the PP intimated UNFCCC for project titled “1.5 MW Wind Power Project CDM project by ZENITH SILK MILLS PVT LTD, VASTA DEVDI ROAD, SURAT - 395004, GUJARAT, INDIA” on 19/02/2010, which is in the name of the PP and prior to the proposed project activity. Please Clarify the same in accordance with “Guidelines on Assessment of Debundling for SSC project activities” Version 03	CL 2	OK
a. With the same project participants	EB 34	Ann 09	Refer 3.j.ii (above)	-	OK
b. Registered within the period of 2	EB	Ann	Refer 3.j.ii (above)	-	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
years	34	09			
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	Refer 3.j.ii (above)	-	OK
iii. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	There would be some changes / modifications, based on the Project Participant response to the CAR/CL raised in this section.	-	OK
k. In CDM-SSC-PDD section B.1 is the approved baseline and monitoring methodology and version no provided?	EB 34	Ann 09	The project participant has mentioned the approved baseline and monitoring methodology as AMS I D, version 17 in section B.1 of the PDD.	OK	OK
l. In CDM-SSC-PDD section B.2 are the following provided?	EB 34	Ann 09			
i. Justification of the choice of project activity and category?	EB 34	Ann 09	The category for the project activity provided is not as per the latest available approved baseline and monitoring methodology.	-	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	EB 34	Ann 09	It has been demonstrated that the project qualifies as a small-scale project activity (Type I) and the capacity of the proposed project activity i.e 1.5 MW will not exceed 15 MW during entire crediting period.	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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 ktCO <sub>2</sub> e in any year of the crediting period.					
m. In CDM-SSC-PDD section B.3 is the project boundary of the project activity, based on the guidance of the applicable project category, provided?	EB 34	Ann 09	The project boundary of the project activity is in accordance with the applied methodology AMS-I D version 17.	OK	OK
n. In CDM-SSC-PDD Section B.4 are following provided?	EB 34	Ann 09			
i. The baseline for the proposed project activity with reference to the chosen project category.	EB 34	Ann 09	The baseline of the project activity has been provided as "The baseline to the proposed project activity is the electricity that would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid" in section B.4 of the PDD, which is in accordance with the chosen project category.	OK	OK
ii. Justification of key assumptions and rationales	EB 34	Ann 09	Justification of key parameters, assumptions and rationales are not provided in section B.4 of the PDD.	CAR 4	OK
iii. Transparent illustration of all data used to	EB	Ann	Refer 3.n.ii (above)	-	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
determine the baseline emissions (variables, parameters, data sources etc)	34	09			
iv. Are there any changes/modifications compared to the webhosted PDD?	EB 34	Ann 09	There would be some changes / modifications, based on the Project Participant response to the CAR/CL raised in this section.	-	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	In accordance with attachment A to appendix B of the simplified modalities and procedures for small-scale CDM project activities. PP is using option A i.e. Investment Analysis.	OK	OK
ii. National policies and circumstances relevant to the baseline of the proposed project activity	EB 34	Ann 09	There are no policies relevant to the baseline.	OK	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	In section B.5, PDD indicates that the project start date is after 2 <sup>nd</sup> August 2008, hence PP has intimated the UNFCCC and NCDMA (Indian DNA) on 04/03/2011 within six month from the project start date i.e 26/10/2010. In addition to this PP has also provided the chronology of the events for the project activity, which clearly shows that the continued actions were taken to secure the CDM status.	OK	OK



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p. In CDM-SSC-PDD section B.6.1 are following provided?	EB 34	Ann 09			
(i) Explanation on how the procedures, in the approved project category to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity.	EB 34	Ann 09	The section B.6.1 of the PDD explains the procedures as per the approved project category to calculate project emissions, baseline emissions, leakage emissions and emission reductions.	OK	OK
(ii) Clearly stating of which equations will be used in calculating emission reductions.	EB 34	Ann 09	In section B.6.1 of the PDD, PP indicates the equation used in calculating emission reduction. Refer 5.e (below)	OK	OK
(iii) Explanation 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	The selected project category does not provide different options to choose and default values.	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	The information on the data and parameters that are not monitored but determined upfront are made available in section B.6.2 of the PDD.	OK	OK
ii. The actual value applied.	EB 34	Ann 09	The actual values of the parameters has been applied	OK	OK



## VALIDATION REPORT

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iii. Explanation and justification for the choice of the source of data.	EB 34	Ann 09	The justifications of choice of data and source of data are indicated transparently in section B.6.2 of the PDD	OK	OK
iv. Clear and transparent references or additional documentation in Annex 3.	EB 34	Ann 09	No, additional information has been provided in Annex 3 of the webhosted PDD.	OK	OK
v. Where values have been measured, a description of the measurement methods and 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.	EB 34	Ann 09	All the parameters are based on the publically available data. Hence, no values are measured	OK	OK
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	The project participant has provided the ex ante calculations of the baseline emissions and emission reduction by applying all relevant equations provided in section B.6.3 of the PDD. However, refer 3.r.ii (below)	-	OK
ii. Documentation how each equation is applied, in a manner that enables the reader to reproduce the calculation	EB 34	Ann 09	Documentation and references of each equation has not been provided and also it is not clear how the baseline emissions are	CL 3	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			calculated.		
iii. Additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets)	EB 34	Ann 09	Please provide a separate copy of the emission reduction calculation sheet.	CL 4	OK
iv. Emission reduction calculations for each component are provided separately if more than one component activity is applied	EB 34	Ann 09	Refer 3.r.iii (above)	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	The section B.6.4 of the PDD indicates the ex ante estimation of emission reductions for all years of the first crediting period in a tabular format.	OK	OK
t. In CDM-SSC-PDD section B.7.1 are following provided?	EB 34	Ann 09			
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	The information on how the data and parameters, which are required to be monitored, would actually be collected during monitoring of the project activity is provided.	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	The project participant has mentioned the source of data used for the monitoring of required parameters.	OK	OK
b. Where data or parameters are supposed to be measured, specify the	EB 34	Ann 09	The measurement and calculation procedures are provided for parameter EG <sub>BLY</sub> in section	-	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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 in Annex 4.			B.7.1 of the PDD. However Refer section 7 below		
iii. A detailed description of the monitoring plan.	EB 34	Ann 09			
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	The operational and management structure to monitor the emission reductions has been provided in section B.7.2 of the PDD.	OK	OK
b. The responsibilities for and	EB	Ann	The responsibilities for data collection and	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
institutional arrangements for data collection and archiving	34	09	achieving have been stated in section B.7.2 of the PDD.		
c. Does the monitoring plan reflect good monitoring practice appropriate to the type of project activity	EB 34	Ann 09	The monitoring plan is such that it reflects a good monitoring practice. However, refer to the CAR/CL raised in section 7 of this protocol.	-	OK
d. Relevant further background information in Annex 4	EB 34	Ann 09	There is no information provided in Annex 4 of the PDD. The Annex 4 refers to section B.7 of the PDD.	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	The date of the application of the baseline and monitoring methodology has been provided in DD/MM/YYYY as 22/02/2012.	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	The contact information of the person/entity responsible for the application of the baseline and monitoring methodology has been provided in Section B.8 of the PDD.	OK	OK
iii. Indicated if the person/entity is also a project participant listed in Annex 1	EB 34	Ann 09	It has not been indicated, whether the person/entity mentioned in section B.8 of the PDD is a PP or Not	CAR 5	OK
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	EB 34	Ann 09	The starting date of the proposed CDM project activity is 26/10/2010, which is in accordance with the Glossary of terms (EB 41, para 67).	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
begun (EB33, Para 76/CDM Glossary of terms/EB41, Para 67)					
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	The start date i.e. 26/10/2010 has been chosen as the date of Purchase order placed for the project activity.	OK	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?	EB 34	Ann 09	The starting date of the project activity i.e 26/10/2010 is earlier than the publication of the PDD for global stakeholder consultation i.e 11/04/2012.  Refer 3.o.iii (above)	-	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	The expected lifetime of the project activity has been provided as 20 years and 0 months in section C.1.2 of the PDD.	OK	OK
x. In CDM-SSC-PDD section C.2 is it stated 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	In section C.2 of the PDD, it is stated that Fixed crediting period has been chosen for the project activity.	OK	OK
y. In CDM-SSC-PDD section C.2.1 is it indicated that each crediting period shall be at most 7 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	EB 34	Ann 09	Not applicable as the project activity uses Fixed crediting period.	OK	OK



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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 as the project activity uses fixed crediting period.	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 as the project activity uses fixed crediting period.	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	In section C.2.2 of the PDD, it is mentioned that fixed crediting period has been chosen	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	The start date of crediting period is indicated in DD/MM/YYYY format.	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	Length of the crediting period has been mentioned as 10 Years and 0 Months.	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	It is explained in the section D.1 of the PDD that the proposed CDM project activity does not require Environment Impact Assessment as per the schedule I of Environment Impact assessment (EIA) notification 1994 and 2006.	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	EB 34	Ann 09	In Section E.1 of the PDD, PP has mentioned that the local stakeholders were intimated regarding meeting through personal	OK	OK



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local stakeholders shall be made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted			invitations on 24/10/2011.		
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	The local stakeholders were informed about the project activity, taking provisions of the CDM modalities and procedures in to account.  The same has been checked while interviewing the local stakeholders, during site visit on 26/06/2012	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	The local stakeholder process has been completed on 08/11/2011, which is prior to the submission of the PDD to DOE 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	Stakeholders were identified with the details/names of the local stakeholders, who made comments during consultation meeting.	OK	OK
ii. A summary of these comments	EB 34	Ann 09	The summary of the comments are provided in section E.2 of the PDD.	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	EB 34	Ann 09	The PDD indicates that there were no negative comments received from stakeholders.	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
stakeholders provided?					
ii. In CDM-SSC-PDD Annex 1 are following provided?	EB 34	Ann 09			
i. Contact information of project participants	EB 34	Ann 09	The contact information of the project participant has been provided in Annex 1 of the PDD.	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	All the mandatory fields are provided in Annex 1 of the PDD.	OK	OK
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 has been stated in Annex 2 that "The entire cost of the project has been borne by Zenith Silk Mills Private Limited. Therein, No public funding is involved in the project activity under consideration".	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	The annex 3 refers to the Section B.4 of the PDD and there is no additional information provided.	OK	OK
ll. In CDM-SSC-PDD Annex 4 is the background information used in the application of the monitoring methodology	EB 34	Ann 09	The Annex 4 refers to the section B.7 of the PDD and there is no additional information in Annex 4.	OK	OK



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provided?					
<b>4. Project description</b>					
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	A clear description of the project activity has been provided in section A.4.2 of the PDD, which provides clear understanding of the nature of the project activity. However, section A.2 of the PDD indicates that "A long term wheeling agreement has been made with Gujarat Energy Transmission Corporation Limited ('GETCO'). GETCO will transmit the electricity generated from WTG to the boundary of the electricity distribution company, Torrent Power Limited (TPL)." Project Participant to provide the copies of the wheeling agreements signed with the GETCO and TPL	CL 5	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, the description of the proposed CDM project activity given in section A.2 and A.4.2 of the webhosted PDD sufficiently covers all the relevant technical aspects of wind power plants implemented by the project activity.	OK	OK
ii. accurate?	VVM	59	Refer 4.a (above)	-	OK
iii. providing the reader with a clear understanding of the nature of the	VVM	59	Refer 4.a (above)	-	OK



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proposed CDM project activity?					
iv. Are there any changes/modifications compared to the webhosted PDD?	VVM	59	There are no changes/modifications compared to the webhosted PDD.	-	OK
c. Is the proposed CDM project activity in existing facilities or utilizing existing equipments?	VVM	60	The project activity is a Greenfield project and does not utilise any existing facility or equipment.	OK	OK
d. Is the CDM project activity one of the following types:	VVM	60			
i. Large scale?	VVM	60	The project activity is not a large scale project.	OK	OK
ii. Non-bundled small scale projects with emission reductions exceeding 15,000 tonnes per year?	VVM	60	The proposed CDM project activity is a non-bundled small scale CDM project with emission reduction not exceeding 15000 tonnes per year i.e. 2,947 tonnes per year.	OK	OK
iii. Bundled small scale projects, each with emission reductions not exceeding 15,000 tonnes?	VVM	60	The project activity is not a bundled CDM project.	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	Not applicable	OK	OK
f. If yes to (d.iii) above, was the number of physical site visits based on sampling?	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	VVM	61	The project activity is an individual proposed	OK	OK



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CDM project activities with emission reductions not exceeding 15,000 tonnes per year, was a physical site inspection conducted?			small scale CDM project with emission reductions not exceeding 15000 tonnes per year i.e. 2,947 tonnes per year. However, a member of validation team of BVC conducted a physical site inspection on 26/06/2012.		
i. For all other proposed CDM project activities not referred to in paragraphs 59 – 61, was a physical site inspection conducted?	VVM	62	As mentioned above, the validation team conducted a physical site inspection on 26/06/2012.	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	The proposed CDM project activity is a Greenfield project with purchase of new equipments and does not involve any alteration of an existing installation or process.	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
<b>5. Baseline and monitoring methodology</b>					
<b>a. General requirement</b>					
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	The baseline and monitoring methodology selected by the project participants comply with the methodology approved by the CDM executive board i.e AMS- ID version 17	OK	OK



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b. Is the selected methodology applicable to the project activity?	VVM	66	The selected methodology AMS ID version 17 is applicable to the project activity	OK	OK
c. Had the PP correctly applied the selected methodology?	VVM	66	Refer to (5.b) below	-	OK
d. Had the selected methodology been correctly applied with respect to project boundary?	VVM	67	The selected methodology is been applied with respect to project boundary.  However, Refer 3.m (above)	-	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 applied with respect to additionality?	VVM	67	Refer to section (6) below	-	OK
1. Has the general guidance to the small scale CDM methodologies, information on additionality (attachment A to appendix B) been applied correctly?	AMS	I D	In accordance with attachment A to appendix B of the simplified modalities and procedures for small-scale CDM project activities. PP is using option A i.e. Investment Analysis.	OK	OK
h. Had the selected methodology been correctly applied with respect to monitoring methodology?	VVM	67	Refer to section (7) below	-	OK
<b><i>b. Applicability of the selected</i></b>					



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<b><i>methodology to the project activity</i></b>					
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	The selected baseline and monitoring methodology is AMS ID version 17 and is applicable to the proposed project activity.	OK	OK
b. Has the DOE applied specific guidance provided by the CDM Executive Board in respect to the applicable approved methodology?	VVM	69	The Validation team has cross-checked all applicable specific guidance of AMS-I.D provided by the CDM Executive Board to the proposed project activity and found it is correctly applied.	OK	OK
c. Is the methodology correctly quoted?	VVM	70	AMS-I D, version 17 Grid connected renewable electricity generation is correctly quoted	OK	OK
d. Are the applicability conditions of the methodology met?	VVM	71		-	-
a. Does the project activity comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to a national or a regional grid?  2. 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 comprises renewable energy generation units from wind and supplies electricity to NEWNE grid.	OK	OK



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b. Has the project participant provided justification in line with the applicability of methodology with respect to Table 2 of approved methodology ?	AMS	I D	The project participants provided justification that the project activity supplies electricity to the identified electricity grid i.e NEWNE grid, which is in line with methodology with respect to Table 2.	OK	OK
c. Does the project activity i. 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); ii. involve a capacity addition iii. involve a retrofit of (an) existing plant(s) or iv. involve a replacement of (an) existing plant(s)	AMS	I D	The proposed project activity is the new installation of 1 WEGs of 1.5 MW capacity and will export the power generated to NEWNE Grid of India.	OK	OK
d. For Hydro power plants with reservoirs, does it satisfy at least one of the following conditions 3. (a) the project activity is implemented in an existing reservoir with no change in the volume of reservoir 4. (b) the project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, is greater than 4 W/m <sup>2</sup>	AMS	I D	This applicability criterion is not applicable as the project activity is not a hydro power plant.	OK	OK



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5. (c) the project activity results in new reservoirs and the power density of the power plant is greater than 4 W/m <sup>2</sup> .					
e. Is the following guideline followed: 6. (a) If the new unit has both renewable and non-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. 7. (b) If the new unit co-fires fossil fuels, the capacity of the entire unit shall not exceed the limit of 15 MW.	AMS	I D	The proposed project activity is Wind based power generation and not a biomass based power project.	OK	OK
f. Is the following guideline followed: 8. Combined heat and power (co-generation) systems are not eligible under this category	AMS	I D	The project activity is wind generation project and not a combined heat and power (cogeneration) system. Hence the criterion is not applicable.	OK	OK
g. Is the following guideline followed: 9. 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 distinct from the existing	AMS	I D	The project activity is the new installation and hence the criterion not applicable	OK	OK
h. Is the following guideline followed: 10. In the case of retrofit or replacement, to	AMS	I D	The project activity is the new installation and not a retrofit or modification of existing facility.	OK	OK



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qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.			Hence this criterion is not applicable		
e. Is the project activity expected to result in emissions other than those allowed by the methodology?	VVM	71	There are no emissions other than those allowed by the methodology.	OK	OK
f. Is the choice of the methodology justified?	VVM	71	Yes, the choice of the methodology is justified	OK	OK
g. Have the project participants shown that the project activity meets each of the applicability conditions or the approved methodology?	VVM	71	The project participants shown that the project activity meets each of the applicability condition of the approved methodology.	OK	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	The tool referred by the methodology is "Tool to calculate emission factor of an electricity system", which is applicable in line with applied baseline and monitoring methodology.	OK	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	There are no such sources available than used in the PDD.	OK	OK
j. If yes, was the PDD cross checked against 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	VVM	72	As the project activity involves electricity generation from renewable wind resource, the	-	OK



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the proposed CDM project activity be made?			methodology AMS I D is applicable for the proposed project activity		
l. If no, clarification of the methodology 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.c) 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.k) and (5.b.l) above, a request for revision was submitted before the CDM Executive Board has approved the proposed deviation or revision?	VVM	74	Not applicable	OK	OK
<b>c. Project boundary</b>					
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 of the project activity is in accordance with the applied methodology AMS-I D version 17.	OK	OK
i. Does the physical, geographical site of the renewable generation?	AMS	I D	Refer 5.c.a (above)	-	OK
b. Is the delineation in the PDD of the project boundary correct and include identification of all locations, processes and equipment	VVM	79	Delineation in the section B.3 of the PDD, the project boundary includes all location, processes and equipment of the project	OK	OK



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including secondary equipment and associated processes such as logistics etc.?			activity.		
c. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline?	VVM	79	Refer 5.c.a (above)	-	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	No changes have been made in the project boundary in respect of the project activity.	-	OK
e. Have all sources and GHGs required by the methodology been included within the project boundary?	VVM	79	All sources and GHGs required by the applied baseline and monitoring methodology is included in the project boundary.	OK	OK
f. Does the methodology allow project participant to choose whether a source or gas is to be included within the project boundary?	VVM	79	The methodology does not provide such options.	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
<b><i>d. Baseline identification</i></b>					
a. Does the PDD identify the baseline for the proposed CDM project activity, defined as the scenario that reasonably represents the	VVM	81	The web hosted PDD identifies the baseline scenario as the electricity delivered to the grid by the project activity would have otherwise	OK	OK



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anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed CDM project activity?			been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.		
b. Has any procedure contained in the methodology to identify the most reasonable baseline scenario, been correctly applied?	VVM	82	The methodology AMS I D refers to grid as the baseline and same has been applied by the project participant.	OK	OK
i. Is the following guideline followed: Is the project activity new grid-connected renewable power plant/unit and hence 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	The proposed CDM project activity involves installation of wind (renewable) energy based grid connected power plant and hence 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 the renewable generating unit multiplied by the grid emission $BE_Y = EG_{BL Y} * EF_{CO2 grid Y}$	AMS	I.D	The baseline emissions are calculated as the product of electrical energy baseline expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor.	OK	OK
iii. Is the Emission Factor calculated in a transparent and conservative manner as follows: (a) A combined margin (CM), consisting of	AMS	I.D	Yes	OK	OK



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<p>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</p> <p>(b) The weighted average emissions (in t CO<sub>2</sub>/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.</p>					
<p>iv. Is the following guideline followed:</p> <ul style="list-style-type: none"> <li>- 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.</li> <li>- 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.</li> <li>- If the recovered methane is used for heat generation or cogeneration it is eligible under category I.C.</li> </ul>	AMS	I.D	The proposed CDM project activity is a grid connected Wind power plant and hence this is not applicable.	OK	OK



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<p>v. Is the following guideline followed for project activities that involve retrofits or replacements of an existing facility for renewable energy generation:</p> <ul style="list-style-type: none"> <li>- The baseline scenario is the continuing operation of the existing plant.</li> <li>- 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 EG<sub>historical</sub>, 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 (DATE<sub>BaselineRetrofit</sub>). 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.</li> </ul>	AMS	I.D	The proposed CDM project activity is a grid connected wind power plant and is a Greenfield project. Hence this is not applicable.	OK	OK



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<p>vi. Is the following guideline followed for Retrofit/capacity addition of hydro, solar, wind, geothermal, wave and tidal plants:</p> <p><b>11.</b> - Use of standard deviation for calculating baseline electricity generation.</p> <p><b>12.</b> - 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.</p> <p><b>13.</b> - In the case that 5 years of historical data are not available - e.g., due to recent retrofits or exceptional circumstances - a new methodology or methodology revision shall be proposed.</p> <p><b>14.</b> - 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.</p> <p><b>15.</b> - Project activities for capacity addition in hydro or geothermal shall use equation 3 replacing subscript .retrofit. with .capacity addition.</p>	AMS	I.D	The proposed CDM project activity is a grid connected Wind power plant and is a Greenfield project. Hence this is not applicable.	OK	OK



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<p>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:</p> <p><b>16.</b> <math>BE_{\text{retrofit},\text{CO}_2,y} = (EG_{\text{PJ},\text{retrofit},y} - EG_{\text{BL},\text{retrofit},y}) * EF_{\text{CO}_2}</math></p> <p>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</p>	AMS	I.D	The proposed CDM project activity is a grid connected wind power plant and is a Greenfield project. Hence this is not applicable.	OK	OK
<p>viii. Is the requirements concerning demonstration of the remaining lifetime of the replaced equipment met as described in the general guidelines to SSC methodologies?</p> <p><b>17.</b> 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.</p>	AMS	I.D	The proposed CDM project activity is a grid connected wind power plant and is a Greenfield project. Hence there is no requirement of the remaining lifetime of the project activity.	OK	OK
<p>ix. Is the following guideline followed for Capacity addition with renewable energy</p>	AMS	I.D	The proposed CDM project activity is a grid connected wind power plant and is a	OK	OK



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<p>units other than hydro, solar, wind, geothermal, wave and tidal plants:</p> <ul style="list-style-type: none"> <li>- 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 (DATE<sub>BaselineRetrofit</sub>).</li> <li>- If the existing units shut down, are derated, or otherwise become limited in production, the project activity should not get credit for generating electricity from the same renewable resources that would have otherwise been used by the existing units (or their replacements).</li> </ul>			Greenfield project. Hence this is not applicable.		
x. Does project activity involve co-firing ? If yes, the quantities and types of biomass and biomass to fossil fuel ratio to be used during crediting period is explained and documented transparently and presented in PDD ? Are ex ante estimation of these values provided in the PDD ?	AMS	I D	The proposed CDM project activity is a grid connected wind power plant and is a Greenfield project. Hence this is not applicable.	OK	OK
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	VVM	81	The proposed project activity is a 1.5 MW wind power plant. The project activity qualifies the criteria of small-scale project activity as per the General Guidance to SSC CDM methodologies. Hence, Tool for the	OK	OK



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demonstrate additionality”) to establish the baseline scenario?			demonstration and assessment of additionality” and the “Combined tool to identify the baseline scenario and demonstrate additionality is not applicable.		
d. If yes, was the methodology consulted on the application of these tools? (In such cases, the guidance in the methodology shall supersede the tool.)	VVM	82	Not applicable as the proposed CDM project activity is a small-scale project activity.	OK	OK
e. Does the methodology require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario?	VVM	83	The methodology does not require several alternative scenarios to be considered in the identification of the most reasonable baseline scenario since the methodology itself prescribes the baseline scenario.	-	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 as the baseline is prescribed by the applied methodology.	OK	OK
g. Has any reasonable alternative scenario been excluded?	VVM	83	There is no other alternative scenario involves in the determination of the baseline scenario of the proposed CDM project activity.	OK	OK
h. Is the baseline scenario identified reasonably supported by:	VVM	84			
i. Assumptions?	VVM	84	No assumptions has been bade	OK	OK
ii. Calculations?	VVM	84	The values are not derived from calculations but are provided by the CEA database.	OK	OK
iii. Rationales?	VVM	84	The CEA database ver. 7 is referred for the	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			calculation of baseline data.		
i. Are the documents and sources referred to in the PDD correctly quoted and interpreted?	VVM	84	The documents and sources are correctly quoted.	OK	OK
j. Was the information provided in the PDD cross checked with other verifiable and credible sources, such as local expert opinion, if available? (identify the sources)	VVM	84	There is no requirement of the local expert as the information provided in the web hosted PDD are sourced from the publicly available information i.e. Central Electricity Authority, which is the only body under Government of India to produce such information.	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	All the CDM requirements are taken into consideration in the identification of baselines scenario	OK	OK
l. Have all relevant policies and circumstances been identified and correctly considered in the PDD, in accordance with the guidance by the CDM Executive Board?	VVM	85	There are no national policies relevant to the baseline.	OK	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	The project activity is power generation from renewable source i.e, wind and the PDD provides with the verifiable description including a description of the technology used and the information provided is in line with the approved methodology AMS I D.	OK	OK
<b><i>e. Algorithms and/or formulae used to determine emission reductions</i></b>					



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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 the equations applied for calculation of baseline emissions, project emissions, leakage emissions are in line with the applied methodology AMS I D ver. 17	OK	OK
b. Have the equations and parameters in the PDD been correctly applied with respect those in the select approved methodology?	VVM	90		-	-
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	The project activity is the energy generation from wind. As per the applied methodology AMS I D, there is no project emissions generated from the proposed project activity.	OK	OK
ii. Is leakage considered, if the energy generating equipment is transfereed from another activity	AMS	I.D	PDD states that there is no equipment transfer from other project activity. Hence as per the applied methodology leakage emissions are considered nil.	OK	OK
iii. Is emission reduction calculated as per equation $ER_Y = BE_Y - PE_Y - LE_Y$	AMS	I.D	The emission reduction is calculated as per the equation $ER_Y = BE_Y - PE_Y - LE_Y$	OK	OK
c. Does the methodology provide for selection between different options for equations or parameters?	VVM	90	The methodology AMS-I.D provides 2 options for calculating emission factor. The project participant has chosen the option of calculating emission factor based on the	OK	OK



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			combined margin (CM). The CEA database has been referred for the same.		
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	Methodology allows any one of the methods to be used. Calculations are based on data from official source i.e. CEA database which is from an official source has been used.	OK	OK
e. If yes, have correct equations and parameters been used, in accordance with the methodology selected?	VVM	90	It is indicated in the PDD that the Combined margin emission factor is calculated based on the "Tool to calculate emission factor of an electricity system".  However, Refer 5.d.b.iii (above)	-	OK
f. Will data and parameters be monitored throughout the crediting period of the proposed CDM project activity?	VVM	91	The Ex-ante calculation of emission factor is carried out and will remain unchanged for the entire crediting period and The parameter "Net Electricity Supplied to the grid" will be monitored throughout the crediting period of the proposed project activity.	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		-	OK
i. Appropriate and correct?	VVM	91	The value of emission factor for NEWNE grid is fixed throughout the crediting period and the values are taken from CEA database which is official data publicly available.	OK	OK
ii. Applicable to the proposed CDM project	VVM	91	Data and parameters mentioned in section	OK	OK



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activity?			B.6.2 and B.7.1 of the PDD are applicable to the project activity.		
iii. Resulting in a conservative estimate of the emission reductions?	VVM	91	The values are conservative and correct based on the data available publicly, which are produced by CEA, Government of India.	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 parameter "Net Electricity Supplied to the Grid" is monitored on implementation of the project activity.	OK	OK
i. If yes, are the estimates provided in the PDD for these data and parameters reasonable?	VVM	91	The estimated value has been provided in the PDD	OK	OK
<b>6. Additionality of a project activity</b>					
a. Does the PDD describe how a proposed CDM projet activity is additional?	VVM	94	The PDD describes that the project activity is additional and this has been demonstrated considering Investment barrier provided in the Attachment A to Appendix B of Simplified modalities and procedures for small scale CDM project activities. However, the webhosted PDD indicates that the project capacity is less than the 5 MW capacity. The section B.5 of the PDD does not indicate, why the Annex 23, EB 63, "Guidelines for demonstrating additionality of Micro Scale project activities" is not applied for this project	CL 6	OK



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			activity. Please clarify.		
b. Were the following steps of the tool to assess additionality used:	EB 65	Ann 21	The steps required to assess the demonstration of additionality as per the "Tool for the demonstration and assessment of additionality" are not applicable as the proposed CDM project activity is a small-scale CDM project activity.	OK	OK
i. Identification of alternatives to the project activity?	EB 65	Ann 21	Not applicable	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 65	Ann 21	Investment analysis has been used to demonstrate that the proposed project activity is additional	OK	OK
iii. Barriers analysis?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
iv. Common practice analysis?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
c. In step 1 (i) have all the sub-steps as below been followed?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			barrier analysis Hence, Not applicable		
(i) Sub-step 1a: Define alternatives to the project activity	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(ii) Sub-step 1b: Consistency with mandatory laws and regulations	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
d. Have the following alternatives been included while defining alternatives as per sub-step 1a?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(a) The proposed project activity undertaken without being registered as a CDM project activity;	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(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,	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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taking into account, where relevant, examples of scenarios identified in the underlying methodology;					
(c) If applicable, continuation of the current situation (no project activity or other alternatives undertaken).	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, 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 relevant country/region?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
j. Has PP selected Step 2 (Investment analysis) or Step 3 (Barrier analysis) or both Steps 2 and 3?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
k. In step 2, have all the sub-steps as below been followed?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment	OK	OK



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			barrier analysis Hence, Not applicable		
i. Sub-step 2a: Determine appropriate analysis method;	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
ii. Sub-step 2b: Option I. Apply simple cost analysis;	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
iii. Sub-step 2b: Option II. Apply investment comparison analysis;	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
iv. Sub-step 2b: Option III. Apply benchmark analysis;	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
v. Sub-step 2c: Calculation and comparison of financial indicators (only applicable to Options II and III);	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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vi. Sub-step 2d: Sensitivity analysis (only applicable to Options II and III).	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
I. In sub-step 2a has the determination of appropriate method of analysis done as per the guidance as below?	EB 65	Ann 21			
(a) 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(b) Otherwise, use the investment comparison analysis (Option II) or the benchmark analysis (Option III). Specify option used with justification.	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
m. Has the below guideline followed for sub-step 2b Option I. Apply simple cost analysis? Document 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.	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
n. Has the below guideline followed for sub-	EB	Ann	The project activity is a small scale project	OK	OK



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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	65	21	activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable		
o. Has the below guideline followed for Sub-step 2b: Option III. Apply benchmark analysis?	EB 65	Ann 21		OK	OK
(a) Identify the financial/economic indicator, such as IRR, most suitable for the project type and decision context.	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	-	OK
(b) 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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(c) Discount rates and benchmarks shall be derived from: (a) Government bond rates, 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	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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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 65	Ann 21			
(a) Calculate the suitable financial indicator for the 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.	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(b) 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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(c) Justify and/or cite assumptions.	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(d) 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(e) 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(f) Present in the CDM-PDD a clear comparison of the financial indicator for the proposed CDM activity. Please specify details for above.	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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r. Has the outcome of Step 2 clearly mentioned with justification?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
s. In step 3: Barrier analysis have all the sub-steps as below been followed?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
<b>18.</b> Sub-step 3a: Identify barriers that would prevent the implementation of the proposed CDM project activity;	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
<b>19.</b> Sub-step 3b: Show that the identified barriers would not prevent the implementation of at least one of the alternatives (except the proposed project activity).	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
l. (a) Investment barriers: For alternatives undertaken and operated by private	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to	OK	OK



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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 demonstrated by the credit rating of the country or other country investments reports of reputed origin.			Appendix B, PP has used the Investment barrier analysis Hence, Not applicable		
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	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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literature or technology manufacturer information, The particular technology used in the proposed project activity is not available in the relevant region.					
III. (c) Barriers due to prevailing practice: The project activity is the "first of its kind".	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
IV. (d) Other barriers, preferably specified in the underlying methodology as examples.	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
u. Has the outcome from Step 3a clearly mentioned in PDD?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
v. Has the below guideline followed for 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(a) If the identified barriers also affect other alternatives, explain how they are affected less strongly than they affect	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment	OK	OK



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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.			barrier analysis Hence, Not applicable		
(b) 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(c) 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)	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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Relevant statistical data from national or international statistics; (d) Documentation of 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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
x. In step 4: Common practise analysis have all the sub-steps as below followed?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(a) Sub-step 4a: Analyze other activities similar to the proposed project activity;	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
(b) Sub-step 4b: Discuss any similar Options that are occurring.	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to	OK	OK



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			Appendix B, PP has used the Investment barrier analysis Hence, Not applicable		
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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, 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 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	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK



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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 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
bb.Has it been proved that the project is additional?	EB 65	Ann 21	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
cc. Has the PP demonstrated additionality by explaining Attachment A to Appendix B including Investment barrier, Technological barrier, Barrier due to prevailing practice or other barriers?	EB 63	Ann 24	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
dd.If Investment barrier has been explained, is	EB	Ann	The project activity is a small scale project	OK	OK



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it demonstraed that financilly more viable alternative to the project activity would have led to higher emissions? Please explain.	63	24	activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable		
ee. 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 uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions? Please explain.	EB 63	Ann 24	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
ff. 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 63	Ann 24	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
gg. 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 63	Ann 24	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
hh. Have the project participants identified the most relevant barrier?	EB 63	Ann 24	The project activity is a small scale project activity and as per the attachment A to	OK	OK



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			Appendix B, PP has used the Investment barrier analysis Hence, Not applicable		
ii. Does a proposed CDM project activity falls in a positive list of grid-connected renewable electricity generation technologies that are automatically defined as additional, without further documentation of barriers, consists of the following grid-connected renewable electricity generation technologies of installed capacity up to 15 MW including: <ol style="list-style-type: none"> <li>I. Solar technologies (photovoltaic and solar thermal electricity generation)</li> <li>II. Off-shore wind technologies</li> <li>III. Marine technologies (wave, tidal)</li> </ol>	EB 63	Ann 24	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis. Project activity does not fall under positive list of grid connected technologies.  Hence, Not applicable	OK	OK
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 63	Ann 24	The project activity is a small scale project activity and as per the attachment A to Appendix B, PP has used the Investment barrier analysis Hence, Not applicable	OK	OK
<b>a. Prior consideration of the clean development mechanism</b>					
a. Is the project activity start date prior to the date of publication of the PDD for stakeholder comments?	VVM	98	The start date of the project activity was 26/10/2010 whereas the PDD was published for global stakeholder comments on UNFCCC	OK	OK



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			website on 11/04/2012. Thus it indicates that the start date of the project activity is prior to the date of publication of PDD for GSC.		
b. If yes, were the CDM benefits considered necessary in the decision to undertake the project as a proposed CDM project activity?	VVM	98	Refer 3.o.iii (above)	OK	OK
➤ 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	c.	The start date is the purchase order dated 26/10/2010 placed by the project participant to Wind energy generator supplier for one WEG. The same is in accordance with "Glossary of CDM terms"	OK	OK
d. Does the project activity require construction, retrofit or other modifications?	VVM	99	The proposed CDM project activity is a Greenfield project and hence does not require construction, retrofit or other modifications.	OK	OK
e. If yes, is it ensured that the date of commissioning cannot be considered as the project activity start date?	VVM	99	Not applicable	OK	OK
f. Is it a new project activity (project activities with starting date on or after 02 August 2008) or an existing project activity (project activities with a start date before 02 August 2008)?	VVM	100	The start date of the project activity is the date after the publication of PDD for stakeholder comments on 11/04/2012 ( <a href="http://cdm.unfccc.int/Projects/Validation/index.html">http://cdm.unfccc.int/Projects/Validation/index.html</a> ), which is after 02 August 2008 and hence, it is a new project activity.	OK	OK



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g. For a new project, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the Executive Board before the project activity start date, had the PP informed the Host Party DNA and 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	Prior to webhosting of the PDD for global stakeholder comments, the project participant has intimated CDM EB and NCDMA (Indian DNA) vide email dated 4/03/2011. This was confirmed from UNFCCC website ( <a href="http://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html">http://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html</a> ) which is within six months of the project start date.	OK	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	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
(i) 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	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
(a) Minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM			The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK



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project activity?					
(ii) 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	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
(iii) contract with consultants for CDM/PDD/methodology services?	VVM	102	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
(iv) 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	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
(v) evidence of agreements or negotiations with a DOE for validation services?	VVM	102	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
(vi) submission of a new methodology to the CDM Executive Board?	VVM	102	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
(vii) Publication in newspaper?	VVM	102	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the	OK	OK



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			proposed project activity is a new project activity.		
(viii) interviews with DNA?	VVM	102	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
(ix) earlier correspondence on the project with the DNA or the UNFCCC secretariat?	VVM	102	The project activity start date is 26/10/2010 which is after 2 <sup>nd</sup> August 2008. Therefore, the proposed project activity is a new project activity.	OK	OK
<b><i>b. Identification of alternatives</i></b>					
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 description of the baseline in the PDD as per the approved methodology AMS I.D version 17 selected by the proposed CDM project activity defines the baseline to be grid 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 as the baseline scenario is prescribed by the applied methodology.	OK	OK
c. Does the list of alternatives given in the PDD ensure that:	VVM	106			
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



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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
<b>c. Investment analysis</b>					
a. Has investment analysis been used to demonstrate the additionality of the proposed CDM project activity?	VVM	108	The Project participant uses Attachment A to Appendix B 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	No alternatives are compared as the methodology prescribes baseline.	OK	OK
ii. economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs)?	VVM	108	Equity IRR is calculated as financial indicator for project activity and compared with the benchmark	OK	OK
c. Was this shown by one of the following approaches?	VVM	109			
i. Demonstrate that the proposed CDM	VVM	109	Not applicable as the proposed CDM activity	OK	OK



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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.			would produce revenue by sale of power to grid apart from CDM related income. Also no alternatives are there as the methodology prescribes baseline.		
ii. The proposed CDM project activity is less economically or financially attractive than at least one other credible and realistic alternative.	VVM	109	No alternatives are compared as the methodology prescribes baseline.	OK	OK
iii. The financial returns of the proposed CDM project activity would be insufficient to justify the required investment.	VVM	109	Equity IRR is calculated as financial indicator for project activity and compared with the benchmark	OK	OK
d. Is the period of assessment limited to the proposed crediting period of the CDM project activity?	EB 62	Ann 5	The period of assessment is not limited to the proposed crediting period, instead assessment is carried out for Expected operational lifetime of the project activity i.e., for 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	EB 62	Ann 5	The project IRR calculations reflects the period of expected operation of the project activity (technical Lifetime) i.e 40 Years	OK	OK



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activity assets at the end of the assessment period?					
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 62	Ann 5	No major maintenance and/or rehabilitation are expected during the assessment period of the project activity	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 62	Ann 5	Refre 6.c.m (below)	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 62	Ann 5	The IRR calculations include a fair value of the project activity assets after 20 years (technical lifetime). However, the cost of land is not considered at the end of the assessment period.	OK	OK
i. Has the fair value been calculated in accordance with local accounting regulations where available, or international best practice?	EB 62	Ann 5	Project participant need to justify the fair value calculated is in accordance with local accounting regulation.	CL 7	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 62	Ann 5	Refer 6.c.i (above)	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	EB 62	Ann 5	NA	OK	OK



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profits for the purpose of calculating the financial indicator (e.g. IRR, NPV)?					
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 62	Ann 5	NA	OK	OK
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 62	Ann 5	<p>All the input values used in the investment analysis are valid. However, Project participants need to clarify following:-</p> <p>1. How PLF considered is appropriate to the project activity with source of reference</p> <p>2. Source for the insurance cost and transmission charges considered for the project activity.</p> <p>3. Escalation on tariff is not considered for the overall life of the project activity. Please clarify</p>	CL 8	OK
n. Is the timing of the investment decision consistent and appropriate with the input values?	EB 62	Ann 5	Investment decision (board resolution) was taken on 26/06/2010 and all the input values were available at the time of investment decision.	OK	OK
o. Are all the listed input values been consistently applied in all calculations?	EB 62	Ann 5	All the listed inputs values been applied consistently in calculation. However, refer 6.c.m (above)	-	OK



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p. Does the investment analysis reflect the economic decision making context at point of the decision to recommence 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 62	Ann 5	The project activity is a new project activity not a recommenced project.  Hence not applicable.	OK	OK
q. Have project participants supplied the spreadsheet versions of all investment analysis?	EB 62	Ann 5	Investment analysis has been provided in Excel spreadsheet.	OK	OK
r. Are all formulas used in this analysis readable and all relevant cells be viewable and unprotected?	EB 62	Ann 5	All the formulas used in the analysis are readable and all relevant cells are viewable and unprotected.	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 62	Ann 5	Not applicable	OK	OK
t. In case the PP wishes to black-out certain elements of the publicly available version, is it justifiable?	EB 62	Ann 5	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 62	Ann 5	The cost of financing expenditure (loans repayment, interest, etc) is included in the calculation of project IRR.	OK	OK
v. In the calculation of equity IRR, has only the portion of investment costs which is financed	EB 62	Ann 5	The PDD adopts Project IRR which includes both debt and equity. Hence not applicable.	OK	OK



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by equity been considered as the net cash outflow?					
w. Has the portion of the investment costs which is financed by debt been considered a cash outflow in the calculation of equity IRR? (this is not allowed)	EB 62	Ann 5	The PDD adopts Project IRR which includes both debt and equity. Hence not applicable.	OK	OK
x. Was a pre-tax benchmark be applied?	EB 62	Ann 5	Default value for return on equity is considered for benchmark after adjusting for Inflation rate of the country, where the project activity is commissioned	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 62	Ann 5	Default value for return on equity is considered for benchmark after adjusting for Inflation rate of the country, where the project activity is commissioned	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 62	Ann 5	Default value for return on equity is considered for benchmark after adjusting for Inflation rate of the country, where the project activity is commissioned	OK	OK
aa. In cases where a benchmark approach is used is the applied benchmark appropriate to the type of IRR calculated?	EB 62	Ann 5	Project participant has considered the equity IRR as a financial indicator and Default value for return on equity is considered for benchmark after adjusting for Inflation rate of the country, where the project activity is	OK	OK



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			commissioned		
bb. Has local commercial lending rates or weighted average costs of capital (WACC) selected as appropriate benchmarks for a project IRR?	EB 62	Ann 5	Return on Equity is selected as benchmark for a equity IRR. Refer 6.c aa (above)	OK	OK
cc. Has required/expected returns on equity selected as appropriate benchmark for an equity IRR?	EB 62	Ann 5	Not applicable	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 62	Ann 5	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 62	Ann 5	The project activity could be developed by an entity other than the project participants. Hence the PP has applied the benchmark which are publicly available in the market	OK	OK
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 62	Ann 5	Not applicable	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	EB 62	Ann 5	Not applicable	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
company is brand new, would have been used for similar projects in the same sector in the country/region?					
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 62	Ann 5	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 conducted?	EB 62	Ann 5	WACC has not been used by the project activity	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 62	Ann 5	Not applicable	OK	OK
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	EB 62	Ann 5	Not applicable	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
make an investment to supply the same (or substitute) products or services?					
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 62	Ann 5	1. The Project Participant has not justified the rationale for applying the 10% sensitivity on all the parameters under Section B.5 of the webhosted PDD. 2. Project Participant has not provided any justification of why the generation [PLF] is not subjected to any sensitivity analysis.	CAR 6	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 62	Ann 5	Refer 6.c.II (above)	-	OK
nn. Is the range of variations selected is reasonable in the project context?	EB 62	Ann 5	The range of variations selected is reasonable in the project context.	OK	OK
oo. Does 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 62	Ann 5	The variation in the sensitivity analysis covers the range of +10% and -10% in section B.5 of the PDD.	OK	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	EB 62	Ann 5	Project participant is requested to demonstrate the scenario of crossing the benchmark with the sensitivity parameters and likelihood of occurring of such scenario.	CL 9	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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?					
qq. Was the plant load factor defined ex-ante in the CDM-PDD according to one of the following options:	EB 62	Ann 5			
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 62	Ann 5	Refer CL 8.	--	OK
ii. The plant load factor determined by a third party contracted by the project participants (e.g. an engineering company)?	EB 62	Ann 5	Refer c.qq.i (above)	-	OK
rr. Was a thorough assessment of all parameters and assumptions used in calculating the relevant financial indicator, and determine the accuracy and suitability of these parameters using the available evidence and expertise in relevant accounting practices conducted?	VVM	111	Not applicable	OK	OK
ss. Were the parameters cross-checked against third-party or publicly available sources,	VVM	111	Not applicable	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
such as invoices or price indices?					
tt. Were feasibility reports, public announcements and annual financial reports related to the proposed CDM project activity and the project participants reviewed?	VVM	111	Not applicable	OK	OK
uu. Was the correctness of computations carried out and documented by the project participants assessed?	VVM	111	Not applicable	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	Not applicable	OK	OK
ww. Is the type of benchmark applied is suitable for the type of financial indicator presented?	VVM	112	Not applicable	OK	OK
xx. Do any risk premiums applied determining the benchmark reflect the risks associated with the project type or activity?	VVM	112	Not applicable	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:			Not applicable	OK	OK
iii. assessing previous investment decisions by the project participants involved?	VVM	112	Not applicable	OK	OK
iv. determining whether the same	VVM	112	Not applicable	OK	OK



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## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
benchmark has been applied?					
v. determining if there are verifiable circumstances that have led to a change in the benchmark?	VVM	112	Not applicable	OK	OK
zz. Did the project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities?	VVM	113	Not applicable	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	Not applicable	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, by cross-checking or other appropriate manner, that the input	VVM	113	Not applicable	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
values from the FSR are valid and applicable at the time of the investment decision?					
<b>d. Barrier analysis</b>					
a. Has barrier analysis been used to demonstrated the additionality of the proposed CDM project activity?	VVM	115	The project participant has not demonstrated the additionality using barrier analysis,	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			
ii. do not prevent the implementation of at least one of the alternatives?	VVM	115			
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	117	Not applicable	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
i. assessing the available evidence and/or undertaking interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) to determine whether the barriers listed in the PDD exist?	VVM	117			
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 <i>at least one of</i> the possible alternatives, in particular the	VVM	117	Not applicable	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
identified baseline scenario?					
<b><i>e. Common practice analysis</i></b>					
a. Is this a large-scale, or first-of-its kind small-scale project activity?	VVM	118	The proposed CDM project activity is a small-scale project and it's not a first-of-its-kind and hence, common practice analysis is not applicable.	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 geographical 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 technologies the relevant region for assessment will be local and for others it may be transnational/global.	VVM	118	Not applicable	OK	OK
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	VVM	120	Not applicable	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
CDM project activities, have been undertaken in the defined region?					
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
<b>7. Monitoring plan</b>					
a. Does the PDD include a monitoring plan?	VVM	122	The webhosted PDD includes a monitoring plan which is described in the section B.7.2 and data and parameters to be monitored is given in section B.7.1 of the webhosted PDD.	OK	OK
b. Is this monitoring plan based on the approved monitoring methodology applied to the proposed CDM project activity?	VVM	122	The project participant has provided the monitoring plan in accordance with applied baseline and monitoring methodology AMS I D, version 17.	OK	OK
c. Were the list of parameters required by the the selected methodology identified?	VVM	123	The parameter required to be monitored as per the applied methodology is net electricity supplied by the project activity to grid, which is identified and included in the PDD.	OK	OK
d. Does the monitoring plan contains all necessary parameters?	VVM	123	The parameter required to be monitored as per the applied methodology is net electricity supplied by the project activity to grid, which	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
			is identified and included in the PDD.		
e. Are the parameters clearly described?	VVM	123	AMS-I D version 17 states Monitoring shall consist of metering the net electricity exported by the renewable technology to the grid. $EG_{BL,y}$ will be monitored and this parameter is clearly described in the PDD.	OK	OK
f. Does the means of monitoring described in the plan comply with the requirements of the methodology?	VVM	123	AMS-I D, Version 17 requires monitoring of the net electricity exported by the project activity to the grid. The same is also described in the monitoring plan in Section B.7.1. and Section B.7.2 of the webhosted PDD.	OK	OK
g. Have all relevant parameters been monitored as indicated in the table of the methodology? PI state any deviations/omissions.	AMS	I.D	The parameter required to be monitored as per the applied methodology is net electricity supplied by the project activity to grid, which is identified and included in the PDD.	OK	OK
h. Has the CO <sub>2</sub> emission factor of the grid electricity measured either by Combined Margin or by the Weighted Average emission?	AMS	I.D	The CO <sub>2</sub> emission factor of the grid electricity is determined by the combined margin emission factor calculations based on the CEA database. This value has been fixed ex ante for the entire crediting period.	OK	OK
i. Has the CO <sub>2</sub> emission factor of fossil fuel type i measured as per the .Tool to calculate project or leakage CO <sub>2</sub> emissions from fossil fuel combustion."	AMS	I.D	There is no use of fossil fuel as the proposed project activity involves grid connected wind power plant. Hence, this is not applicable.	OK	OK
j. Has the Net calorific value of fossil fuel type i measured as per the .Tool to calculate	AMS	I.D	There is no use of fossil fuel as the proposed project activity involves grid connected wind	OK	OK



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## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
project or a leakage CO2 emissions from fossil fuel combustion.			power plant. Hence, this is not applicable.		
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 combustion.	AMS	I.D	There is no use of fossil fuel as the proposed project activity involves grid connected wind power plant. Hence, this is not applicable.	OK	OK
l. Has the Quantity of net electricity supplied to the grid in year y measured using energy meters.	AMS	I.D	The quantity of the net electricity supplied to the grid in year y is measured using energy meters.	OK	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	AMS	I.D	a. Project Participant has provided additional information which is not required under Section B.7.1 of the webhosted PDD. b. Calibration frequency and responsible entity for calibration of the energy meters and Local controller is not clear with the description provided in section B.7.1 and B.7.2 of the PDD c. The cross checking mechanism, and procedure to deal with data uncertainty has not been described in section B.7.1 or B.7.2 of the PDD. d. In Monitoring plan PP has mentioned that the Generation from the individual WTG will be recorded and Net electricity supplied to the grid will be calculated after adjusting for transmission losses (based	CL 10	OK



VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
<p>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</p>			<p>on the Generation from individual WTG). However, the procedure of monitoring and recording the Generation from Individual WTG is not mentioned in the section B.7.2 of the PDD and also the parameter is not monitored. Please Clarify. e. The metering system at the site as well as at the sub-station is not clearly described in the webhosted PDD under Section B.7.1 or B.7.2.</p>		
<p>n. Is the Quantity of biomass consumed in year y monitored/recorded Continuously or estimate using annual energy/mass balance? Notes on measurement method: - 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 consumption<sup>11</sup> of each type of fuel (biomass or fossil) to be used should be specified ex ante. The consumption of each</p>	AMS	I.D	<p>There is no use of biomass fuel as the proposed project activity involves grid connected wind power plant. Hence, this is not applicable.</p>	OK	OK



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CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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					
o. Is the Moisture content of the biomass residues monitored at least on a monthly basis?	AMS	I.D	There is no use of biomass fuel as the proposed project activity involves grid connected wind power plant. Hence, this is 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	There is no use of biomass fuel as the proposed project activity involves grid connected wind power plant. Hence, this is not applicable.	OK	OK
q. Is Net calorific value of biomass residue type k monitored annually?	AMS	I.D	There is no use of biomass fuel as the proposed project activity involves grid	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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			connected wind power plant. Hence, this is not applicable.		
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 from data used to establish EG <sub>historical</sub> ?	AMS	I.D	There was not any exiting renewable plant prior to the project activity. The proposed project activity is green field grid connected wind power plant. Hence, this is not applicable.	OK	OK
s. Is the parameters relevant to reservoir based hydro and geothermal plants monitored following the most recent version of ACM0002?	AMS	I.D	The proposed project activity is grid connected wind power plant. Hence, this is not applicable.	OK	OK
t. Are the monitoring arrangements described in the monitoring plan feasible within the	VVM	123	Refer to CLs mentioned above in this section of the protocol with respect to section B.7 of	-	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
project design?			the web hosted PDD.		
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	Refer to CLs mentioned above in this section of the protocol with respect to section B.7 of the web hosted PDD.	-	-
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	Refer to 7.m above	-	OK
ii. quality assurance procedures?	VVM	123	Refer to 7.m above	-	OK
iii. quality control procedures?	VVM	123	Refer to 7.m above	-	OK
<b>8. Sustainable development</b>					
a. Does the CDM project activity assists Parties not included in Annex I to the Convention in achieving sustainable development?	VVM	125	Contribution of project activity to sustainable development is given for all the four indicators stipulated by Government of India (social well being, economic well being, technological well being and environmental well being).	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 please provide a copy of the Host Country Approval for the proposed project activity.	(CL-1)	OK
<b>9. Local stakeholder consultation</b>					



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## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
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	The project participant conducted a local stakeholder's consultation meeting on 08/11/2011 at CMS- Nanisindhodi (monitoring station of suzlon) which was prior to the publication of the PDD on the UNFCCC website for global stakeholder's consultation from 11/04/2012 to 10/05/2012. The project participant invited local communities, farmers, official of gram panchayat and Official of state utility. However, Project Participant to provide all supporting evidence of the local stakeholder consultation process. E.g Copy of the invitation letters given to stakeholders, minutes of the stakeholder meeting and the attendance sheet of the same.	CL 11	OK
b. Have comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited?	VVM	129	The comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity been invited during local stakeholders' consultation meeting.	OK	OK
c. Is the summary of the comments received as provided in the PDD complete?	VVM	129	The summary of the comments are provided in section E.2 of the PDD.	OK	OK
d. Have the project participants taken due account of any comments received and described this process in the PDD?	VVM	129	There was no negative comment received from the local stakeholders.	OK	OK
<b>10. Environmental impacts</b>					



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## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
a. Have the project participants submitted documentation on the analysis of the environmental impacts of the project activity?	VVM	131	It is explained in the section D.1 of the PDD that the proposed CDM project activity does not require Environment Impact Assessment as per the schedule I of Environment Impact assessment (EIA) notification 1994 and 2006.	OK	OK
b. Have the project participants undertaken an analysis of environmental impacts?	VVM	132	Not applicable as commented above.	OK	OK
c. Does the host Party require an environmental impact assessment?	VVM	132	It is explained in the section D.1 of the PDD that the proposed CDM project activity does not require Environment Impact Assessment as per the schedule I of Environment Impact assessment (EIA) notification 1994 and 2006.	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
<b>1. Project design of small-scale clean development mechanism project activities</b>					
a. Does the proposed small-scale project activity meet the requirements of the simplified modalities and procedures for small-scale CDM project activities?	VVM	133	The proposed CDM project activity involves wind energy based power plant with installed capacity of 1.5 MW, which is below 15 MW defined limit of the small scale project activity. Hence it meets the requirement of the simplified M & P of the SSC project activities.	OK	OK
b. Does the project activity qualify within the thresholds of the three possible 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 kilotonnes of carbon dioxide equivalent annually.]	VVM	134	The project activity qualifies the thresholds of the 15 MW <sub>electrical</sub> , as the proposed CDM project activity is Type I project involving implementation and operation of the 1.5 MW wind power plant.	OK	OK



## VALIDATION REPORT

CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
c. Does the project activity conform to one of the approved small-scale categories?	VVM	134	The project activity conforms to the approved small-scale category of “Grid connected renewable electricity generation”.	OK	OK
d. Does the project activity apply the relevant tool and methodology?	VVM	134	The project activity applies relevant methodology AMS I D, version 17 and “Tool to calculate emission factor for an electricity system”.	OK	OK
e. Are the small-scale methodologies applied in conjunction with the general guidance to the methodologies, which provides guidance on equipment capacity, equipment performance, sampling and other monitoring-related issues?	VVM	134	The SSC methodology applied is found to be in conjunction with General Guidance to the SSC methodologies.	OK	OK
f. Is the project activity a debundled component of a large-scale project, i.e., is there a registered small-scale CDM project activity or an application to register another CDM project activity: (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 boundary of the proposed small-scale activity at the closest point?	VVM	134	The project activity is not debundled project activity of a large-scale project as this is the first CDM project of the project participant.  However, refer 3.j.ii (above)	-	OK
g. Is and assessment of the environmental impacts of the proposed CDM project activity required by the host Party?	VVM	134	The host party does not require assessment of environment impact of the proposed CDM project activity.	OK	OK

VALIDATION REPORT



CHECKLIST QUESTION	Ref.	§	COMMENTS	Draft Concl	Final Concl
h. Is the project additional?	VVM	135	The project is additional in accordance with Attachment A to Appendix B, version 8.	OK	OK

## VALIDATION REPORT

**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
<p><b>CAR 1</b>            The project participant is “Zenith Silk Mills Pvt. Ltd.” which is listed in tabular form in section A.3 of the PDD.            The same is not consistent with contact details provided in annex 1 of the PDD.</p>	<p>Table 1            2.d</p>	<p>There had been a typographical error while mentioning the contact details of project proponent in Annex 1 of PDD.</p> <p>The same has appropriately been mentioned now in updated version of PDD, Version 01, 27/07/2012.</p>	<p>The name of the project participant is now mentioned consistently in section A.3 and Annex-I of the revised PDD.</p> <p>Hence the CAR is closed</p>
<p><b>CAR 2</b>            1. In Section A.2, it is stated that the electricity generated from the proposed project activity would be utilized for captive consumption. However details of the captive consumption units in terms of numbers of such units and their locations are not provided in the webhosted PDD.            2. Further provide supporting evidence to demonstrate that the captive consumption unit was dependant on grid alone for its electricity use. [Please provide the electricity bills of the captive unit for 3 years prior to the investment decision date of the proposed project activity ]</p>	<p>Table 1            3.d.i</p>	<p>1. The same has been mentioned in updated version of PDD Version 01, 27/07/2012.</p> <p>2. The requisite electricity bills as supporting evidence to baseline of project activity are being provided as Doc 9- Baseline electricity bills.</p>	<p>1. In section A.2 of the PDD, Project Participant has provided the details of Captive consumption Units and the same is located in Surat.</p> <p>2. The project participant has provided the electricity bills of the previous 3 years prior to the decision making date viz; from the month of June 2007, which clearly shows that the Captive consumption unit situated in Surat was dependent on grid for electricity consumption.</p>



## VALIDATION REPORT

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 observations, the CAR is closed.
<b>CAR 3</b> The project activity details have been provided in section A.4.1.4 of the webhosted PDD related to Location of the project activity. However, the description seems to be exceeding more than one page.	Table 1 3.f.i	The description towards location of project activity has been limited to one page in updated PDD, version 01, 27/07/2012	The details provided in section A.4.1.4 of the revised PDD is now presented in one page only.  Hence the CAR is closed.
<b>CAR 4</b> Justification of key parameters, assumptions and rationales are not provided in section B.4 of the PDD.	Table 1 3.n.ii	The same has been mentioned in section B.4 of updated PDD version 02, 23/08/2012.	Justification of key parameters, assumptions and rationales are provided in section B.4 of the revised PDD.  Hence the CAR is closed
<b>CAR 5</b> It has not been indicated, whether the person/entity mentioned in section B.8 of the PDD is a Project Participants or Not	Table 1 3.u.iii	The same has been mentioned in section B.8 of updated PDD version 01, 27/07/2012.	In section B.8 of the PDD, it is mentioned that the responsible person/entity for the application of the baseline and monitoring methodology is not project participant.  Hence the CAR is closed
<b>CAR 6</b> 1. The Project Participant has not justified the rationale for applying the 10% sensitivity on all the parameters under Section B.5 of the webhosted PDD.	Table 1 6.c.II	1. In line with paragraph 21 of "GUIDELINES ON THE ASSESSMENT OF INVESTMENT ANALYSIS (Version 05), EB 62, Annex 5", a reasonable range of	1. Project participant has applied the 10% sensitivity on the parameters of tariff and PLF, which is in accordance with paragraph 21 of the "Guidelines on the Assessment of Investment



VALIDATION REPORT

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
<p>2. Project Participant has not provided any justification of why the generation [PLF] is not subjected to any sensitivity analysis.</p>		<p>variations are selected to carry out sensitivity analysis for the proposed project activity. Additionally, the threshold variation towards crossings the benchmark IRR has been included in updated PDD version 02, 23/08/2012.</p> <p>2. It is to be noted that IRR of the proposed project activity shows the similar variation with variation in electricity Tariff and Plant Load Factor, therein the sensitivity analysis was performed earlier for electricity tariff only. However, the PLF sensitivity has now been included in update version of PDD, version 01, 27/07/2012.</p>	<p>Analysis (Version 05), EB 62, Annex 5.</p> <p>However the project participant has applied a sensitivity analysis of - 11.5% for the project cost based on the review of the actual project cost as evidenced from the purchase orders placed and -20% on the O&amp;M cost since the actual O&amp;M cost based on the purchase order was observed to be about 17.86% lower than the offer cost.</p> <p>The same has now been revised in the IRR sheet and the PDD. It is further observed that the revised PDD mentions the scenario crossing the benchmark for all the parameters considered for sensitivity.</p> <p>2. The project participant has included the Plant Load Factor (PLF) as a sensitivity parameter in section B.5 of the revised PDD.</p>



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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 CAR is closed
<b>CL 1</b> Project Participant to please provide a copy of the Host Country Approval for the proposed project activity.	Table 1 1.a	The same is being provided as Doc 10- HCA.	Project participant has submitted the Host Country Approval for the project activity dated 13/06/2012, Ref: - 4/6/2012-CCC.  Hence, CL is Closed
<b>CL 2</b> Project Participant has indicated in the webhosted PDD that there is no registered small scale project under CDM with the same project participants, category, technology and with project boundary with in 1 Km of the project boundary of proposed project activity, which is registered with CDM EB with in the previous two years. However, while cross checking through UNFCCC website validation team has observed that the PP intimated UNFCCC for project titled "1.5 MW Wind Power Project CDM project by ZENITH SILK MILLS PVT LTD, VASTA DEVDI ROAD, SURAT -395004, GUJARAT, INDIA" on 19/02/2010, which is in the name of the PP and prior to the proposed project activity. Please Clarify the same in accordance with "Guidelines on Assessment of Debundling for	Table 1 3.j.ii	The Project proponent intimated first to UNFCCC on 3 <sup>rd</sup> February 2011, towards prior consideration of proposed project activity. However, in lieu of proper mentioning of title of project activity in F-CDM- Prior consideration form, UNFCCC requested PP to re-submit the same after dully filled- in the title of project activity. Accordingly, PP re-submitted the Form F to UNFCCC on 19 <sup>th</sup> February 2011. Nevertheless, UNFCCC again requested PP on 2 <sup>nd</sup> March 2011 to fill- in the project title appropriately.  Accordingly, Project Proponent submitted the dully filled F-CDM-Prior consideration form on 4 <sup>th</sup> March 2011 that has been accepted by UNFCCC.	The validation team observed that the prior consideration form was sent to the UNFCCC and the DNA on 04/03/2011 by reviewing the email communication and no communication prior to this date was done to these entities. The Project Participant further sent an email to the UNFCCC dated 06/10/2012 regarding the duplicacy of Form F [Prior consideration of CDM form] to which the UNFCCC responded vide an email to state that the duplicate Prior Consideration Form [Form F] dated 19/02/2010 is erroneous and has been removed from the UNFCCC website. The validation team verified the email communications done by the Project Participant to the



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SSC project activities" Version 03		<p>The supporting document towards the same is being provided as Doc 11-Communication with UN.</p> <p>It is to be noted that PP sought clarification to UNFCCC vide email dated 06/10/2012 for erroneously inclusion of prior consideration for the project activity. The UNFCCC responded to state that erroneously inclusion of prior consideration form dated 19/02/2010 has been removed from the webpage. The aforesaid response of UNFCCC is attached herewith for your reference.</p> <p>Thus the PP confirms there was only one communication of prior consideration to the UNFCCC dated 04/03/2011.</p>	<p>UNFCCC and the reply email from the UNFCCC to the Project Participant and concluded that the Prior consideration date of 19/02/2010 was an erroneous entry on the UNFCCC website.</p> <p>Thus CL is closed.</p>
<b>CL 3</b> Documentation and references of each equation has not been provided and also it is not clear how the baseline emissions are calculated in Section B.6.3 of the PDD.	Table 1 3.r.ii	The same has been mentioned in section B.6.3 of updated PDD version 02, 23/08/2012.	<p>The reference of the equations used has now been provided in section B.6.3 of the revised PDD.</p> <p>Hence, CL is Closed</p>
<b>CL 4</b> Please provide a separate copy of the emission	Table 1	The same is being provided as Doc 12- ER Sheet.	Project participant has provided the separate emission reduction sheet for



## VALIDATION REPORT

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
reduction calculation sheet.	3.r.iii		the project activity. Hence, CL is Closed
<b>CL 5</b> Project Participant to provide the copies of the wheeling agreements signed with the GETCO and TPL	Table 1 4.a	The same is being provided as Doc 13- Wheeling Agreement.	The copies of the wheeling agreement with GETCO and TPL are provided to the validation team. Hence the CL is closed.
<b>CL 6</b> The PDD describes that the project activity is additional and this has been demonstrated considering Investment barrier provided in the Attachment A to Appendix B of Simplified modalities and procedures for small scale CDM project activities. However, the webhosted PDD indicates that the project capacity is less than the 5 MW capacity. The section B.5 of the PDD does not indicate, why the Annex 23, EB 63, “Guidelines for demonstrating additionality of Micro Scale project activities” is not applied for this project activity. Please clarify.	Table 1 6.a	The justification for non-applicability of “Guidelines for demonstrating additionality of Micro Scale project activities” has been provided in updated PDD version 02, 23/08/2012.	The project participant has demonstrated in section B.5 of the PDD that the proposed project activity is not a micro scale project. Hence, the “Guidelines for demonstrating additionality of Micro Scale project activities” is not applicable Hence CL is Closed
<b>CL 7</b> Project participant to justify as to how the fair value is calculated in accordance with local accounting regulation, in the financial calculations.	Table 1 6.c.i	The fair value of the asset has appropriately been calculated by subtracting the overall depreciation during entire life time of project from capital cost of the project activity under consideration.	The fair value [salvage value] of the project activity has been calculated in accordance with the local regulations and the same has been verified and approved by the financial expert engaged by the DOE.



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<p><b>CL 8</b> Project participant to clarify the following w.r.t the financial working submitted :-</p> <ol style="list-style-type: none"> <li>1. How PLF considered is appropriate to the project activity with source of reference</li> <li>2. Source for the insurance cost and transmission charges considered for the project activity.</li> <li>3. Escalation on tariff is not considered for the overall life of the project activity. Please clarify</li> </ol>	Table 1 6.c.m	<ol style="list-style-type: none"> <li>1. In line with paragraph 3 (a) of "Guidelines for the Reporting and Validation of Plant Load Factors, version 01, Annex 11, EB 48, the value of net electricity generation as submitted to bank has primarily been used to compute PLF of project activity. The same is being submitted as Doc 14 PLF supporting. The bank states 29.04 Lakh units as net electricity generation that includes 7% wheeling and transmission charges payable to GETCO. As such wheeling and transmission charges of 7% have been added to net electricity generation for computing PLF of project activity under consideration.</li> <li>2. As mentioned in IRR computation sheet, the insurance cost and transmission charges are sited from offer submitted by wind farm developer-Suzlon, the same has been submitted earlier as Doc 8-</li> </ol>	<p>Hence the CL is closed.</p> <ol style="list-style-type: none"> <li>1. The validation team verified the letter from the financing bank viz; The Surat People's Co-op Bank Ltd vide letter dated 25/01/2012, which states the annual net generation as 2904000 units from the 1.5 MW project capacity. This deduces to a PLF of 22.10%. Since this PLF value is based on the net electricity generation, the Project Participant has added another 7% as the transmission and wheeling charges since the electricity generated from the proposed project activity would be used for captive consumption. The value of 7% charges is taken from the GERC Tariff Order dated 30/01/2010 which was available and applicable at the time of investment decision. Therefore the PLF deduces to 23.76%.</li> <li>2. The source for the insurance cost and transmission charges are considered from the offer letter of</li> </ol>



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		<p>Suzlon Offer.</p> <p>3. It is to be noted that the overall escalation on electricity tariff (from Sep 2007 to September 2010, three year prior to project decision) calculates out as about 0.87%, that is not a significant value while considering the tariff. Moreover, the possible variation in tariff and threshold variation to crossing the IRR benchmark has too been addressed under sensitivity analysis. Therein, apart from the tariff sensitivity, tariff escalation has not considered separately.</p>	<p>Suzlon Energy Ltd and hence accepted.</p> <p>3. The validation team reviewed the electricity bills of the captive unit of the project participant where the electricity generated from the project activity would be wheeled to, for 3 years prior to the investment decision from June 2007 to September 2010 and observed the tariff to be escalating by 0.87%. Therefore the validation team concluded that escalation in tariff is not material and therefore not escalated in the financial working. However the parameter of tariff has been subjected to a sensitivity analysis of +10%.</p> <p>Hence the CL is closed.</p>
<p><b>CL 9</b> Project participant is requested to demonstrate the scenario of crossing the benchmark with the sensitivity parameters and likelihood of occurring of such scenario.</p>	<p>Table 1 6.c.pp</p>	<p>The same has been mentioned in IRR sheet and section B.5.of updated PDD, version 01, 27/07/2012.</p>	<p>The project participant has now included the scenario of project activity parameters crossing the benchmark, in the revised IRR sheets and the revised PDD, Section B.5.</p> <p>Hence the CL is closed.</p>



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<p><b>CL 10</b></p> <p>a. Project Participant has provided additional information which is not required under Section B.7.1 of the webhosted PDD.</p> <p>b. Calibration frequency and responsible entity for calibration of the energy meters is not clear with the description provided in section B.7.1 and B.7.2 of the PDD</p> <p>c. The cross checking mechanism, and procedure to deal with data uncertainty has not been described in section B.7.1 or B.7.2 of the PDD.</p> <p>d. In Monitoring plan PP has mentioned that the Generation from the individual WTG will be recorded and Net electricity supplied to the grid will be calculated after adjusting for transmission losses (based on the Generation from individual WTG). However, the Generation from Individual WTG is not monitored. Please Clarify.</p> <p>e. The metering system at the site as well as at the sub-station is not clearly described in the webhosted PDD under Section B.7.1 or B.7.2</p>	<p>Table 1 7.m</p>	<p>a. The same has been addressed in section B.7.1 of updated PDD version 01, 27/07/2012.</p> <p>b. The same has been mentioned in updated version of PDD, version 01/27/07/2012.</p> <p>c. The same has been mentioned in updated version of PDD, version 01, 27/07/2012.</p> <p>d. As mentioned in section B.7.2 of PDD, Net electricity supplied to grid will be calculated based on the measured values of “export” and “import” on the meter at the delivery point (i.e. at connected substation), where monthly joint meter reading is taken by utility officials (GETCO/GEDA) and project proponent representative i.e. Suzlon officials. The meter at the final uploading point to grid (i.e. at the connected substation) is common to the project activity and other wind</p>	<p>a. The project participant has removed the additional information from section B.7.1 of the PDD.</p> <p>b. Annual Calibration of all main and check meters will be done and the same is mentioned in section B.7.1 of the PDD.</p> <p>c. The cross checking mechanism and procedure for handling data uncertainty has been described in section B.7.2 of the revised PDD.</p> <p>d. The monitoring system explained by the project participant was observed to be in line with the observations during the site visit.</p> <p>e. The metering system is now clearly explained in section B.7.2 of the PDD.</p> <p>Hence, CL 10 is closed</p>



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		<p>turbines in the wind farm that are not under this project activity. Accordingly, apportioning of electricity supplied to grid by each WTG or group of WTGs with respect to their owner, is done based on the individual meter readings recorded from the controller of each WTG and Joint Meter Readings taken at connected substations. Therein, the net electricity supplied by the project activity is a computed value to be sourced from 'Certificate for Share of Electricity Generated by Wind Farm' issued by State Load Dispatch Centre, GETCO and that has been mentioned as monitored parameter.</p> <p>e. The same has been mentioned in section B.7.1 of updated PDD, version 01, 27/07/2012</p>	
<p><b>CL 11</b> The local stakeholder consultation process is described in the webhosted PDD. However, Project Participant to provide all supporting evidence of the local stakeholder consultation process. E.g Copy of the invitation</p>	<p>Table 1 9.a</p>	<p>The same is being provided as Doc 15- Stakeholder meet documents.</p>	<p>The Project participant has provided the documents related to the local stakeholder meeting of the project activity, such as Invitation letter dated 24/10/2011, Attendance Sheet dated 08/11/2011 and etc.</p>



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letters given to stakeholders, minutes of the stakeholder meeting and the attendance sheet of the same.			Hence the CL is Closed