

VALIDATION REPORT

Vish Wind Infrastructure LLP (VWIL)

**Bundled Wind Power Project in
Jamnagar, Gujarat**

SGS Climate Change Programme

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Commenting Period:		06/01/2011 to 04/02/2011	
First PDD Version and Date:		Version 01 dated 30/12/2010	
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Summary:			
<p>Vish Wind Infrastructure LLP (VWIL) has commissioned SGS to perform the validation of the project: Bundled Wind Power Project in Jamnagar, Gujarat.</p> <p>Methodology Used: AMS I.D (Sectoral Scope: 1: Energy industries - renewable/non-renewable sources)</p> <p>Version and Date: Version 16 dated 11th June 2010</p> <p>The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against CDM Validation and Verification Manual (Version 01.2), Kyoto Protocol requirements, CDM Executive Board/UNFCCC rules.</p> <p>The report is based on the assessment of the project design document undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to document reviews, follow up actions (e.g. site visit, telephone or e-mail interviews) and also the review of the applicable simplified methodology and underlying formulae and calculations.</p> <p>The report and the annexed validation describes a total of 8 findings which include:</p> <ul style="list-style-type: none"> • 5 Corrective Action Requests (CARs); • 3 Clarification Requests (CLs); • 0 Forward Action Requests (FARs); and <p>All findings have been closed satisfactorily and the project will be recommended to the CDM Executive Board with a request for registration.</p>			
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Abbreviations

BM	Build Margin
BSE	Bombay Stock Exchange
CAPM	Capital Asset Pricing Model
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reduction
CERC	Central Electricity Regulatory Commission
CL	Clarification Request
CM	Combined Margin
COP/MOP	Conference of Parties serving as the Meeting of Parties
CP	Conference of Parties
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA	Environmental Impact Assessment
EIL	Enercon India Limited
FAR	Forward Action Request
GEDA	Gujarat Energy Development Agency
GERC	Gujarat Electricity Regulatory Commission
GETCO	Gujarat Energy Transmission Corporation Limited
GHG	Greenhouse gas(es)
GUVNL	Gujarat Urja Vikas Nigam Limited
HCA	Host Country Approval
INR	Indian Rupee
IRR	Internal Rate of Return
ISHC	International Stakeholder Consultation
JMR	Joint Meter Reading
JNI	J. N. Investment & Trading Co. Private Limited
LoA	Letter of Approval
MoC	Modalities of Communication
MoEF	Ministry of Environment and Forests
MP	Monitoring Plan
NEWNE	Northern, Eastern, Western and North Eastern
NGO	Non Governmental Organization
O&M	Operations & Maintenance
OM	Operating Margin
PDD	Project Design Document
PIN	Project Idea Note
PLF	Plant Load Factor
PP	Project Participant
PPA	Power Purchase Agreement
QA/QC	Quality Assurance/Quality Control
SEA	State Energy Account
SLDC	State Load Despatch Centre
SSC	Small Scale
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
VWIL	Vish Wind Infrastructure LLP
WEC	Wind Energy Converter

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1. Validation Opinion

SGS United Kingdom Ltd has been contracted by Vish Wind Infrastructure LLP (VWIL) to perform a validation of the project: "Bundled Wind Power Project in Jamnagar, Gujarat" in India.

The Validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism (CDM), Validation and Verification Manual (Version 1.2) and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

By installing 12 Wind Energy Converters (WECs) of capacity 0.8 MW each in the state of Gujarat with total installed capacity of 9.6 MW and supplying the electricity to the NEWNE grid, the project activity will result in reductions of greenhouse gas (GHG) emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

In our opinion, the project meets all relevant UNFCCC, CDM criteria and all relevant host country criteria. The project correctly applies methodology AMS I.D. Version 16. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be 185,410 t of CO₂e over a 10-year crediting period, averaging 18,541 t of CO₂e annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given the underlying assumptions do not change.

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

Signed on Behalf of the Validation Body by Authorized Signatory



Signature:

Name: Siddharth Yadav

Date: 4th July 2011

2. Introduction

2.1 Objective

Vish Wind Infrastructure LLP (VWIL) has commissioned SGS to perform the validation of the project: "Bundled Wind Power Project in Jamnagar, Gujarat" with regard to the relevant requirements for Clean Development Mechanism (CDM) project activities. The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

2.2 Scope

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

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

2.3 GHG Project Description

The proposed CDM project activity is a bundled^{50/} wind power project which involves the installation of 12 WECs of 0.8 MW each with an installed capacity of 9.6 MW in Jamnagar district of the state of Gujarat. The details of the sub-bundles are as follows:

Project Participant	No. of WECs	Total Capacity (MW)	Commissioning date
Vish Wind Infrastructure LLP	8	6.4	29/09/2010 ^{17/} and 30/09/2010 ^{17/}
J. N. Investment & Trading Co. Private Limited	4	3.2	27/09/2010 ^{18/}

The electricity generated by the project activity will be supplied to the NEWNE grid. Thus, the project aims at reducing GHG emissions by replacing the same amount of electricity from the NEWNE grid, which would otherwise be generated by a fossil fuel based power plant.

2.4 The Names and Roles of the Validation Team Members

Assessment Team	
Name	Role
Ravi Kant Soni	Lead Assessor
Sudeep Kodialbail	Assessor/ Local Assessor
Vikas Bankar	Expert (Scope TA 1.2 - Wind)
Anshul Sharma	Expert (Finance)

Technical Review Team	
Name	Role
Ramkrishna Patil	Technical Reviewer & Expert (Scope TA 1.2 - Wind)

3. Methodology

3.1 Review of CDM-PDD and Additional Documentation

The validation is performed primarily as a document review of the publicly available project document version 01 dated 30/12/2010 and the subsequent versions: version 02 (dated 18/02/2011); version 03 (dated 03/03/2011); version 04 (dated 09/05/2011); version 05 (dated 26/05/2011) and version 06 (dated 23/06/2011) (final version). Trained assessors using a validation protocol attached as Annex 2 Table 2 perform the assessment

The site visit was performed from 9th to 11th February 2011 by the Assessor/Local Assessor and Sectoral expert. The results are summarised as Annex 1 in the validation report. The validation team has checked the statements mentioned in the PDD through review of documents and contacts with stakeholders.

3.2 Use of the Validation Protocol

The validation protocol used for the assessment is designed in accordance with the Validation and Verification Manual, Version 01.2. It serves the following purposes:

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

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

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

The completed validation protocol for this project is attached as Annex 2 to this report

3.3 Findings

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

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

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

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

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

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

Corrective Action Requests and Clarification Requests are raised in the draft validation protocol and detailed in a separate form (Annex A.3). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to CLs and FARs.

3.4 Internal Quality Control

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team. Findings can be raised at this stage and client must address them within agreed timeline.

4. Validation Findings

4.1 Approval

The PP has submitted, to the assessment team, the letter of approval^{/5/} issued by the Indian DNA, 'The Ministry of Environment & Forests' bearing No. 4/17/2010-CCC dated 28/04/2011. The name of the project activity and the Project Proponent in the HCA was verified against that in section A.1 and section A.3 of the PDD and was found to be consistent. The HCA was further verified against the website of the Host Party DNA at the following link http://cdmindia.in/project_details_view.php?id=292&oid=1&page=5&reporttype=1 to confirm its authenticity (Project ID - 247/09/2010).

The letter of approval confirms that:

- (a) The Government of India has ratified the Kyoto Protocol in August 2002 and hence is a Party to the Kyoto Protocol
- (b) The HCA is an approval of voluntary participation in the proposed CDM project activity
- (c) The project contributes to Sustainable Development in India
- (d) The HCA refers to the precise proposed CDM project activity – 'Bundled Wind Power Project in Jamnagar, Gujarat' – mentioned in the PDD being submitted for registration

The LoA is unconditional with respect to (a) to (d) mentioned above.

Discussion of CARs/CLs

CAR #1 was raised requesting the PP to submit the HCA and address the inconsistency in the project title between the webhosted PDD and the HCA. In response, the PP has submitted a revised HCA bearing Letter No. 4/17/2010-CCC dated 28/04/2011. It was verified against the PDD as mentioned above and accepted. Hence, CAR #1 was closed.

Opinion

The validation team confirms that the HCA submitted by the PP complies with the requirements of paragraphs 44-50 of the VVM version 01.2 (EB 55 Annex 1).

4.2 Participation Requirements

The host country for this project is India and has ratified the Kyoto Protocol on 26th August 2002. This was checked from the UNFCCC website <http://maindb.unfccc.int/public/country.pl?country=IN>.

The PPs listed in tabular form in section A.3 of the PDD are M/s Vish Wind Infrastructure LLP & M/s J. N. Investment & Trading Co. Private Limited. The HCA^{/5/} from the Indian DNA approves the participation of the PPs mentioned above. Therefore, the PPs are approved by a Party to the Kyoto Protocol. In addition, the PPs listed in tabular form in section A.3 of the PDD are consistent with the contact details provided in Annex 1 of the PDD. The validation team also confirms that no entities other than those approved as project participants are included in section A.3 of the PDD.

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

In accordance with paragraph 40 (b) of the CDM Modalities and Procedures, the PDD of the proposed CDM project activity was made publicly available for the stakeholder consultation process on the UNFCCC site at <http://cdm.unfccc.int/Projects/Validation/DB/HZ71HCGMVWBSLX4COTU7NONB1ILUBE/view.html>. The PDD was webhosted from 06/01/2011 to 04/02/2011 and comments were invited on the validation requirements. The comments received have been discussed in section 5 of this report.

The PDD has been correctly applied and completed in accordance with the CDM-SSC-PDD form version 03, which is the latest available version. The tables, headings, logo, format and fonts are in accordance with that used in the template. Thus, the PDD is in accordance with the applicable CDM requirements for completing PDDs.

The PP has submitted the MoC^{6/} form, which was verified against the project title and information mentioned in Annex 1 and found to be consistent and hence accepted.

Opinion

In accordance with the requirements of paragraphs 51 to 54 of the VVM version 01.2 (EB 55 Annex 1), the validation team is of the opinion that, the proposed CDM project activity meets all the relevant participation requirements.

4.3 Project Design Document including Project Description

The Project Participant has used the Small Scale Project Design Document Form (CDM-SSC-PDD) Version 3 (http://cdm.unfccc.int/Reference/PDDs_Forms/PDDs/index.html) and has followed the Guidelines for completing the CDM-SSC-PDD Version 5 (<http://cdm.unfccc.int/Reference/Guidclarif/pdd/index.html>). These are the latest available versions and have been confirmed from the UNFCCC website.

The title of the proposed CDM project activity 'Bundled Wind Power Project in Jamnagar, Gujarat', mentioned in section A.1 of the PDD, was verified on the UNFCCC website and was found to be unique. The correctness of the project title was further verified against that mentioned in the HCA. The table indicating the name of the PPs i.e. M/s Vish Wind Infrastructure LLP & M/s J. N. Investment & Trading Co. Private Limited has been correctly applied in section A.3 of the PDD and is consistent with that mentioned in annex 1.

The proposed CDM project activity is a bundled^{50/} wind power project, which involves the installation of 12 WECs of 0.8 MW each with an installed capacity of 9.6 MW in Jamnagar district of the state of Gujarat. The details of the sub-bundles are as follows:

Project Participant	No. of WECs	Total Capacity (MW)
Vish Wind Infrastructure LLP	8	6.4
J. N. Investment & Trading Co. Private Limited	4	3.2

Details about the WEC ID nos.; specific geographical location and commissioning dates for both PP's are as follows:

Vish Wind Infrastructure LLP				
Sr. No	WEC Id Number	Commissioning date	Latitude	Longitude
1	EIL/800/10-11/1887	29/09/2010	21° 56' 13.4" N	70° 11' 11.5" E
2	EIL/800/10-11/1888	29/09/2010	21° 56' 19.1" N	70° 11' 03.0" E
3	EIL/800/10-11/1889	29/09/2010	21° 59' 23.7" N	70° 06' 53.3" E
4	EIL/800/10-11/1890	29/09/2010	21° 59' 48.6" N	70° 06' 17.5" E
5	EIL/800/10-11/1891	30/09/2010	21° 58' 57.6" N	70° 10' 21.9" E
6	EIL/800/10-11/1892	30/09/2010	21° 59' 06.3" N	70° 10' 19.9" E
7	EIL/800/10-11/1893	30/09/2010	21° 59' 23.3" N	70° 10' 14.4" E
8	EIL/800/10-11/1894	30/09/2010	21° 59' 29.8" N	70° 10' 08.6" E

J. N. Investment & Trading Co. Private Limited				
Sr. No	WEC Id Number	Commissioning date	Latitude	Longitude
1	EIL/800/10-11/1822	27/09/2010	21° 59' 20.8" N	70° 13' 19.0" E
2	EIL/800/10-11/1823	27/09/2010	21° 59' 12.7" N	70° 13' 19.7" E
3	EIL/800/10-11/1824	27/09/2010	21° 58' 42.7" N	70° 13' 11.1" E
4	EIL/800/10-11/1825	27/09/2010	21° 56' 01.8" N	70° 11' 04.1" E

The WEC ID nos., capacity and commissioning dates have been verified through the commissioning certificate^{/17//18/} and cross-verified against the GEDA clearance^{/26//27/} for both the sub-bundles. The PPAs^{/24//25/} has been checked to confirm grid connectivity and ownership. The land lease deed^{/19/ to /23/} and GEDA clearance^{/26//27/} has been checked to confirm the ownership and that the PP has received clearance to implement the project activity at the selected site. The technical details of the project activity were verified from the purchase order^{/15//16/}, commissioning certificate^{/17//18/}, and physical inspection during the site visit. The PP has provided the geographical coordinates of the WECs which allows for clear identification of the project activity. These coordinates were verified using Google earth. The proposed CDM project activity does not involve any alteration of existing installations and processes. The WECs installed as a part of the project activity are new as confirmed from the purchase orders^{/15//16/} and cross verified during the site visit.

The project falls under type (i): Renewable Energy Projects, as the project activity involves generation of electricity using wind energy which is a renewable source, and Category D, Grid connected Renewable Electricity Generation as the generated electricity by the project will be exported to the NEWNE grid. Hence, according to simplified modalities and procedures for small-scale CDM project activities the type and category of the project activity has been correctly identified in the PDD.

The proposed CDM project activity is expected to reduce emissions by supplying zero emission electricity to the NEWNE grid, which is dominated by fossil fuel based power plants. Therefore, the net electricity generated by the project will displace the same amount of electricity that would have otherwise been generated by fossil fuel based power plants and a certain amount of GHG emissions will be consequently reduced as well. The proposed CDM project activity is estimated to achieve an annual emission reduction of 18,541 tCO₂e for 10 year crediting period. This is reflected in the table in section A.4.3 of the PDD. The table reflects the estimated amount of emission reductions over the entire crediting period.

The PP has given a written declaration^{/53/} to confirm that the project will remain within the limits of a small scale project activity every year, for the entire crediting period and there is no usage of public funding in the project activity.

The description of the project mentioned in the PDD was found to be accurate and complete. It is consistent and in compliance with the actual situation. All details have been consistently mentioned throughout the PDD.

Discussion of CARs/CLs

CL #4 was raised requesting the PP to address the following issues:

- The PP was requested to clarify the following statement in section B.6.1 of the PDD "Since the project activity is the installation of a new grid connected renewable power plant the $EG_{PJ,y}$ is calculated as: $EG_{PJ,y} = EG_{facility,y}$ ". In response, the PP has deleted the statement from section B.6.1 of the PDD. This has been checked and is accepted.
- The PP was requested to clarify the "Justification of the choice of data" of the parameters in section B.6.2 of the PDD. In response, the PP has revised the "Justification of the choice of data" for the parameters in section B.6.2 of the PDD. The justification provided is appropriate and hence accepted.

Thus, CL #4 was closed out. Detailed discussions have been provided in annex 3 under CL #4.

CAR #5 was raised requesting the PP to address the following issues:

- a. The PP was requested to mention in the PDD the correct references to the latest EB guidance's and the version numbers of the tools used. In response the PP has revised the PDD giving the reference to the latest available EB guidelines and tools used; and have mentioned the correct references for the same in the revised PDD. This has been checked and accepted.
- b. The PP was requested to complete section B.6.3 of the PDD as per the guidelines for completing the CDM-SSC-PDD. In response, the PP has revised the section B.6.3 of the PDD as per the guidelines. Section B.6.3 of the revised PDD has been checked against the guidelines for completing the CDM-SSC-PDD and is found to be complete.

Thus, CAR #5 was closed out. Detailed discussions have been provided in annex 3 under CAR #5.

Opinion

The PDD satisfies the requirements of paragraphs 55-64 of VVM version 01.2^{7/} (EB 55 Annex 1). The PDD used as a basis for validation has been prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website. The PDD contains a clear description of the project activity that provides a clear understanding of the precise nature of the project activity. This description was found to be accurate and complete. It is consistent and in compliance with the actual situation. All details have been consistently mentioned throughout the PDD.

4.4 Eligibility as a Small Scale Project

The proposed CDM project activity is a bundled^{50/} renewable energy project with an installed capacity of 9.6 MW that supplies the generated power to the grid. This has been verified by physical verification of the WEC during the site visit; crosschecked from the technical specification mentioned in the purchase order^{15/16/}; commissioning certificates^{17/18/} and the PPA^{24/25/} signed with the state utility.

Thus, the proposed CDM project activity qualifies within the threshold of 15 MW and meets the eligibility criteria for small-scale CDM project activities mentioned in paragraph 6 (c) of decision 17/CP.7 and the revised definitions of which is provided in paragraph 28 of decision 1/CMP.2. Also, the project activity conforms to type (i) (Renewable Energy Projects) and category D (Grid connected renewable electricity generation). The project activity falls under sectoral scope 1: Energy industries (renewable-/ non-renewable sources).

The PP has used AMS I.D Version 16, which is an approved small-scale methodology and has been verified from the following site <http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html>. The applicability criteria of the methodology have been described in section 4.5 below.

The PDD mentions that the PPs do not have any registered small scale CDM activity or applied for registration of another small scale CDM project activity within 1km of the respective project boundaries of this project in the same project category and technology/measure. The project activity is not a de-bundled project activity as mentioned in the PDD. This has been checked through UNFCCC web site and during the site visit by the validation team. The project activity is a bundled project activity based on the Investors and locations which has been checked during the site visit and discussion with PP and found to be satisfactory.

Opinion

As per the requirements of paragraphs 134-136 of VVM version 01.2^{7/} (EB 55 Annex 1), the validation team is of the opinion that the proposed project activity is eligible as a small-scale CDM project activity.

4.5 Applicability of selected methodology to the project activity

The proposed CDM project activity uses the small scale methodology AMS I.D Version 16. The following steps have been undertaken for assessing the applicability conditions of the methodology mentioned in paragraphs 1 to 8 of the methodology:

1. Paragraph 1 – The project activity is a grid connected wind power project and therefore is a renewable energy project. The project activity supplies electricity to the NEWNE Grid. The use of WECs for power generation was confirmed during the site visit and through the purchase orders^{15/16/}. The grid connectivity of the project & sale of electricity to the grid was verified through

the PPA^{/24//25/} signed with the respective state utilities. Hence, the methodology AMS I. F. not applicable to this project activity.

2. Paragraph 2 – The purchase orders^{/15//16/} and clearances^{/26//27/} issued for the project activity indicates that the project activity is a Greenfield plant. It is not a capacity addition or retrofit or replacement as defined in the methodology. This was also verified during the site visit.
3. Paragraph 3 – This criteria is related to hydropower plants and hence not applicable to the project activity.
4. Paragraph 4 – This criteria is related to biomass power plants and hence not applicable to the project activity.
5. Paragraph 5 – The project activity only has a renewable component as confirmed in paragraph 1. The installed capacity of the project is 9.6 MW which is within the threshold of 15 MW for small-scale projects. This was verified from the commissioning certificates^{/17/ /18/}.
6. Paragraph 6 – The project activity is a grid connected wind power project and thus does not involve combined heat and power generation systems. This was verified during the site visit. Hence this para is not applicable to the project activity
7. Paragraph 7 – This criteria is not applicable since the project is a Greenfield plant as discussed under paragraph 2.
8. Paragraph 8 – This criteria is not applicable since the project is a Greenfield plant as discussed under paragraph 2.

It has also been checked as per the requirements of paragraph 77 of the VVM version 01.2 that there will not be any greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.

Discussion of CARs/CLs

CL #4 was raised requesting the PP to mention all the applicability criteria as per the applicable methodology in section B.2 of the PDD. The PP has mentioned all the applicability criteria as per the applicable methodology in section B.2 of the PDD. This has been checked against the selected methodology and is accepted. Thus CL #4 was closed out.

Opinion

Based on the above discussion, that validation team confirms that the proposed CDM project activity meets all the applicability conditions and all other stipulations of the selected methodology AMS I.D Version 16.

4.6 Project Boundary

The selected methodology AMS I.D Version 16 paragraph 9 states that “The physical, geographical site of the renewable generation source delineates the project boundary.”

The PP has described the project boundary in section B.3 of the PDD and has included the WECs, metering yard, sub-station and the NEWNE grid, to which the proposed project activity evacuates power, inside the boundary. This was verified through physical inspection during the site visit and through the commissioning certificates^{/17/ /18/} and PPA^{/24/ /25/}. The NEWNE grid has been correctly identified for the calculation of electricity emission factor, as the project displaces electrical energy from the NEWNE grid, as per the CEA database version 05^{/11/} which was available at the time of webhosting the PDD for ISHC.

The diagrammatic description of the project boundary, mentioned in section B.3 of the PDD, correctly describes the boundary.

The PP has included CO₂ in the calculation of the baseline. In the baseline scenario, the electricity would have been sourced from the NEWNE grid which in turn is connected to fossil fuel fired power plants which emit CO₂ and hence the inclusion of CO₂ in calculating the baseline is appropriate.

The exclusion of CH₄ & N₂O in the baseline scenario is appropriate, as there are no associated emissions of the same in a wind power project. The project activity involves the generation of electricity using wind energy. Hence, there are no project emissions associated with this project activity. Hence, the exclusion of CO₂, CH₄ & N₂O in the project scenario are appropriate.

Opinion

The validation team is of the opinion that the project boundary has been correctly identified in the PDD inline with paragraph 79 of VVM version 01.2^{7/} (EB 55 Annex 1).

4.7 Baseline Selection and Additionality

The PP has correctly identified the baseline of the proposed CDM project activity as paragraph 10 of the selected methodology AMS I.D Version 16:

“If the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.”

The baseline emissions have been calculated as per paragraph 11 of the methodology:

“The baseline emissions are the product of electrical energy baseline $EG_{BL,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor.”

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

Where:

BE_y Baseline Emissions in year y (t CO₂)

$EG_{BL,y}$ Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)

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

The emission factor has been calculated as per paragraph 12(a) of the methodology:

“The Emission Factor can be calculated in a transparent and conservative manner as follows:

(a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the ‘Tool to calculate the emission factor for an electricity system’.”

The PP has referred to version 02.1.0 of the tool to calculate emission factor for an electricity system, which is the latest available version.

The demonstration of additionality has been described in detail in sections 4.7.1 and 4.7.4 below.

Based on the requirements of paragraphs 81-88 of the VVM version 01.2^{7/} (EB 55 Annex 1), the validation team confirms that:

- All the assumptions and data used by the PP are listed in the PDD, including their references and sources
- All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD
- Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable
- Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD
- 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.

4.7.1 Additionality

The proposed CDM project activity has demonstrated additionality by applying the Attachment A to Appendix B of the simplified modalities and procedures for small-scale CDM project activities and by referring to paragraph 1(a) Investment barrier of EB 35 Annex 34 (Non-binding best practice examples to demonstrate additionality for SSC project activities). The PP has appropriately selected the benchmark analysis to demonstrate additionality. The validation of the input parameters used in the investment analysis and the benchmark analysis has been described in detail in section 4.7.4 below.

The approach used in the PDD was first assessed by verifying the following documents:

1. Proposals^{/13/ /14/} issued by the WEC suppliers
2. Purchase orders^{/15/ /16/} issued to the WEC suppliers
3. Board resolution extracts^{/46/ /47/}
4. CEA database version 5^{/11/}
5. Evidence for PLF as per EB 48 annex 11^{/49/}
6. GERC order 1 of 2010^{/48/}
7. Land Lease Deed^{/19/ to /23/}
8. Clearance issued by GEDA^{/26/ /27/}
9. Commissioning Certificates^{/17/ /18/}
10. Power purchase agreements^{/24/ /25/}

The data, rationales, assumptions and justifications mentioned in the PDD^{/1/}, investment analysis excel sheets^{/2/} and the benchmark excel sheets^{/3/} were crosschecked against the local knowledge, of the validation team, about regulatory and applicable legal requirements in the Host country India. The documents were also verified by a sectoral and financial expert.

The information in the above mentioned documents were also verified against the actual situation on the site and found to be accurate. The staff at the sub-station and the representative of the WEC providers was also interviewed to verify the accuracy in the documents.

Opinion

Based on the responses to the various approaches mentioned above and the requirements of paragraphs 94-97 of the VVM version 01.2^{/7/} (EB 55 Annex 1), the validation team confirms that the documents provided for the project activity are appropriate. Hence, the data, rationales, assumptions and justifications provided in the PDD and IRR excel sheet are reliable and credible.

4.7.2 Prior Consideration of the Clean Development Mechanism

The start date of the proposed CDM project activity has been mentioned in the PDD as 05/04/2010. The evidence for the same submitted by the PP is the purchase order^{/16/} issued to EIL by J. N. Investment & Trading Co. Private Limited for the supply of 4 WECs. The purchase orders were checked for the date and was found to be consistent with that mentioned in the PDD. Also, the start date was found to be in line with the definition of the start date mentioned in the Glossary of CDM terms version 5 and paragraph 67 of EB 41 meeting report.

The start date of the proposed CDM project activity is 05/04/2010, which is after the date of 02/08/2008 and hence it is a new project activity as per EB 49 annex 22. For new project activities, the PP must inform a Host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status. Such notification must be made within six months of the project activity start date and shall contain the precise geographical location and a brief description of the proposed project activity, using the standardized form F-CDM-Prior Consideration.

VWIL has sent a letter dated 10/09/2010^{/39/} and an email dated 14/09/2010^{/40/} informing the host party DNA about the commencement of the project activity and intention to seek CDM status. The host party DNA has responded through email dated 16/09/2010^{/41/} acknowledging this. It is noted that there are two-project participant involved in the project activity i.e.

Project participant Name	No. of WECs
Vish Wind Infrastructure LLP	8

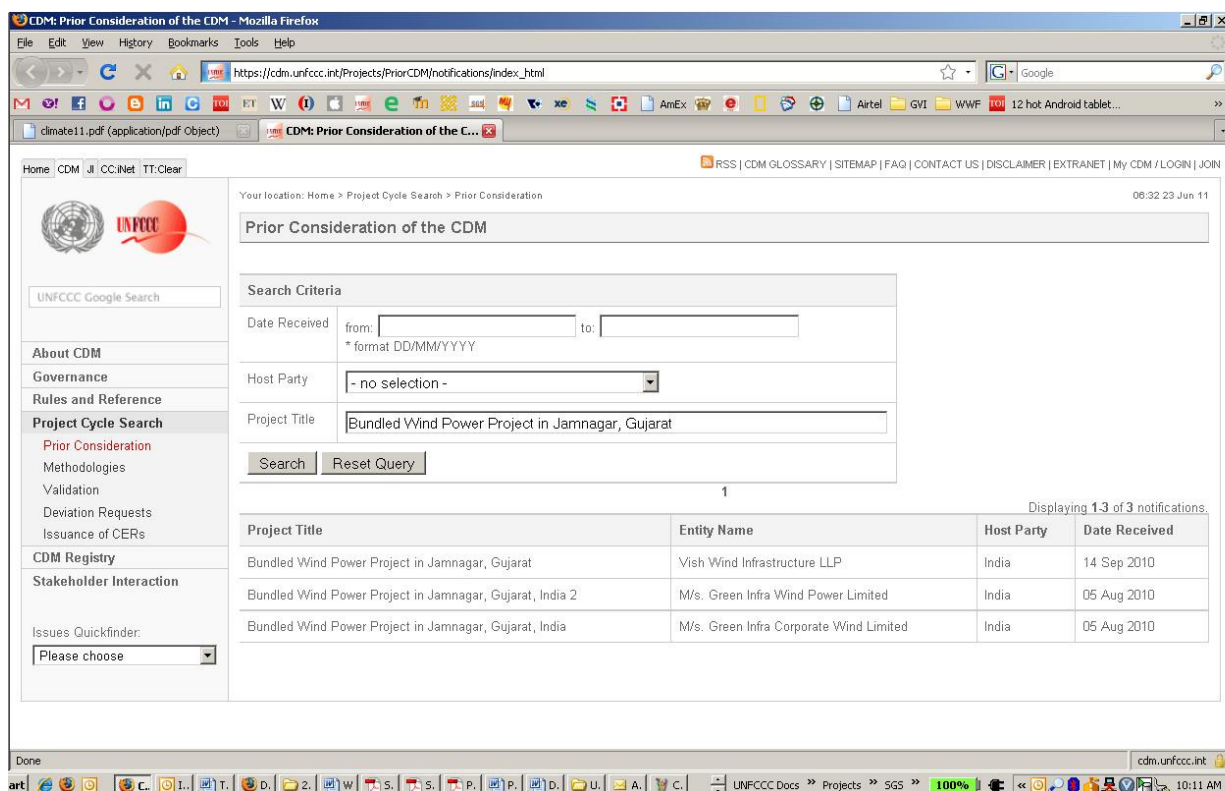
J. N. Investment & Trading Co. Private Limited

4

The notification sent to the UNFCCC includes geographical co-ordinates of all WECs belongs to both project participants hence it is concluded that the PP has informed the host party DNA within 6 months of the project activity start date as per the requirements of paragraph 2 of EB 49 Annex 22.

The dates to be taken into account while validating prior consideration of CDM as per EB 49 Annex 22 with respect to intimating the UNFCCC secretariat are as follows:

- **05/04/2010^{/16/}** – Start date of the project activity
- **14/09/2010^{/42/}** – VWIL has sent an email to the UNFCCC secretariat using the standardized form F-CDM-Prior Consideration dated 10/09/2010^{/37/}. This intimation has been done within 6 months of the start date of the project activity. All information as required by the form has been mentioned by the PP. The geographical co-ordinates have been mentioned as an Annexure 1 to the form.
- **14/09/2010** – “Date Received” as mentioned on the UNFCCC website. This can be confirmed from the prior consideration webpage of the UNFCCC website (snapshot shown below).



The screenshot shows the UNFCCC website's 'Prior Consideration of the CDM' page. The search criteria are: Date Received from: [] to: [], Host Party: [- no selection -], and Project Title: Bundled Wind Power Project in Jamnagar, Gujarat. The search results display 13 notifications, with the first three shown in the table below.

Project Title	Entity Name	Host Party	Date Received
Bundled Wind Power Project in Jamnagar, Gujarat	Vish Wind Infrastructure LLP	India	14 Sep 2010
Bundled Wind Power Project in Jamnagar, Gujarat, India 2	M/s. Green Infra Wind Power Limited	India	05 Aug 2010
Bundled Wind Power Project in Jamnagar, Gujarat, India	M/s. Green Infra Corporate Wind Limited	India	05 Aug 2010

As per the above chronology, it can be observed that the PP has notified the UNFCCC on 14/09/2010 which is within 6 months of the project activity start date. This notification has been done using the standardized prior consideration form dated 10/09/2010. The form contains a brief description of the proposed project activity and the precise geographical location of the project activity as an annexure 1 to the form. This is as per the requirements of EB 49 annex 22 paragraph 3 which states that, “Such notification must be made within six months of the project activity start date and shall contain the precise geographical location and a brief description of the proposed project activity, using the standardized form F-CDM-Prior Consideration.”

Discussion of CARs/CLs

CL #7 was raised requesting the PP to clarify how the prior consideration of CDM is in line with EB 49 Annex 22. In response the PP has submitted all the necessary documents (email trail^{/39/} to ^{/45/}, prior

consideration form^{/37/}, and revised prior consideration form^{/38/}) as evidence to substantiate the prior consideration. The PP response was assessed against the requirements of EB 49 Annex 22 and found to be appropriate. Thus, CL #7 was closed out. Detailed discussions have been provided in annex 3 under CL #7 and in the paragraphs above.

The PP did not mention detail chronology of events for notifications to UNFCCC in PDD; this issue was raised under CAR #8. In response the PP had submitted the revised PDD including chronology of events for notifications to UNFCCC in the PDD, and was found to be appropriate, and hence closed under CAR #8.

Opinion

The validation team is of the opinion that the CDM was seriously considered in the decision to implement the project activity as per the requirements of EB 49 annex 22.

4.7.3 Identification of alternatives (if applicable)

Not applicable

4.7.4 Investment analysis (if applicable)

The PP has referred to the investment barrier mentioned in EB 35 Annex 34 to demonstrate additionality and carry out the investment analysis. The same has been described in the PDD. The investment analysis has been validated against the requirements of the "Guidance on assessment of Investment Analysis" (EB 51 Annex 58). The PP has selected equity IRR as the financial indicator and Return on equity as the benchmark. In the investment analysis excel sheets, the equity IRR has been appropriately calculated using the XIRR function since it takes into consideration the time of cash inflow and outflow. The function has been correctly applied in the excel sheet.

The following parameters have been used to calculate the Equity IRR:

1. Project Capacity
2. Project Cost and Means of finance
3. Plant Load Factor (PLF)
4. O&M cost; Escalation and Service tax on O&M expenses
5. Tariff rate
6. Insurance
7. Income tax
8. MAT
9. Depreciation
10. Working Capital
11. Salvage Value

The investment decision dates of the two sub-bundles are different. Hence, the PP has calculated the equity IRR and corresponding benchmark for each of the sub-bundles and the same is reflected in the PDD^{/1/}, the IRR spreadsheets^{/2/} and the benchmark spreadsheets^{/3/}. The assessment team has validated the input parameters from the proposals submitted by the WEC supplier and confirms that proposals were available with the PP when the investment decision was taken. This is in accordance with the requirement of paragraph 6 of EB 51 annex 58.

To verify the accuracy of the financial calculations, the investment analysis presented in IRR and the benchmark spreadsheet has been assessed under the applicable and relevant criteria of latest version of the Guidance on the Assessment of Investment published (EB 51 Annex 58 - Ref: paragraph 110 VVM version 1.2^{/7/})

Further, in order to determine the likelihood of the occurrence of a scenario other than the scenario presented for proposed project activity, a cross-check on the suitability of the assumptions used in the development of the investment analysis has been carried out. The results of assessment are elaborated under the sensitivity analysis section in this report. The variables, that constitute more than 20% of either total project cost or total project revenue has been subjected to variation of +/- 10% and the results of this variation is presented in the PDD and can be reproduced in the associated IRR spreadsheet. The validation team confirms that this variation (+/-10%) is reasonable and appropriate in the context of the proposed

project activity circumstances. Furthermore the same has been confirmed through the purchase orders placed by the PP reflecting the actual values of key input parameters like project cost, O&M and PLF.

Project Capacity

The no. of WEC and the capacity of each WEC mentioned below have been considered from the proposals^{/13/ /14/} submitted by EIL.

	Sub bundle I (VWIL)	Sub bundle II (JNI)
No. of WECs	8	4
Capacity (MW)	0.8	0.8
Total Capacity (MW)	6.4	3.2

The total installed capacity of the project activity is 9.6 MW.

Project Cost and Means of finance

The total project cost, mentioned in the table below, have been considered from the proposals^{/13/ /14/} issued by EIL.

	Sub bundle I (VWIL)	Sub bundle II (JNI)
Million INR	379.76	189.88

The project cost includes the cost of the WEC (all equipment, systems, subsystems & components); Concrete Tower; Other equipment (Transformer; D.P. structure & Steel Sections); Foundation Works (material & labour); erection, installation and commissioning of electrical work (material & labour); Land; Transportation and transfer of development rights.

The project cost per MW, of the project activity, has been cross checked against projects in the same region i.e. the state of Gujarat. The following registered project were referred: UN3511, UN3578, UN3632, UN3724, UN3742 and UN3783.

The project cost per MW was found to vary from 54.38 to 65.81 million INR. This variation in project cost are due to reasons such as different suppliers; varying capacity of the projects; specific location of the project activity; negotiation capability of the client; etc. The corresponding cost per MW for the project activity in the same region is 59.34 million INR. Hence, the project cost considered for the proposed project activity is acceptable and appropriate. The value of project cost was also checked by the sectoral scope expert and confirmed to be appropriate.

The actual projects cost is 528 million INR which has been verified against the purchase orders. Thus the actual cost is 7.3% lower than the proposal cost. This variation in the costs has been considered in the sensitivity analysis.

The proposed CDM project activity is a 100% equity financed project. The extracts of the board resolutions of both PPs clearly states that the project will be funded by equity alone. The CA certificates^{/57/} also confirms that the PP has not availed any term loan or credit facilities from any banks or financial institutions. This confirms that the project is 100% equity funded.

Plant Load Factor (PLF)

The PLF considered for both the sub-bundles is 23.90%. The PP has considered PLF 23.90% for financial analysis, which has been obtained from the WEC supplier offer letter. This value is appropriate and acceptable since it was available at the time of investment decision, which is as per the requirements of paragraph 6 of EB 51 Annex 58. Further, as per the guidelines in paragraph 3(b) of EB 48 Annex 11, the PP has contracted a third party (M/s Ravi Enteck Limited, Chennai) to determine the PLF at the WEC site. The PLF obtained from the third party report is 24.50%. The difference in the values of PLF have been addressed in the sensitivity analysis mentioned below and it has been demonstrated that even with a PLF of

24.50%, the project activity is still additional. The PLF value was also cross checked against the GERC order no. 1 of 2010, which mentioned a value of 23%. Thus, the value used for the investment analysis is appropriate and conservative.

Based on installed capacity and actual generation, obtained from publicly available data, it is further verified that the actual maximum PLF achieved in the state of Gujarat during the past 7 year was 18.29% which is less than the PLF of 23.90% that has been considered for the sub-bundle and hence, conservative.

(References:

http://www.cea.nic.in/power_sec_reports/general_review/0304/chap-2.pdf;
http://www.cea.nic.in/power_sec_reports/general_review/0304/chap-3.pdf;
http://www.cea.nic.in/power_sec_reports/general_review/0405/ch2.pdf;
http://www.cea.nic.in/power_sec_reports/general_review/0405/ch3.pdf;
<http://www.windpowerindia.com/statyear.html>;
<http://www.windpowerindia.com/statcumul.html>)

O&M cost; Escalation and Service tax on O&M expenses

The annual O&M cost of each WEC for both sub-bundles is 0.617 Million INR i.e. 7.404 Million INR for the project activity (i.e. 1.30% of project cost), which has been considered from the proposals^{/13/ /14/} issued by the WEC suppliers.

The O&M is free for one year for both sub bundles and they have an annual escalation of 6% after the free O&M period. The annual escalation in O&M cost was also cross verified against registered wind project with the same O&M contractor and was found to be 6%:

- “24.8 MW Wind power project by Belgaum Wind Farms Private Ltd. in Gadag, Karnataka” UN ref no. 1687 registered on 19/06/2009 (<http://cdm.unfccc.int/Projects/DB/DNV-CUK1204705646.68/view>)
- “20 MW Enercon Wind farms (SAI) Pvt. Limited in Maharashtra” UN ref no. 3854 registered on 14/12/2010 for Gujarat (<http://cdm.unfccc.int/Projects/DB/DNV-CUK1279516994.31/view>)

The service tax on the O&M expenses has been considered as 10.30%, which is as per the Income tax act of the Government of India. The proposal issued by the WEC suppliers also states that “Service tax will be extra at actual”.

Tariff rate

The applicable tariff rate has been considered as per the GERC order no. 1 of 2010^{/48/}. During the validation it was confirmed that this tariff order was the latest available official document which was valid and applicable for this project at the time of the investment decision. It is stated under paragraph 5.2 of Article 5 of the PPA^{/24/ /25/} between the PP and GUVNL that “GUVNL shall pay a fixed rate of Rs 3.56 per kWh for delivered energy as certified by SEA of Gujarat SLDC during the 25 year life of the project as determined by the Commission through Order No: 1 of 2010 dated 30th January 2010”. Hence, it is evident that the tariff order is the basis of the PPA. As per the PPA and the GERC order, the applicable tariff rate has been clearly defined for 25 years. Hence, the PP has considered a fixed tariff rate of 3.56 INR/kWh for the entire lifetime of the project activity.

Income tax and MAT

The chosen tax rate and MAT is as per the Income tax Act, Government of India.

	Sub bundle I (VWIL)	Sub bundle II (JNI)
Income tax (%)	30.90	33.99
MAT (%)	0	17.00

The income tax rate for Limited Liability Partnership (LLP) and Private limited companies are different as per the Income Tax Act, Government of India. Hence, the income tax rate for Vish Wind Infrastructure LLP is 30.09% & J.N. Investment & Trading Co. Pvt. Ltd. is 33.99%.

MAT is not applicable to VWIL, as per the Income Tax Act, Government of India as it is LLP Limited Liability Partnership (LLP).

Insurance

The insurance for both the sub-bundles has been considered to be 0.12% of the project cost as per the quotation^{55/} submitted by United India Insurance Co. Ltd. The value has been checked against the quotation and is found to be correct.

Depreciation

The PP has considered an income tax depreciation rate of 80% on the WECs and a book depreciation of 4.5% upto 90% of the asset value for both the sub-bundles, which is as per the Income tax act, Government of India. The book depreciation value has been deducted for calculating the gross profit and has been added back to the net profit for the purpose of calculating the Equity IRR. This has been verified from the IRR calculation spreadsheet. This is in line with paragraph 5 of EB 51 Annex 58. The depreciation as per the income tax rate has been deducted from the gross income in the tax calculations, which is appropriate.

Working Capital

The PP has appropriately considered a 30 day billing cycle for the receivables in the working capital calculations and has considered the O&M payment schedule as per the offer letter issued by the WEC supplier which states that - "The O&M charges shall be payable each quarter in advance" i.e. every 90 days. The billing cycle of 30 days and O&M payment schedule of 90 days has been correctly applied in the IRR excel sheet.

Salvage Value

Salvage value has been used in the calculation of Equity IRR. The cost of land has been excluded from the capital cost while calculating the depreciation. As per the CERC notification dated 19th January, 2009 ([http://www.cercind.gov.in/2009/Whats-New/tariff-pdf/CERC-\(Terms-and-Conditions-of-Tariff\)-Regulations-2009-14.pdf](http://www.cercind.gov.in/2009/Whats-New/tariff-pdf/CERC-(Terms-and-Conditions-of-Tariff)-Regulations-2009-14.pdf)) which mentions that "The salvage value of the asset shall be considered as 10% and depreciation shall be allowed up to maximum of 90% of the capital cost of the asset", the PP has considered a salvage value of 10%, which is appropriate. The CERC order was the latest available order at the time of investment decision for the project activity and hence appropriate.

Based on the above mentioned assumptions the Equity IRR as been calculated to be:

Sub bundle I (VWIL)	Sub bundle II (JNI)
8.79%	8.08%

The "cash flow" sheet of the investment analysis excel document shows that the total equity was inducted in three steps of 25%; 65% and 10%. This has been considered from the proposal^{13/} submitted by the WTG supplier which mentions the "Terms of payment" as follows:

- 25% of order value as advance along with purchase order
- 65% of order value on dispatch of material
- 10% on commissioning of WTGs against commissioning certificate

The dates considered for the same has been assumed for the sake of calculations.

Suitability of Benchmark

The PP has determined the benchmarks for each of the sub-bundles using the Capital Asset Pricing Model (CAPM) as described below:

The required return (Ke) as per the CAPM is the return from a risk free return (Rf) plus beta (B) times the difference between the expected market return (Rm) and the risk free return (Rf), i.e.

$$K_e = R_f + B (R_m - R_f)$$

The PP has selected the Return on Equity as the benchmark, which is appropriate, as the financial indicator selected is Equity IRR. Thus, it is in line with the requirements of paragraph 12 of EB 51 Annex 58.

The values of Rf, B and Rm used for the calculation of the benchmarks have been validated against the sources mentioned in table below and have been found to be appropriate.

Particular	VWIL	Source
Rf – Risk free return	8.38%	RBI Monthly Bulletin June 2010 (April 2010)
B – Beta	1.09	Calculated (VWIL Benchmark Sheet Version2)
Rm – Market return	15.77%	Calculated (VWIL Benchmark Sheet Version2)
Benchmark	16.40%	Calculated (VWIL Benchmark Sheet Version2)

Particular	JNI	Source
Rf – Risk free return	8.27%	RBI Monthly Bulletin Feb 2011 (Jan 2010)
B – Beta	1.03	Calculated (JNI Benchmark Sheet Version2)
Rm – Market return	15.85%	Calculated (JNI Benchmark Sheet Version2)
Benchmark	16.05%	Calculated (JNI Benchmark Sheet Version2)

Rf – Risk free return: Risk Free Return has been considered as per the information provided by the Reserve Bank of India (RBI). RBI or Reserve Bank of India is the Central Bank of India which regularly publishes these values and hence the source is appropriate. The values considered are for a term to maturity of 20 years considering the lifetime of the WECs. The Rf for VWIL and JNI have been considered for the months of April 2010 and January 2010 as they were the latest available values at the time of the investment decision of July 2010 and March 2010 respectively. Hence these values are appropriate.

B – Beta: The measured equity beta for a particular company relates to the unique capital structure of that firm. A change in the capital structure will change the degree of financial risk borne by the equity holders and the corresponding equity beta. Therefore, a common practice to allow equity betas to be compared across firms with different capital structures is to adjust the estimated equity beta into the equivalent unlevered beta i.e. the equity beta that would apply if the assets were financed wholly with equity, using the following formula:

$$\text{Unlevered beta} = \text{Raw beta} / [1 + (1 - \text{Tax}) \times (\text{debt} / \text{equity})]$$

Thus, the PP has calculated the unlevered beta for a set of power generating companies in India and the average value has been considered for calculating the benchmark. The raw beta values have been directly obtained from a third party source (Bloomberg) and the snapshots of the same are available in appendix 1 of the PDD.

VWIL and JNI took the investment decision on 09/07/2010^{46/} and 30/03/2010^{47/} respectively. The cut off dates considered for calculating the beta value are 30/06/2010 and 28/02/2010 respectively, which are the last days of the months previous to the investment decision date and hence appropriate.

Accordingly the PP has created a portfolio of all the power generating companies listed on BSE (Tata Power, BF Utilities Ltd, Neyveli Lignite Corporation Ltd, Reliance Infrastructure Ltd and Gujarat Industries Power Co Ltd) with a trading history of at least two years and calculated the Return on Equity. Detailed calculations have been provided in the benchmark excel sheets. The detailed calculations in the benchmark spreadsheet have been found to be appropriate and hence accepted.

Rm – Market return: The market return can be calculated from the following available indices^{56/}: (1) BSE-Sensex (2) BSE-100 (3) BSE-200 (4) BSE-500. Hence, the PP has calculated the market return from all the earlier mentioned indices for the period from the date of inception of these indices upto the cut off, i.e. the same as that considered in the beta calculations above. Minimum market return of the available indices is for BSE 200. Hence, to be conservative the PP has used the BSE 200 market return for calculation of the benchmark.

The BSE 200 is made up of the 200 selected companies from the specified and non-specified lists of the BSE. The selection of companies was primarily been done based on current market capitalization. The selection also takes into account a balanced sectoral representation of the listed companies in the universe of BSE. Hence, the BSE 200 index can be considered as a well-diversified market portfolio and hence is appropriate.

Using the above-mentioned values, the benchmark for the sub-bundles has been determined as:

Sub bundle I (VWIL)	Sub bundle II (JNI)
16.40%	16.05%

Thus, the equity IRR of the project activity is below the benchmark. The analysis indicates that the project activity is not financially viable without the benefits of CDM. Further, a sensitivity analysis has been carried out subjecting critical parameters to variations of 10% and the same has been discussed below.

The data in the revised excel spreadsheet^{2/ 3/} submitted by the PP has been validated against the references provided and was found to be correct. The references provided are publicly available data sources. Thus, it satisfies the requirements of paragraph 13 of EB 51 Annex 58.

The PP has submitted all versions of the excel spreadsheets used for the investment analysis. The financial expert has checked the sheets. All the assumptions, links and formulae used in the sheet are readable and all cells are viewable and unprotected. The analysis has been presented in a transparent manner in the excel spreadsheet and is reproducible. Thus, it satisfies the requirements of paragraph 8 of EB 51 Annex 58.

The lifetime of the project activity is 20 years. The financial analysis has been carried out in the excel spreadsheet considering the entire period of 20 years in spite of the project having a fixed crediting period of only 10 years. Thus, the assessment period has been appropriately considered as per paragraph 3 of EB 51 Annex 58.

The validation team is of the opinion that the above benchmark, which is based on the parameters that are standard in the market, is suitable in the context of underlying project activity. Since the benchmark is based on parameters that are standard in market, the cost of equity is calculated by using best financial practices and data sources have been clearly validated by validation team. The project activity involves 100% equity, hence benchmark cost of equity is calculated based on parameters that are standard in market. Thus Validation team has checked suitability of benchmark as per the latest "guidelines on the assessment of investment analysis Version 04 (EB 61 annex 13) and confirms that parameters used in calculation of Benchmark are standard in market is suitable applied in the context of the proposed project activity.

Sensitivity Analysis

The PP has appropriately selected the following variables to conduct the sensitivity analysis:

1. Project cost
2. Plant Load Factor (PLF)
3. O&M cost

The results of the sensitivity analysis have been presented in the PDD^{1/}. The results have also been presented in the excel spreadsheet^{2/} in a reproducible manner. Thus, it satisfies the requirements of paragraph 17 of EB 51 Annex 58.

The sensitivity analysis for the variables covers a range from +10% to -10% which is appropriate in context of the project requirements. Thus, it satisfies the requirements of paragraph 18 of EB 51 Annex 58.

The sensitivity analysis for the tariff rate for both sub-bundles has not been carried out as the tariff rate is fixed for the entire crediting period.

The outcome of the sensitivity analysis for each of the variable along with the selected benchmark is summarized in the tables below.

Project Cost

Since the project cost for each sub bundle has considered from proposals provided by WECs supplier, hence anticipating the variation that may take place sensitivity analysis has been conducted to an extent of $\pm 10\%$ in line with the "Guidelines on the assessment of investment analysis" version 03 (EB 51 Annex 58). The outcome of sensitivity analysis for project cost summarized below:

	+10%	Base IRR	-10%	Benchmark
Sub-bundle I (VWIL)	6.98%	8.79%	10.98%	16.40%
Sub-bundle II (JNI)	6.41%	8.08%	10.09%	16.05%

As per the above table, it is confirmed that even after 10% reduction in project cost the project IRR does not crosses the benchmark.

It can be noted that the equity IRR crosses the respective benchmarks if project cost for sub-bundles I and II reduces by 28.00% and 30.40% respectively. However, the actual variation in project cost is a decrease of 7.3% for both sub bundles. Reduction of the project cost by more than that verified from purchase orders of respective sub bundles is not possible since the project has already been implemented and commissioned based on the values mentioned in the purchase order.

Plant Load Factor

In the below table, it is observed that the equity IRR is below the selected benchmark even after a 10% increase in PLF.

	+10%	Base IRR	-10%	Benchmark
Sub-bundle I (VWIL)	10.49%	8.79%	7.00%	16.40%
Sub-bundle II (JNI)	9.58%	8.08%	6.49%	16.05%

The equity IRR crosses the respective benchmarks if the PLF for sub-bundles I and II increases by 48.50% and 58.20% respectively. The PLF considered for both sub-bundles is 23.90, which is more than the actual PLF achieved in the same region over the past 8 years (evidence for the same has been mentioned above with the parameter description under the heading of Plant Load Factor) i.e. 19.77%. Thus, an increase in the PLF above that already considered is an unlikely scenario.

The PLF obtained from the third party report is 24.5% which is only 2.5% more than the PLF considered for the financial calculations. This variation has already been covered in the discussions above.

O&M

Anticipating the expected variation in O&M cost the PP has also conducted sensitivity analysis for O&M cost to an extent of $\pm 10\%$ in line with the Guidelines on the assessment of investment analysis (EB51, annex 58). It is noticeable from the analysis that equity IRR does not cross the benchmark if O&M cost decreases by 10%.

	+10%	Base IRR	-10%	Benchmark
Sub-bundle I (VWIL)	8.50%	8.79%	9.08%	16.40%
Sub-bundle II (JNI)	7.83%	8.08%	8.32%	16.05%

It is also noted that even with a 100% decrease in O&M cost for both sub-bundles, the IRR does not cross the benchmark. Hence, the IRR crossing the benchmark for the O&M cost is highly unlikely.

Based on the above discussions, it can be established that the project activity is financially not viable without the benefits of CDM.

Discussion of CARs/CLs

CAR#2 and CAR #3 were raised to address the issues related to the investment analysis. The issues raised and their discussions are as follows:

- a. The PP was requested to confirm that the PLF and Effective PLF considered is as per EB 48 Annex 11 and as per paragraph 6 of EB 51 annex 58. In response, the PP has used the PLF from the WEC supplier offer letter (23.90%) for the investment analysis, since it was available at the time of investment decision. This is appropriate as per paragraph 6 of EB 51 Annex 58. Further, as per the UN guidelines in paragraph 3(b) of EB 48 Annex 11, the PP has contracted a third party (24.50%) to determine the PLF at the WEC site. The difference in the values of PLF has been addressed in the sensitivity analysis in the PDD. Thus the PLF considered for the project activity satisfies the requirements of EB 48 Annex 11 (paragraph 3b) and EB 51 annex 58 (paragraph 6).
- b. The PP was requested to provide documentary evidence for consideration of 100% equity in the project. In response, the PP has submitted declarations from the CA and has given a reference to the board resolutions of both the PPs. The extracts of the board resolutions of both PPs clearly states that the project will be funded by equity alone. The CA certificate also certifies that the PP has not availed any term loan or credit facilities from any banks or financial institutions. This confirms that the project is 100% equity funded.
- c. The PP was requested to provide documentary evidence (Eg. invoice) to check the actual project cost, O&M cost and escalation in O&M. The Purchase Orders and the Invoices have been checked to confirm that the total project cost mentioned in both the documents is consistent. As per the O&M details in the proposal issued by the WEC supplier to both PPs, the O&M will be carried out free of charge for the 1st year. The WECs of the project activity have been commissioned between 27/09/2010 and 30/09/2010. The O&M is free till September 2011. The O&M agreement for the period after the free period has not been signed. Hence the PP has subjected the O&M cost to a sensitivity analysis where it has been seen that even if the O&M cost is reduced to zero, the XIRR does not cross the benchmark.
- d. The PP was requested to address the gap between the actual cost and the cost considered during the investment decision in the sensitivity analysis in the PDD. The PP has addressed the gap between the project cost considered for the investment analysis and the actual project cost in section B.5 of the PDD under the sensitivity analysis. The actual project cost is 7.3% lower than the project cost considered for the investment analysis. The PP has carried out a sensitivity analysis considering a range of +/- 10% in the PDD. Even with a 10% decrease in the project cost, the XIRR does not cross the benchmark.
- e. The PP was requested to include the threshold limit i.e. the scenario in which the calculated IRR crosses the benchmark and explain the likelihood of that scenario in the PDD. The PP has included the threshold limit, i.e. the scenario in which the IRR crosses the benchmark, for the parameters included in the sensitivity analysis, in section B.5 of the PDD. The IRR does not cross the benchmark under any scenario.
- f. As in wind project gestation period is normally less than 1 year. Initial cash outflow can be matched against cash inflow in year 1. In response the PP has used the XIRR function instead of the IRR function in the excel sheet since it takes into consideration the time of cash inflow and outflow. The same has been correctly applied in the investment analysis excel sheet for the calculation of return on equity. This has been checked and is accepted.
- g. The PP was requested to provide the screen shots of beta value used from Bloomberg. In response, the PP has provided the screenshots from Bloomberg used for the beta value. The value of raw beta mentioned in the snap shots have been checked against that used in the benchmark excel sheet and is found to be consistent.
- h. The PP was requested to explain the calculation of the benchmark in section B.5 of the PDD. The PP has explained in detail the calculation of the benchmark in appendix 1 of the PDD. This has

been checked against the calculation carried out in the excel sheet and is found to be consistent, hence accepted.

- i. The PP was requested to mention appropriate references/sources for all values in the investment analysis and the benchmark excel sheets. The references/sources for all values in the investment analysis and the benchmark excel sheets have been checked and found to be appropriate and hence is accepted.
- j. The PP had mentioned both 'Equity IRR' and 'Project IRR' in section B.5 of the PDD. Hence, the PP was requested to clarify which is the selected financial indicator and consistently mention the same in the PDD. The PP has considered 'Equity XIRR' as the financial indicator and the same has now been consistently mentioned in the PDD. This has been checked and is accepted.
- k. The PP was requested to provide appropriate references and values for market return, risk free return and beta in line with paragraph 6 of EB 51 Annex 58. The references and values for market return, risk free return and beta mentioned in the benchmark excel sheet have been checked. The values have been found to be in line with paragraph 6 of EB 51 Annex 58.

The PP has submitted all the necessary documents and satisfactory responses for the issues raised above. Thus, CAR #2 and CAR #3 was closed out. Detailed discussions have been provided in annex 3 under CAR #2 and CAR #3.

Opinion

The above mentioned validation of the investment analysis has been carried out as per the requirements of requirements of paragraphs 111 and 112 of the VVM version 01.2^{7/} (EB 55 Annex 1). The validation team is of the opinion that the investment analysis satisfies all the relevant requirements of EB 51 Annex 58:

- The period of assessment considered for the project activity is 20 years, thus satisfying the requirements of paragraph 3 of EB 51 Annex 58.
- All input values used in the analysis have been checked against the documentary evidences mentioned in section 4.7.1 above. The values have been found to be valid and applicable at the time of the investment decision taken by the PP. In addition, the values mentioned in the excel spreadsheet and the PDD have been consistently applied in all calculations. Thus, it satisfies the requirements of paragraph 6 of EB 51 Annex 58.
- The PP has submitted all versions of the excel spreadsheets; and all assumptions, links and formulae used in the sheet are readable; calculations are transparent and reproducible; all cells are viewable and unprotected. Thus, it satisfies the requirements of paragraph 8 of EB 51 Annex 58.
- The PP has selected the return on equity calculated using CAPM as the benchmark, which is appropriate, as the financial indicator selected is Equity IRR. Thus, it satisfies the requirements of paragraph 12 of EB 51 Annex 58.
- The data used in the financial calculations sheet submitted by the PP were validated against publicly available data. Thus, it satisfies the requirements of paragraph 13 of EB 51 Annex 58.
- The PP has presented the results of the sensitivity analysis in the PDD and the excel spreadsheet. The analysis is reproducible in the spreadsheet. Thus, it satisfies the requirements of paragraph 17 of EB 51 Annex 58.
- The sensitivity analysis appropriately covers a range from +10% to -10% and hence satisfies the requirements of paragraph 18 of EB 51 Annex 58.

4.7.5 *Barrier analysis (if applicable)*

Not applicable.

4.7.6 *Common practice analysis*

Not applicable.

4.8 Application of Baseline Methodology and Calculation of Emission Factors

The project activity uses the simplified baseline and monitoring methodology AMS I.D Version 16. The applicability conditions of the methodology have been discussed in section 4.5 above. The PP has correctly identified the baseline as per paragraph 10 of AMS I.D Version 16. This has been described in section 4.7 above.

Baseline emissions (**BE_y**) – The combined margin emission factor, baseline emissions and emission reductions calculations have been mentioned in the emission reduction excel sheet^{4/} and the PDD. The baseline emissions equivalent to tCO₂ due to the project have been calculated as the product of the net electricity supplied to the grid and the grid emission factor as per the combined margin approach described in the 'Tool to calculate the emission factor for an electricity system' (version 02.1.0) which is the latest available tool. The power produced will be exported to the NEWNE grid. Hence, the grid emission factor and the corresponding baseline emissions have been calculated for the NEWNE grid.

The grid emission factor has been arrived at as per paragraph 12(a) of AMS I.D Version 16 (as mentioned in section 4.7 above) in the following manner. The values of OM and BM have been determined ex-ante as per the CEA database version 5^{11/}, which is published by the Ministry of Power, Government of India. The CEA is the sole authority for publication of such data in India. The version of the database referred to is the one that was available at the time of webhosting the PDD for the ISHC. Thus, the selection of the values of OM and BM is appropriate. The values OM, BM, and CM have been identified as follows:

	OM (tCO ₂ /MWh)	BM (tCO ₂ /MWh)	CM (tCO ₂ /MWh)
NEWNE grid	1.00497	0.67518	0.92253

The OM has been determined as the average of the previous 3 years values mentioned in the CEA database. The value of BM has been identified directly from the CEA database. The combined margin emission factor has been arrived at by applying weights of 75% for OM and 25% for BM, as specified in the tool. The combined margin emission factor has been determined ex-ante and is fixed for the entire crediting period.

The baseline emissions for the project activity have been calculated as the product of the net electricity supplied to the grid and the grid emission factor as per paragraph 11 of AMS I.D Version 16. The PP has rounded down the value of total baseline emissions in order to be conservative. The baseline emissions for the project activity have been calculated to be 18,541 tCO₂.

Project emissions (**PE_y**) – The project activity involves the generation of electricity using wind energy. Hence, there are no project emissions associated with this project activity as per paragraph 19 of AMS I.D Version 16.

Leakage (**LE_y**) – Leakage has not been considered for the project activity. According to paragraph 20 of AMS I.D Version 16, if the energy generating equipment is transferred from another activity or if the existing equipment is transferred to another activity, leakage is to be considered. The proposed project activity uses new energy generating equipment which has been verified from the purchase order^{15/ 16/}. Thus, not considering leakage for the project activity is appropriate.

Emission Reductions (**ER_y**) – The emission reductions for the project activity have been calculated as per paragraph 21 of AMS I.D Version 16 as follows: **ER_y = BE_y – PE_y – LE_y**

Based on the values of baseline emissions, project emissions and leakage the annual emission reductions have been calculated as 18,541 tCO₂/year.

Discussion of CARs/CLs:

The PDD was not updated as per latest version of tool to calculate emission factor, this issue was raised under CAR #8. In response the PDD was updated to include reference to the latest version of tool to calculate emission factor. It is confirmed that there is no change in ER calculation using latest version of tool. Thus, this issue was closed under CAR #8.

Opinion

Based on the above discussion and the requirements of paragraphs 89-93 of the VVM version 01.2^{7/} (EB 55 Annex 1), the validation team confirms that:

1. All assumptions and data used by the PP are listed in the PDD, including their references and sources
2. All documentation used by the PP as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD
3. All values used in the PDD are reasonable in the context of the proposed CDM project activity
4. The baseline methodology AMS I.D Version 16 has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions
5. All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

4.9 Application of Monitoring Methodology and Monitoring Plan

The project activity applies the simplified baseline and monitoring methodology AMS I.D Version 16. The applicability conditions of the methodology have been discussed in section 4.5 above.

The PP has defined the monitoring parameters as per the requirements of paragraph 22 of the methodology AMS I.D Version 16 and taking into consideration the actual procedure followed on the site. In line with this, the PP has defined the monitoring parameter, in section B.7.1 of the PDD.

1. $EG_{BL, y}$ – (MWh/y): Net Quantity of Electricity exported to the grid

This value which will be used for the emission reduction calculations. This parameter will be obtained directly from the monthly certificate for share of electricity generated issued by GETCO.

In the state of Gujarat there are a number of WECs connected to a single feeder. Hence, to calculate the net electricity exported by the WECs of the project activity alone, the state electricity utility uses an apportioning procedure which has been described in detail in section B.7.2 of the PDD. The apportioning is carried out by the state utility and the PP has no role in this calculation. This procedure was verified by checking the same with the personnel in the sub-station during the site visit and was found to be correct.

The project activity is divided into clusters with each cluster having exclusive metering arrangement. The meter readings taken at these metering points are provided by the representatives of Enercon to GEDA. These meters are sealed by GEDA. The following parameters, as described in the PDD, are continuously monitored and measured at the cluster meters and recorded on a monthly basis:

1. $EG_{Cluster, Export}$ = Electricity exported by the project activity
2. $EG_{Cluster, Import}$ = Electricity imported by the project activity
3. $EG_{Cluster, WF, Export}$ = Electricity exported by all the project owners connected to Enercon substation
4. $EG_{Cluster, WF, Import}$ = Electricity imported by all the project owners connected to Enercon substation

The Enercon Substation at Sadodar has main meter(s) also known as revenue meter to which the wind turbines installed by the project proponent and wind turbines installed by other project owners are connected. GEDA apportions the net electricity supplied to the grid at the Enercon substation to all the project owners after adjusting transmission loss from GETCO meters at Sadodar Substation to the meter readings taken at dedicated cluster meters of different project owners. The following parameters, as described in the PDD, are continuously monitored and measured at the substation meters:

1. $EG_{GETCO, Export}$ = Electricity exported
2. $EG_{GETCO, Import}$ = Electricity imported

The meter reading is recorded jointly by the representatives of Enercon and GEDA/GETCO in the form of JMR on monthly basis. The meter reading recorded at cluster meters are sent to GEDA every day.

The type of metering equipment, procedure of meter reading, meter testing, and calibration has been described in section B.7.2 of the PDD and is consistent with the PPA signed specifically for this project activity.

The PP has mentioned the operational and management structure for data monitoring in the PDD, along with the responsibilities at each level. The PP has mentioned that all the monitored data would be archived electronically and on paper regularly throughout the crediting period. Also, data will be archived for 2 years after the end of the crediting period. This is stated in section B.7.1 of the PDD.

The validation team confirms that the description in the PDD correctly represents the metering system available at the project activity site and that the defined monitoring plan can be implemented in the context of the project activity.

EIL, the O&M contractor for the WECs has experience in monitoring and managing the O&M of numerous other wind farm 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.

Discussion of CARs/CLs

CL #6 was raised requesting the PP to address the following issues:

- a. Since the parameter “EG_{BL,y}” alone is sufficient for the calculation of emission reductions, the PP is requested to clarify the monitoring of other parameters mentioned in section B.7.1 of the PDD. In response, the PP has retained only the parameter “EG_{BL, y}” in section B.7.1 of the PDD and has deleted the other parameters. In the state of Gujarat, the value of “EG_{BL, y}” is directly obtained from the ‘Certificate for share of electricity generated by the wind farm measured at the sub-stations’ issued by GETCO for each client. This value is sufficient for the calculation of emission reductions for the project activity. This has also been verified through discussions with the personnel at the sub-station during the site visit and hence is accepted.
- b. As per section B.1 of the PDD, the selected baseline and monitoring methodology for the project activity is AMS I.D./Version 16. Hence, the PP was requested to clarify the reference to ACM0002 Version 11 in section B.7.2 of the PDD. The PP has revised the monitoring plan giving the reference of the selected methodology AMS I.D version 16. This is appropriate and hence is accepted.

Thus, CL #6 has been closed out. Detailed discussions have been provided in annex 3 under CL #6.

It was not clear how the monitoring parameter discussed in project activity is meeting the methodology requirement of monitoring/recording frequency; this issue was raised under CAR #8. In response the PP had submitted revised PDD including monitoring and recording frequency of parameters in line with methodology, found appropriate, hence closed under CAR #8.

Opinion

Based on the above discussion and the requirements of paragraphs 122-124 of the VVM version 01.2^{7/} (EB 55 Annex 1), the validation team confirms that:

1. The monitoring plan included in the PDD is based on the approved methodology AMS I.D version 15 which has been applied to the proposed CDM project activity
2. The monitoring plan is in compliance with the applied methodology AMS I.D version 15
3. The monitoring arrangements described in the monitoring plan are feasible within the project design
4. The PP has the ability to implement the monitoring plan as per the PDD

4.10 Environmental Impacts

The PP has not carried out an EIA for the proposed wind power project. The schedule of the notification S.O. 1533^{54/} published by the Ministry of Environment and Forests (MoEF), Government of India gives a list of the project activities that require a prior environmental clearance. According to this schedule wind power projects do not require a prior environmental clearance and hence an EIA need not be carried out.

Opinion

The Validation team is of the opinion that the project complies with environmental regulations in India.

4.11 Local Stakeholder Comments

The local stakeholder consultation process has been described in detail, by the PP, in section E of the PDD.

The PP has identified all individuals as well as organizations that may be affected by the project as the stakeholders. Based on the observations of the validation team during the site visit and as per the definition of 'stakeholder' in the Glossary of CDM terms version 5, the identification of stakeholders for consultation was found to be appropriate. Thus, the validation team is of the opinion that the relevant stakeholders have been consulted.

The PP has conducted the stakeholder consultation meeting for the project activity in the district of Jamnagar i.e. where the WECs are located. The date of the invitation, meeting; and mode of invitation have been summarized in the table below:

Date of meeting	Date of invitation	Mode of invitation
28/10/2010 ^{/30/}	13/10/2010 ^{/28/}	Public Notice – Newspaper Advertisement ^{/28/}
	14/10/2010 ^{/29/}	Invitation Letter ^{/29/}

The PP has clearly detailed the stakeholder consultation process in the PDD.

After sharing information with the local stakeholders about the company, and the purpose of proposed activity, the stakeholders were briefed about global warming and its impacts, Kyoto Protocol, CDM and role of wind power in mitigating the global warming. The benefits of the project activity to the stakeholders were discussed and their comments were invited. The questions raised by the stakeholders and the responses provided have been mentioned in section E of the PDD. The Minutes of the meeting^{/30/} and the attendance sheet^{/31/} of the stakeholder meeting have been submitted by the PP.

During the site visit the validation team interviewed some of the local villagers. Based on the replies of the villagers, the validation team was convinced that the process of stakeholder consultation was carried out as described in the PDD. The villagers also confirmed that they were invited for the meeting through invitation letters. This was found to be consistent with the invitation process mentioned in the PDD.

Overall, there was agreement among the stakeholders that the proposed project activity would lead to the overall development of the area, mainly by generating employment opportunities and improving the infrastructure leading to an improved life for the villagers. The local stakeholders interviewed during the site visit endorsed this view.

It is also confirmed that local stakeholders were invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website.

Opinion

According to the requirements of the paragraphs 128-130 of the VVM version 01.2^{/7/} (EB 55 Annex 1), the validation team is of the opinion that the local stakeholder consultation process has been satisfactorily carried out.

5. Comments by Parties, Stakeholders and NGOs

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

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

The Project Design Document for this project was made available on the UNFCCC website at <http://cdm.unfccc.int/Projects/Validation/DB/HZ71HCGMVWBSLX4COTU7NONB1ILUBE> and was open for comments from 6th January 2011 until 4th February 2011. Comments were invited through the UNFCCC CDM homepage.

5.2 Compilation of all Comments Received

Comment Number	Date Received	Submitter	Comment
1	02/02/2011	Babloo	The PP states that they have considered 80% accelerated depreciation. However the PDD is silent on the tax shielding as a result from accelerated depreciation. PPs cleverly do not consider the accounting tax offsetting in their companies while calculating the IRR. This is evident from the recently registered projects and those requesting registration. The DOE is therefore requested to critically analyze how the accelerated depreciation benefit has been taken into account and confirm the accounting of the cash inflows as a result of the negative tax liability in the initial years. DOE should not be misguided by the financial presented by the PP or consultant which are custom made for CDM purposes and not the actual financial considered at the investment decision. Note that considering cash inflows results in an increase in the IRR making wind projects a profitable venture.
2	04/02/2011	Hiral Mehta / Mahesh Pandya	1. PDD does not contain four sustainability criteria set by DNA to justify project. 2. How much grazing land has been acquired for setting up wind farm? 3. What would be impact of negative environmental conditions in area upon project? What would be alternatives? 4. How many skilled/unskilled people from surrounding area were employed at this project during commissioning and operation? 5. Whether NOC from state departments has been issued to this project? 6. Which CSR activities are planned for local people? Please explain in detail.
3	Not Available	Mathew on behalf of mathew	The link present on the UNFCCC site for this comment does not open. SGS has asked the person who posted this comment to re-post it as it could not be read but they never responded to or re-posted their comment.

5.3 Explanation of How Comments Have Been Taken into Account

Comment 1

The investment analysis excel sheet submitted by the PPs has considered 80% accelerated depreciation and has also taken into account the tax shielding as a result of the accelerated depreciation. This is evident from the 'cash flow statement' in both the excel sheets. The project 'p&l' statement also takes into account the tax exemption for the project activity.

The investment analysis submitted by the PP has been checked to confirm that the tax benefits under 80 IA sections of the IT act has been included. In spite of this, it is observed that the chosen financial indicator i.e. equity IRR does not cross the benchmark. This indicates that the project is not financially viable even after the tax benefits have been considered. Hence, the tax benefits under 80 IA sections of the IT act cannot be the main motive of the proposed CDM project activity.

The financial analysis has been verified and accepted by the financial expert.

Comment 2

1. PP has incorporated the four sustainability criteria in section A.2 of the project. This has been checked and is accepted.
2. The land on which the wind farm has been set up is government revenue land as per paragraph 6(b) of the land lease agreement.
3. The schedule of the notification S.O. 1533 published by the Ministry of Environment and Forests (MoEF), Government of India gives a list of the project activities that require a prior environmental clearance. According to this schedule wind power projects do not require a prior environmental clearance. This project involves generation of electricity using the renewable source of wind. Hence, there are no negative environmental effects.
4. PP has provided employment to skilled and unskilled people during the implementation of the project activity. This was verified from the local stakeholders during the site visit.
5. GEDA has issued clearances for the project activity. This has been checked and is accepted.
6. Due to the implementation of the project activity, roads have been constructed; water supply infrastructure has been developed, medical camps have been conducted for the local people and the local schools have been supported through donation of books, etc. These activities have been verified by talking to the local stakeholders during the site visit.

Thus the Stakeholder comments have been taken into account.

6. List of Persons Interviewed

Date	Name	Position	Short Description of Subject Discussed
10/02/2011	Anushree Mishra	Officer (Enercon India Ltd)	Project Design, Baseline, Emission Reduction Calculation, Monitoring Procedure, Financial additionality, IRR calculations
10/02/2011	Kishor Vasara	Dy. Manager (EIL)	Monitoring procedure, monitoring parameters, operation maintenance, calibration, data recording and invoicing.
10/02/2011	P. Sajil	Asst. Manager (EIL)	
10/02/2011	Nathubhai Vaniya	Local Villagers	Local stakeholder consultation process, Mode of invitation, points discussed during the meeting
10/02/2011	Chinubhai Katara	Local Villagers	
10/02/2011	Vallabhbbhai Solanki	Local Villagers	

7. Document References

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

/1/	PDD
/1.1/	PDD Version 01, dated 30/12/2010 (Published for international stakeholder consultation) http://cdm.unfccc.int/Projects/Validation/DB/HZ71HCGMVWBSLX4COTU7NONB1ILUBE
/1.2/	PDD Version 02, dated 18/02/2011
/1.3/	PDD Version 03, dated 03/03/2011
/1.4/	PDD Version 04, dated 09/05/2011
/1.5/	PDD Version 05, dated 26/05/2011
/1.6/	PDD Version 06, dated 23/06/2011
/2/	Investment Analysis Spreadsheets
/2.1/	Vish Wind Investment Analysis Version 04
/2.2/	J N Investment Analysis Version 04
/3/	Benchmark Calculation Spreadsheets
/3.1/	Vish Wind Benchmark Version 03
/3.2/	J N Benchmark Version 03
/4/	Emission Reductions Calculation Spreadsheet
/5/	Host Country Approval No. 4/17/2010-CCC dated 28/04/2011
/6/	Modalities of Communication dated 26/05/2011

Discuss the key changes in the final PDD against the version published for the international stakeholder consultation

PDD Version	Date of Revision	Main changes reason for Revision
6 (Final Version)	23/06/2011	<p>Section A.2</p> <ul style="list-style-type: none"> To mention details regarding the Contribution towards sustainable development <p>Section B.2</p> <ul style="list-style-type: none"> To mention all the applicability criteria as per the applicable methodology <p>Section B.4</p> <ul style="list-style-type: none"> To describe the baseline and its development giving reference to the selected methodology <p>Section B.5</p> <ul style="list-style-type: none"> To address the gap between the actual costs and the costs considered for the investment analysis, under the sensitivity analysis To include the threshold limit i.e. the scenario in which the calculated IRR crosses the benchmark and explanation on the likelihood of that scenario <p>Section B.6.2</p> <ul style="list-style-type: none"> To clarify the "Justification of the choice of data" of the parameters in section B.6.2 <p>Section B.7.1</p> <ul style="list-style-type: none"> To define the required and appropriate monitoring parameters <p>Annexure 2</p> <ul style="list-style-type: none"> To describe the calculation of the benchmark <p>Throughout the PDD</p>

PDD Version	Date of Revision	Main changes reason for Revision
		<ul style="list-style-type: none"> To mention the correct references to the latest EB guidance's and the version numbers of the tools used

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

/7/	<u>Clean Development Mechanism Validation and Verification Manual Version 1.2</u>
/8/	<u>Approved methodology - AMS I.D Version 16</u>
/9/	<u>Tool to calculate the emission factor for an electricity system (Version 02.1.0)</u>
/10/	<u>Tool for the demonstration and assessment of additionality (Version 05.2)</u>
/11/	<u>CEA database Version 5 (Ministry of Power, Government of India)</u>
/12/	<u>Project UNFCCC web page with date of webhosting of the PDD</u>
	<u>Proposal</u>
/13/	Sub bundle I (VWIL) – Dated 25/06/2010 issued by EIL
/14/	Sub bundle II (JNI) – Dated 18/03/2010 issued by EIL (Ref. JNI/2009-10/EIL-110)
	<u>Purchase Order</u>
/15/	Sub bundle I (VWIL) – Dated 10/07/2010 issued to EIL (Ref. No. VWILLP/EIL/10-11/02; VWILLP/EIL/10-11/02-1; VWILLP/EIL/10-11/02-2 and VWILLP/EIL/10-11/02-3)
/16/	Sub bundle II (JNI) – Dated 05/04/2010 issued to EIL (Ref. No. JNI/EIL/10-11/01; JNI/EIL/10-11/02 and JNI/EIL/10-11/03)
	<u>Commissioning Certificate</u>
/17/	Sub bundle I (VWIL) – Dated 11/10/2010 issued by GEDA with commissioning dates of 29/09/2010 (4 WECs) and 30/09/2010 (4 WECs) (Ref No. GEDA/VWI/PWF/CHIRODA/2010-11/3072)
/18/	Sub bundle II (JNI) – Dated 11/10/2010 issued by GEDA with commissioning date of 27/09/2010 (4 WECs) (Ref No. GEDA/JNI/PWF/CHIRODA/2010-11/3073)
	<u>Land Lease Deed</u>
	Sub bundle I (VWIL)
/19/	Dated 21/08/2010 (Ref No. 1491) – For Survey Nos. 143/P35
/20/	Dated 21/08/2010 (Ref No. 1493) – For Survey Nos. 576/P1/P3
/21/	Dated 21/08/2010 (Ref No. 1495) – For Survey Nos. 226/1
	Sub bundle II (JNI)
/22/	Dated 14/07/2010 (Ref No. 1291) – For Survey Nos. 775/P49
/23/	Dated 14/07/2010 (Ref No. 1293) – For Survey Nos. 441/1
	<u>Power Purchase Agreement</u>
/24/	Sub bundle I (VWIL) – Dated 21/09/2010 (No. S 079019) signed with GUVNL – Covering Letter dated 23/09/2010 (Ref. No. GUVNL/COM/343/1927)
/25/	Sub bundle II (JNI) – Dated 05/08/2010 (No. M 192350) signed with GUVNL – Covering Letter dated 10/08/2010 (Ref. No. GUVNL/COM/WF/339/1616)
	<u>Clearance</u>
/26/	Sub bundle I (VWIL) – Dated 20/09/2010 issued by GEDA (Ref: GEDA/VWIL/PWF/CHIRODA/2010-11/2877)
/27/	Sub bundle II (JNI) – Dated 02/07/2010 issued by GEDA (Ref: GEDA/JNI/PWF/CHIRODA/2010-11/2016)
	<u>Local Stakeholder Consultation</u>
/28/	Public Notice – Advertisement in local newspaper dated 13/10/2010
/29/	Invitation letters dated 14/10/2010
/30/	Minutes of the meeting held on 28/10/2010
/31/	Attendance sheet
	<u>Documents to verify the Monitoring Plan</u>
/32/	GETCO certificate for share of electricity generated for December 2010
/33/	Invoice for December 2010

/34/	Declaration issued by the WEC supplier stating that the LCS meter does not need calibration
/35/	Training Course certificate issued by the Enercon Training Academy
/36/	Meter Test Certificate issued by The Paschim Gujarat Vij Company Ltd. No. 00058 dated 22/01/2010 (GJU04175) No. 00059 dated 22/01/2010 (GJU04176) No. 00060 dated 22/01/2010 (GJB01470)
	Prior Consideration of CDM
/37/	Prior CDM consideration form dated 10/09/2010
/38/	Revised Prior CDM consideration form dated 05/10/2010
/39/	Letter dated 10/09/2010 addressed to the host Party DNA (MoEF) informing them about the project activity
/40/	Email dated 14/09/2010 address to host Party DNA (MoEF) with the prior consideration form
/41/	Email response dated 16/09/2010 from the host Party DNA (MoEF) acknowledging the submission
/42/	Email dated 14/09/2010 address to UNFCCC with the prior consideration form
/43/	Email response dated 28/09/2010 from UNFCCC informing the PP to mention “exact precise details of the project in sections 1 - 4 (geo-coordinates).”
/44/	Email dated 06/10/2010 address to UNFCCC with the revised prior consideration form
/45/	Email response dated 15/10/2010 from UNFCCC confirming the receipt of the revised form
	Board Resolution (with CDM consideration)
/46/	Sub bundle I (VWIL) – Extracts of the board meeting held on 09/07/2010
/47/	Sub bundle II (JNI) – Extracts of the board meeting held on 30/03/2010
/48/	Tariff Order – GERC order no. 1 of 2010 dated 30/01/2010 (with effect from 11/08/2009)
/49/	PLF evidence as per EB 48 Annex 11 – PLF report issued by M/s Ravi Enteck Limited, Chennai dated 24/11/2010
/50/	Bundling Form Version 04 dated 23/06/2011
/51/	Letter dated 12/07/2010 issued by JNI authorizing VWIL to carry out all CDM related activities for the project activity
/52/	Declaration issued by WEC supplier (EIL) mentioning the WEC lifetime of 20 years
/53/	Declaration – confirming no use of ODA and stating that the project activity will remain within the limits of a small scale project activity for the entire crediting period
/54/	MoEF notification for EIA - http://envfor.nic.in/legis/eia/so1533.pdf dated 14th September 2006
/55/	Insurance quotation issued by United India Insurance Co. Ltd. dated 03/03/2010
/56/	Sensex; BSE 100; BSE 200 and BSE-500 (http://www.bseindia.com/stockinfo/indices.aspx)
/57/	Certificate dated 21/02/2010 issued by M/s Mehul Vora & Co. (Chartered Accountants) stating that the PPs(JNI & VWIL) have not availed of any term loans

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A.1 Annex 1: Local Assessment

This checklist is designed to provide confirmation of in-country data and information provided in the Project Design Document for “**Bundled Wind Power Project in Jamnagar, Gujarat**”.

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

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
1. Host Country Approval	Host Country Approval submitted	Host Country Approval ^{/5/}	Appropriate and accepted
2. Enercon Offer letter	Offer letters have been submitted	Offer letters ^{/13/ /14/}	Appropriate and accepted
3. Purchase Orders	Purchase order for project activity has been checked	Purchase order ^{/15/ /16/}	Appropriate and accepted
4. Commissioning Certificates	Commissioning certificates have been submitted	Commissioning certificates ^{/17/ /18/}	Appropriate and accepted
5. Power Purchase Agreement	PPA for the project activity has been submitted by PP	PPA ^{/24/ /25/}	Appropriate and accepted
6. Contractual Agreement between Vish Wind Infrastructure LLP and J. N. Investment & Trading Co. Private Limited	Authorization letter has been submitted by the PP	Authorization letter ^{/51/}	Appropriate and accepted
7. Acknowledgement from UNFCCC and Indian DNA regarding prior intimation within 6 months from start date as per EB 49 Annex 22	Email trail of the communication with the UNFCCC and the Indian DNA has been submitted	Prior consideration documents ^{/37/ to /45/}	Appropriate and accepted
8. Emission Reduction Excel sheet	Emission reduction calculation sheet submitted by PP	Emission reduction calculation sheet ^{/4/}	Appropriate and accepted

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
9. Modalities of Communication	MoC provided by project participant	MoC ^{/6/}	Appropriate and accepted
10. Bundling form	Bundling form has been submitted	Bundling form ^{/50/}	Appropriate and accepted
11. Third party PLF report	PP has submitted the third party PLF report	PLF report ^{/49/}	Appropriate and accepted
12. Declaration stating that the LCS meters do not require calibration	Declaration submitted by the PP	Declaration stating no calibration required for LCS meter ^{/34/}	Appropriate and accepted
13. Evidence for no use of ODA	Undertaking is provided by project participant	Undertaking for No ODA ^{/53/}	Appropriate and accepted
14. Meter Test / Calibration report	Sample meter test certificate has been submitted by the PP	Meter test certificate ^{/36/}	Appropriate and accepted
15. Proof of media used to invite local stakeholders and date of stakeholder meeting (Newspaper advertisement; personal invitations, etc)	Invitation letters, public notice and MoM provided by project participant	Invitation letters ^{/29/} Public Notice ^{/28/} MoM ^{/30/}	Appropriate and accepted
16. MoM and attendance sheet of local stakeholder consultation is required. Discussion with the local stakeholders is required during the site visit	Discussions with stakeholders were carried out during the site visit to confirm the local stakeholder consultation process. PP has submitted the MoM and attendance sheet of the meeting.	MoM ^{/30/} Attendance sheet ^{/31/}	Appropriate and accepted
17. Ownership documents, Licenses, clearances for each wind mill. Land purchase or land lease agreements.	Land lease deed, commissioning certificates, GEDA clearance have been submitted by PP	Land lease deed ^{/19/ to /23/} Commissioning certificate ^{/17/ /18/} GEDA clearance ^{/26/ /27/}	Appropriate and accepted

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
18. Evidence that the technology used would not be changed during the crediting period	Undertaking is provided by project participant	Undertaking for No technology change ^{/34/}	Appropriate and accepted
19. Evidence for start date of the project activity	Date on which purchase order was placed for the project activity has been considered as project start date	Purchase order ^{/15/ /16/}	Appropriate and accepted
20. Debundling criteria will be checked during site visit	The debundling criteria have been checked during the site visit	Checked during site visit	Appropriate and accepted
21. Location of all monitoring meters for each wind mill should be checked during site visit.	The locations of the monitoring meters have been checked during the site visit.	Checked during site visit	Appropriate and accepted

A.2 Annex 2: Validation Checklist

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

Requirement	Means of Validation Reference	Comments	Conclusion/C ARs/ CLs
<p>1. All Parties involved have approved the project activity</p> <p>1.1. Has the DNA of each Party involved in the proposed CDM project activity in section A.3 of the PDD provided a written letter of approval which confirms</p> <p>1.1.1. The country is a Party to the Kyoto Protocol</p> <p>1.1.2. Participation is Voluntary</p> <p>1.1.3. The Host Party confirming that the proposed CDM project activity contributes to sustainable development of the country Non-Annex 1 Party shall submit a letter of approval</p> <p>1.1.4. It refers to the precise proposed CDM project activity title in the PDD being submitted for registration</p>	<p>Annex 3, Clean Development Mechanism, Validation and Verification Manual, Version 01.2 (from this point forwarded referenced as VVM) – 45/49a-d /54a-b/127</p> <p>Paragraph 37 CDM Modalities and procedures</p>	<p>India has ratified the Kyoto protocol on 26th August 2002 and is allowed to participate. http://maindb.unfccc.int/public/country.pl?country=IN</p> <p>PP is requested to submit the HCA for the project activity.</p> <p>CAR #1 raised</p> <p>PP has submitted the HCA for the project activity.</p>	<p>CAR #1 closed out</p> <p>Y</p>
<p>1.2. If the project participant(s) listed in the PDD published at international stakeholder¹ consultation are not included in the PDD submitted with request for registration, a letter should be obtained from the withdrawn project</p>	<p>EB 30 Para. 41.</p> <p>EB50 Annex 48 para. 8</p>	<p>Not Applicable</p>	<p>Y</p>

¹ Stakeholders mean the public, including individuals, groups or communities affected, or likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity

Requirement	Means of Validation Reference	Comments	Conclusion/C ARs/ CLs
participant(s) confirming its voluntary withdrawal from the proposed project activity.			
1.3. The letter/s of approval are unconditional with respect to 1.1.1 to 1.1.4 above	VVM Para. 49/ 53,54	Pending closure of CAR #1	CAR #1 closed out Y
2. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for a minimum of 30 days, and the project design document and comments have been made publicly available	VVM Para. 128 Marrakech Accords, CDM Modalities, §40	The project was webhosted on UNFCCC site from 06/01/2011 to 04/02/2011 at http://cdm.unfccc.int/Projects/Validation/DB/ROQ13LBU1V4M7MRB7WO41481MTGXOI http://cdm.unfccc.int/Projects/Validation/DB/HZ71HCGMVWBSLX4COTU7NONB1ILUBE/view.html Number of comments received: 3 The comments received have been addressed in section 5 of the validation report.	ISHC comments closed out Y
3. The project design document is in accordance with the applicable CDM requirements for completing PDDs.	VVM Para. 57 Marrakech Accords, CDM Modalities, Appendix B, EB Decisions	PP is requested to mention in the PDD the correct references to the latest EB guidance's and the version numbers of the tools used PP is requested to complete section B.6.3 of the PDD as per the guidelines for completing the CDM-SSC-PDD CAR #5 was raised The PDD has been completed in accordance with the CDM-SSC-PDD form version 03, which is the latest available version. The tables, headings, logo, format and fonts are in	CAR #5 closed out Y

Requirement	Means of Validation Reference	Comments	Conclusion/C ARs/ CLs
		accordance with that used in the template.	
4. The project participants shall submit a completed modalities of communication (MoC) Form	F_CDM_MOC form available on UNFCCC website	PP has submitted a completed MoC form for the project activity in the format prescribed in EB 45 annex 60.	Y

Table 2 PDD

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
A. General Description of Project Activity				
A.1. Project Title				
A.1.1. Does the used project title clearly enable the reader to identify the unique CDM activity?	VVM Para.56 Guidelines for completing a CDM-PDD (PDD) section A.1	DR	The title of the project activity mentioned is “Bundled Wind Power Project in Jamnagar, Gujarat”. The uniqueness of the title was verified by checking the same on the UNFCCC website. The title will be further checked against the LoA from the Host country. Pending closure of CAR #1. PP has submitted the LoA from the host Party. The project title was found to be consistent in the PDD, LoA & the UNFCCC website.	CAR #1 closed out Y
A.1.2. Is there an indication of a revision number and the date of the revision?	VVM Para.56 PDD section A.1	DR	The version number and date of version has been mentioned in section A.1 of the PDD as Version: 01 and Date: 30/12/2010	Y
A.2. Description of the Project Activity				
A.2.1. Does the description of the proposed CDM project activity as contained in the PDD sufficiently cover all relevant elements accurately?	VVM Para.59 PDD section A.2 see also A.4, A.4.3 and B.3	DR	The project activity entails installation of WECs for power generation and supplying the same to the NEWNE grid. Information regarding the purpose, type of technology used and contribution of the project activity to sustainable development has been described in the PDD.	Y
A.2.2. Is all information provided consistent and in compliance with the actual situation or	VVM Para.64 PDD section A.2 see also A.4,	DR SV	The proposed CDM project activity, which has already been commissioned, involves the installation of 12 WECs of total capacity 9.6 MW which will generate electricity and export it to the NEWNE grid. The information provided by the PP in the PDD was found to be consistent and in compliance with the actual situation on the ground. This	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
planning?	A.4.2 and B.3		was verified during the site visit.	
A.2.3. Is all information provided consistent with details provided in further chapters of the PDD?	VVM Para.64 PDD section A.2	DR	Information regarding the purpose of the project activity, type of technology used and contribution of the project activity to sustainable development has been described in section A.2 of the PDD. This detail were verified against those mentioned in further sections of the PDD and was found to be accurate and consistent.	Y
A.3. Project Participants				
A.3.1. Is the table required for the indication of project participants correctly applied?	VVM Para. 51 PDD section A.3	DR	Section A.3 has been completed in accordance with the guidelines for completing the CDM-SSC-PDD. The LoA and the PDD will be checked for consistency in the name of the PP. Pending closure of CAR #1 Section A.3 has been completed in accordance with the guidelines for completing the CDM-SSC-PDD. The name of the PP has been consistently mentioned in the LoA & the PDD.	CAR #1 closed out Y
A.3.2. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	VVM Para. 51 PDD section A.3	DR	Consistency of PP details will be verified against the LoA to be submitted by the PP. Pending closure of CAR #1 The name of the PP has been consistently mentioned throughout the PDD.	CAR #1 closed out Y
A.4. Technical Description of the Project Activity				
A.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)? Are the latitude and	VVM Para.64 PDD section A.4	DR	PP has mentioned the geographical coordinates of each of the WECs in section A.4.1.4 of the PDD, thus allowing for the unique identification of the project activity.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
longitude of the site indicated (decimal points)				
A.4.2. Does the proposed CDM project activity involve the alteration of existing installations or process?	VVM Para.64 PDD section A.4	DR SV	The proposed CDM project activity is a green field project. PP has submitted the purchase orders of the equipments used. The project does not involve the alteration of existing installations or processes. This was also verified during the site visit.	Y
A.4.3. Do the project participants possess ownership or licenses which will allow the implementation of the project at that site / those sites?	VVM Para.64 PDD section A.4	DR	PP has submitted the GEDA clearance and the land lease deed which, which allow the implementation of the project activity at the project site.	Y
A.4.4. Is the category(ies) of the project activity correctly identified?	VVM Para.64 PDD section A.4	DR	The PDD mentions that the proposed CDM project activity falls under type – I, and project category is ‘D ‘- Grid connected renewable electricity generation. This has been correctly identified.	Y
A.4.5. Is all information provided in compliance with actual situation or planning as available by the project participants?	VVM Para.64 PDD section A.4 EB 52 Para. 13	DR SV	The proposed CDM project activity, which has already been commissioned, involves the installation of 12 WECs of total capacity 9.6 MW, which will generate electricity and export the same to the NEWNE grid. The information provided by the PP in the PDD was found to be consistent and in compliance with the actual situation.	Y
A.4.6. Is the table required for the indication of projected emission reductions correctly applied?	VVM Para.64 PDD section A.4	DR	The table for the projected emission reductions has been correctly applied in section A.4.3 of the PDD in accordance with the guidelines for completing the CDM-SSC-PDD.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
A.5. Debundling				
A.5.1. Is the small-scale project activity a debundled component of a large scale project activity	VVM Para. 136c EB54 para 35 & Annex 13	DR	The PDD mentions that the project proponent does not have any other registered or applied for registration CDM project activity in the 1 km area from the present project activity by same project participant within 2 years in same project category and technology. The same was checked during the site visit.	Y
A.5.2. If the project is a debundled component of a larger project, does the larger project fall within the limits for small-scale CDM project activities	VVM Para. 134c	DR	The project activity is not a de-bundled project activity as mentioned in the PDD. The same was checked during the site visit.	Y
A.6. Public Funding				
A.6.1. Does the information on public funding provided conform to the actual situation or planning as presented by the project participants?	PDD section A.4.4	DR SV	The PDD mentions that there is no public funding for the project activity. PP has provided a declaration regarding the same. No signs of donor funding was visible on the site. The information provided by the PP conforms to the actual situation.	Y
A.6.2. Is all information provided consistent with details provided by further chapters of the PDD (in particular annex 2)?	PDD section A.4.4	DR	The information provided by the PP in section A.4.4 of the PDD is consistent with that mentioned in Annex 2 of the PDD.	Y
A.6.3. In case of public funding from Annex I	PDD section A.4.4	DR	Not applicable, as there is no public funding for the proposed CDM project activity.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
Parties is it confirmed that such funding does not result in a diversion of official development assistance				
B. Baseline and Monitoring Methodology				
B.1. Choice and Applicability				
B.1.1. Is the baseline methodology previously approved by the CDM Methodology Panel?	VVM Para.68 PDD section B.1	DR	Section B.1 of the PDD contains a reference to the methodology used i.e. AMS I D version 16 which is an approved methodology and is valid.	Y
B.1.2. Has the methodology (incl. the tools) been altered from the original version as referenced in the PDD?	VVM Para.69 PDD section B (B.1-B.2)	DR	The methodology AMS I.D version 16 and relevant tools used for the project activity have been correctly quoted and applied without any alteration. This has been verified by comparing it against the version available on the UNFCCC website.	Y
B.1.3. Does the project activity qualify as small scale project?	VVM Para. 134a	DR SV	The project uses the methodology AMS I D version 16; the total rated capacity of project activity is 9.6 MW, which is less than the specified limit of 15 MW for a small-scale project activity. The same was cross-checked during the site visit. Hence the project qualifies as a small scale project.	Y
B.1.4. Is the category(ies) of the project activity correctly identified in accordance with Appendix B to the simplified modalities and procedures for small-scale CDM project activities?		DR	The project type and category identified in section B.1 of the PDD is I.D – grid connected renewable electricity generation. The project activity involves electricity generation using WECs and supplying the same to NEWNE grid. Hence, the project type and category have been correctly identified in accordance with Appendix B of the simplified modalities and procedures for small-scale CDM project activities.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
B.1.5. Is the selected simplified methodology applicable to the project activity in the PDD?	VVM Para.75/66a/68/73 PDD section B (B.1-B.2)	DR	<p>Section B.2 of the PDD discusses the applicability of the methodology AMS I.D./Version 16 to the proposed project activity. The proposed CDM project activity will supply electricity to the NEWNE grid from a renewable source (i.e. wind) and the capacity of the project activity (9.6 MW) is below the 15 MW limit for small scale projects. Hence, AMS I.D/version 16 is applicable to the project activity.</p> <p>PP is requested to mention all the applicability criteria as per the applicable methodology in section B.2 of the PDD Hence CL #4 raised PP has mentioned all the applicability criteria as per the applicable methodology in section B.2 of the PDD. This has been checked against the selected methodology and is accepted.</p>	<p>CL #4 closed out</p> <p>Y</p>
B.1.6. Does the project activity conform to one of the approved small-scale categories?	VVM Para. 136b EB55 Annex 35	DR	The proposed project activity confirms to AMS I.D./Version 16 under sectoral scope – 01 (Energy industries renewable - Non-renewable sources) and justification for the applicability criteria has been mentioned in section B.2 of the PDD.	Y
B.1.7. Is the project activity a bundle of several small scale activities and if so does it contain any sub-bundles?		DR	The project activity is a bundled project activity as mentioned in the PDD. PP has submitted the bundling form for the same.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
B.1.8. If the project activity is a bundle of several small scale activities, does the sum of the total bundle (including any subbundles) fall within the limits for small scale projects		DR	The project is a bundled project activity with a total capacity of 9.6 MW which falls within the limits for small scale project activities.	Y
B.1.9. If the project activity is a bundle of several small scale activities, has the form with information related to the bundle been submitted and is it correctly used		DR	PP has submitted the bundling form for the project activity. The form has been correctly filled.	Y
B.1.10. Is the discussion in the PDD in conformance with all applicability criteria of the applied methodology?	VVM Para.75/66b/68 PDD section B (B.1-B.2)	DR	Section B.2 of the PDD discusses the applicability of the methodology AMS I.D./Version 16 to the proposed project activity. The proposed CDM project activity will supply electricity to the NEWNE grid from a renewable source (i.e. wind) and the capacity of the project activity (9.6 MW) is below the 15 MW limit for small scale projects. Hence, AMS I.D./version 16 is applicable to the project activity.	Y
B.2. Project Boundary				
B.2.1. Are all emission sources and gases related to the baseline scenario, project scenario and leakage clearly identified and described in a complete and transparent	VVM Para.79/77 /67a PDD section B.3	DR	The PDD correctly describes the project boundary, including the physical delineation of the proposed CDM project activity.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
manner? Is there information on GHG emissions in proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.				
B.2.2. In case of grid connected electricity projects: Is the relevant grid correctly identified in accordance with the tool to calculate emission factor of electricity system (wherever applicable) and the underlying methodology?	VVM Para.79 PDD section B.3	DR	The project activity involves generation of electricity using WECs. The electricity generated is exported to the NEWNE grid of India. This grid is identified in accordance with the tool to calculate emission factor version 02.1.0	Y
B.2.3. Does the project boundary include the physical delineation of the proposed CDM	VVM Para.78/79 PDD section B.3 also see section A.4.2	DR	The project boundary of the proposed CDM project activity has been delineated in section B.3 of the PDD. The delineation is correct and meets the requirements of the selected baseline methodology AMS I.D./Version 16	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
project activity?				
B.2.4. Are the project's geographical boundaries and the project's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	VVM Para.76/79 PDD section B.3 also see section A.4.2	DR	The project boundary has been described clearly as per the selected methodology AMS I D version 16.	Y
B.3. Identification of the Baseline Scenario				
B.3.1. Does the PDD discuss the identification of the most likely baseline scenario? Does the PDD follow the steps to determine the baseline scenario required by the methodology and is the application of the methodology and the discussion and determination of the chosen baseline transparent?	VVM Para.67b.80/82/86 PDD Section B.4/B.5	DR	The baseline for the proposed CDM project activity has been identified in accordance with the methodology AMS I D version 16 and mentioned clearly in the PDD.	Y
B.3.2. Are all tools/procedures in the methodology correctly applied to identify the most reasonable baseline	VVM Para.81/82/86a- d/83/84 PDD Section	DR	The discussion and determination of the chosen baseline is transparent and supported by the available data which is the NEWNE grid. The data are available from CO2 Baseline Database for the Indian Power Sector, Version 05.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
scenario? This includes all potential realistic and credible baseline scenarios in the discussion taking into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	B.4/B.5			
B.3.3. Is the choice of the baseline compatible with the available data?	VVM Para.86b-c/95 PDD Section B.4/B.5	DR	The baseline has been identified for proposed project activity as per the methodology AMS I D version 16 and mentioned clearly in the PDD.	Y
B.3.4. Is conservativeness addressed in the way of identifying the baseline?	VVM Para.90 PDD Section B.4/B.5	DR	The baseline for the proposed project activity has been identified as per the methodology AMS I D version 16 and mentioned clearly in the PDD. The data used for calculating the baseline has been taken from the CO ₂ Baseline Database for the Indian Power Sector (Version 05) published by the Ministry of Power, Government of India. The data in this database has been conservatively calculated. Hence the baseline for the project activity has been conservatively identified.	Y
B.3.5. Does the selected baseline represent the most likely scenario among other possible and/or discussed scenarios?	VVM Para.90/91 PDD Section B.4/B.5	DR	The methodology AMS I.D. Version 16 does not requires the identification of alternative baseline scenarios.	Y
B.3.6. Is there a verifiable description of the baseline scenario? Does this include a description of the	VVM Para.86e/85 PDD Section B.4/B.5	DR	Not required as per methodology AMS I.D. Version 16	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity?				
B.4. Additionality				
B.4.1. Does the PDD clearly demonstrate the additionality using the approach as specified in the methodology and by following all the required steps?	VVM Para 137 EB 54 report, annex 15 VVM Para.67d/95 PDD Section B.1/B.4/B.5	DR	<p>PP is requested to provide documentary evidence for consideration of 100% equity in the project</p> <p>PP is requested to provide documentary evidence (Eg. invoice) to check the actual project cost, O&M cost and escalation in O&M</p> <p>As in wind project gestation period is normally less than 1 year. Initial cash outflow can be matched against cash inflow in year 1</p> <p>PP is requested to mention appropriate references/sources for all values in the investment analysis and the benchmark excel sheets.</p> <p>PP is requested to address the gap between the actual cost (obtained in point 3 above) and the cost considered during the investment decision in the sensitivity analysis in the PDD</p> <p>PP is requested to include the threshold limit i.e. the scenario in which the calculated IRR crosses the benchmark and explain the likelihood of that scenario in the PDD</p> <p>CAR #2 and CAR #3 raised</p> <p>Responses to CAR #2 and CAR #3 have been provided and accepted.</p>	<p>CAR #2 and CAR #3 closed out</p> <p>Y</p>
B.4.2. In case of using the additionality tool: Is the 'Additionality Tool' used in the PDD	PDD Section B.1/B.4/B.5	DR	<p>Pending closure of CAR #2 and CAR #3</p> <p>PP has not used the additionality tool. However 'Tool for the demonstration and assessment of additionality (Version 05.2)', has been referred for the benchmark</p>	<p>CAR #2 and CAR #3 closed out</p>

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
latest version? If an earlier version has been used, do the changes impact the discussion in the PDD? Are all steps followed in a transparent manner?			analysis only.	Y
B.4.3. Has all information been backed up with references, sources and certification? Is the data presented credible and reliable with complete transparency to all available data and documentation?	VVM Para.93/91 PDD Section B	DR SV	Pending closure of CAR #2 and CAR #3. Also, this needs to be discussed during the site visit. Responses to CAR #2 and CAR #3 was provided and accepted. PP has provided sources /references for all values used in the investment analysis. All sources/references have been checked and found to be appropriate.	CAR #2 and CAR #3 closed out Y
B.4.4. Is the discussion on additionality and the evidence provided consistent with the starting date of the project? If the project activity start date is prior to the validation is it discussed how the CDM was taken into account in the decision to go ahead with the project activity	VVM Para.102b PDD Section B.5	DR	PP is requested to justify how the prior consideration of CDM is in line with EB 49 Annex 22. CL #7 raised Responses to CL #7 has been provided and accepted. Detailed explanation has been provided under CL #7 in annex 3.	CL #7 closed out

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
B.4.5. If an investment analysis has been used, has it been demonstrated that the proposed project activity is economically or financially less attractive than at least one other alternative without the revenue from the sale of CERs?	VVM Para. 106, 107, 108, 109 112a-c PDD Section B.5	DR	Pending closure of CAR #2 and CAR #3 Investment analysis has been demonstrated for the project activity and the same has been described in section B.5 of the PDD. Response to CAR #2 and CAR #3 was provided and accepted.	CAR #2 and CAR #3 closed out Y
B.4.6. If a benchmark is used, is it ensured that it is selected in accordance with the requirements of the tool /methodology and it represents standard returns in the market (not linked to the subjective profitability expectation or risk profile of a particular project developer).	VVM Para. 110 PDD Section B.5	DR	PP is requested to provide the screen shots of beta value used from Bloomberg PP is requested to explain the calculation of the benchmark in section B.5 of the PDD PP has mentioned both 'Equity IRR' and 'Project IRR' in section B.5 of the PDD. PP is requested to clarify which is the selected financial indicator and consistently mention the same in the PDD PP is requested to provide appropriate references and values for market return, risk free return and beta in line with paragraph 6 of EB 51 Annex 58. Pending closure of CAR #2 and CAR #3 Equity IRR has been selected as the financial indicator and the return on equity has been selected as the benchmark and has been calculated based on the CAPM model.	CAR #2 and CAR #3 closed out Y
B.4.7. If a barrier analysis has been used, has it been shown that the proposed project activity faces barriers that prevent the	VVM Para. 114 116a-b/117 PDD Section B.5	DR	Not applicable since barrier analysis has not been demonstrated	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
implementation of this type of proposed project activity but would not have prevented the implementation of at least one of the alternatives?	EB50, Annex 13			
B.4.8. Is the discussion on additionality consistent with the identification of all plausible and credible baseline scenarios?	VVM Para. 105 PDD Section B.5	DR	The methodology AMS I.D. Version 16 does not requires the identification of alternative baseline scenarios.	Y
B.4.9. If a barrier analysis has been used have the 'guidelines for objective demonstration and assessment of barriers' been followed? Have all applicable steps been considered and substantiated with objective evidence?	VVM Para 113 EB 50 Annex 13	DR	Not applicable since barrier analysis has not been used	Y
B.4.10. Do the identified baseline scenarios include technologies and practices that include outputs or services comparable with the proposed CDM	VVM Para. 105 PDD Section A.4.2/B.5	DR	The methodology AMS I.D. Version 16 does not requires the identification of alternative baseline scenarios.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
project activity. Do they also abide by the same applicable laws and legislations?				
B.4.11. Has it been shown that the project is not common practice?	VVM Para. 119a/b PDD Section B.5	DR	Common practice analysis is not required by the methodology AMS I.D./Version 16.	Y
B.4.12. What are they key distinctions between the project activity and any similar projects that are widely used as common practice?	VVM Para. 118, 119c/d PDD Section B.5	DR	Common practice analysis is not required by the methodology AMS I.D./Version 16.	Y
B.5. Application of the Simplified Methodology				
B.5.1. Has the simplified methodology been applied correctly for determining baseline emissions ?	VVM Para. 91d PDD Section B (B.6.1 -B.71)	DR	PP is requested to clarify the following statement in section B.6.1 of the PDD "Since the project activity is the installation of a new grid connected renewable power plant the $EG_{PJ,y}$ is calculated as : $EG_{PJ,y} = EG_{facility,y}$ " CL #4 raised PP has deleted this statement from the PDD as it was not appropriate. Hence, the methodology AMS I.D version 16 has been correctly applied for determining the baseline emissions in section B.6.1 and B.6.3 of the PDD and the ER excel sheet.	CL #4 closed out Y
B.5.2. Has the simplified methodology been	VVM Para.	DR	The methodology AMS I.D version 16 has been correctly applied for determining the	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
applied correctly for determining project emissions ?	90/91d PDD Section B (B.6.2-B.71)		project emissions in section B.6.1 and B.6.3 of the PDD and the ER excel sheet.	
B.5.3. Has the simplified methodology been applied correctly for determining leakage ?	VVM Para. 91d PDD Section B (B.6.2 -B.71)	DR	The methodology AMS I.D version 16 has been correctly applied for determining the leakage in section B.6.1 and B.6.3 of the PDD and the ER excel sheet.	Y
B.5.4. Where applicable, has the simplified methodology been applied correctly for the direct calculation of emission reductions ?	VVM Para 88/91d PDD Section B (B.6.2 -B.71)	DR	The methodology AMS I.D version 16 has been correctly applied for the calculation of emission reductions in section B.6.1 and B.6.3 of the PDD and the ER excel sheet.	Y
B.5.5. Where there is an option between different equations or parameters, has the methodological choices for the project been explained, have they been properly justified and are they correct?	VVM Para.89/90/91 PDD Section B (B.6.2 -B.71)	DR	The methodology has been correctly applied for the calculation of emission reductions.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
B.5.6. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	PDD Sections B.5-C	DR	The project activity involves the generation of electricity using wind energy and hence not applicable	Y
B.6. Ex-ante Data and Parameters Used				
B.6.1. Are the data provided in compliance with the methodology?	VVM Para. 91/67c PDD Section B.6.3/B.6.4	DR	The data provided in the excel spreadsheet are in compliance with the approved methodology AMS I.D./Version 16.	Y
B.6.2. Is all the data derived from official data sources or replicable records and have these been correctly quoted?	VVM Para. 91a/b PDD Section B.6.3/B.6.4	DR	All data in the excel spreadsheet have been quoted from official data sources or from replicable records like the CEA database and have been correctly quoted.	Y
B.6.3. Is the vintage of the baseline data correct?	PDD Section B.6.3/B.6.4	DR	The vintage of the baseline data is correct as PP has used the latest version of CO2 Baseline Database for the Indian Power Sector, Version 05 which was available at the time of PDD submission	Y
B.6.4. Is all the data appropriate and correctly applied to the CDM project activity?	VVM Para. 91c PDD Section B.6.3/B.6.4	DR	PP has applied all the data appropriately and correctly to the CDM project activity.	Y
B.6.5. Are data and parameters that are not being monitored and remained fixed throughout the crediting	VVM Para. 90 PDD Section B.6.3/B.6.4	DR	PP is requested to clarify the "Justification of the choice of data" of the parameters in section B.6.2 of the PDD. CL #4 raised. The data from the CEA database version 5 - OM, BM and CO ₂ emission factor which	CL #4 closed out Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
period appropriately assessed, correct, and will they result in conservative estimates?			have been fixed by the PP are appropriate and will result in conservative estimates throughout the crediting period.	
B.6.6. If the project activity uses the PLF does it follow the guidance provided in EB48 annex 11?	EB48 Annex 11.	DR	<p>PP is requested to confirm that the PLF and Effective PLF considered is as per EB 48 Annex 11</p> <p>CAR #2 raised.</p> <p>The PP has used the PLF from the WEC supplier offer letter (23.90%) for the investment analysis, since it was available at the time of investment decision. This is appropriate as per paragraph 6 of EB 51 Annex 58. Further, as per the UN guidelines in paragraph 3(b) of EB 48 Annex 11, the PP has contracted a third party (24.50%) to determine the PLF at the WEC site. The difference in the values of PLF have been addressed in the sensitivity analysis in the PDD. Thus guidance has been followed for the determination of the PLF.</p>	CAR #2 closed out Y
B.7. Calculation of Emissions Reductions				
B.7.1. Has the simplified methodology been applied correctly for determining emission reductions ?	VVM Para. 91d PDD Section A.4.3/B.6	DR	The methodology has been applied exactly as defined for determining the emission reductions. Section B.6.1 of the PDD clearly states the equations to be used and follows all required steps as per the methodology. The same has been reflected in the ER excel sheet.	Y
B.7.2. Are the emission reduction calculations documented in a complete and transparent manner?	VVM Para. 91e PDD Section B.6	DR	Section B.6.3 of the PDD documents indicates how each equation has been applied to calculate the emission reductions. It has been indicated in a reproducible manner. The same has been reflected in the ER excel sheet.	Y
B.7.3. Is the projection based on same procedures as used for later	PDD Section B.6	DR	Project participant has provided a transparent <i>ex ante</i> calculation of baseline emissions expected during the crediting period, applying all relevant equations	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
monitoring or acceptable alternative models?			provided in the approved methodology AMS I.D./Version 16	
B.7.4. Is the calculation of the emission reduction correct?	VVM Para. 91e PDD Section B.6	DR	The application of formulae to calculate emission reductions were found to be correct and reproducible in the PDD as well as the excel sheet. All estimates can be replicated using the parameters mentioned in the PDD.	Y
B.8. Emission Reductions				
B.8.1. Is the form/table required for the indication of projected emission reductions correctly applied?	PDD Section A.4.3/ Section B.6	DR	The tables in section A.4.3 and B.6 of the PDD have been correctly applied.	Y
B.8.2. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	PDD Section A.4.3/ Section B.6	DR	PP has mentioned the start date of the crediting period as 01/07/2011, which is appropriate.	Y
B.9. Monitoring Methodology				
B.9.1. Does the monitoring methodology provide a consistent approach in the context of all parameters to be monitored and further information provided by the PDD?	VVM Para. 67e PDD Section B.7-B.8 see also Annex 4	DR SV	Since the parameter "EG _{BL,y} " alone is sufficient for the calculation of emission reductions, PP is requested to clarify the monitoring of other parameters mentioned in section B.7.1 of the PDD. As per section B.1 of the PDD, the selected baseline and monitoring methodology for the project activity is AMS I.D./Version 16. PP is requested to clarify the reference to ACM0002 Version 11 in section B.7.2 of the PDD.	CL #6 closed out Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
Are all parameters and data that are available at validation consistent with the simplified methodology. Has this data been interpreted and applied correctly?			CL #6 raised. Responses to CL #6 have been provided and accepted. The monitoring methodology has been applied correctly in representing all the parameters to be monitored.	
B.9.2. Does the monitoring methodology apply consistently the choice of the option selected for monitoring both of project and baseline emissions?	PDD Sections B and C	DR SV	Pending closure of CL #6 The monitoring plan has been applied correctly for monitoring of both project and baseline emission.	CL #6 closed out Y
B.10. Data and Parameters Monitored				
B.10.1. Does the monitoring plan in the PDD comply with the simplified methodology? Provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	VVM Para. 91a/91d/121/79 PDD Section B.7- B.7.2	DR	Pending closure of CL #6 The Monitoring plan contains all necessary parameters and means of monitoring described in the plan complies with the requirements of the methodology AMS I.D Version 16.	CL #6 closed out Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
B.10.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the simplified methodology applied?	PDD Section B.7-B.7.2/B.6.2	DR	Choices of project GHG indicators are not required as per methodology AMS I.D Version 16	Y
B.10.3. Will it be possible to determine the specified project GHG indicators?	PDD Section B.6.2-B.8	DR	Project GHG indicators are not required as per methodology AMS I.D Version 16	Y
B.10.4. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	PDD Section B.6.2-B.7.1 EB 55, annex 35	DR	Pending closure of CL #6 The information given for each monitoring variable by the presented table is sufficient to ensure the verification of a proper implementation of the monitoring plan	CL #6 closed out Y
B.10.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records?	PDD Section B.6.2-B.7.1	DR	Pending closure of CL #6 The information given for each monitoring variable by the presented table is sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records.	CL #6 closed out Y
B.10.6. Is the monitoring approach in line with	PDD Section B.5-B.7.2	DR	The monitoring approach will deliver data in a reliable and reasonably acceptable accuracy.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?				
B.10.7. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.	PDD Section B.6.2-B.7.1	DR	The proposed project activity is the generation of electricity using wind energy, so project emission has not been taken into account that is inline with methodology AMS I.D Version 16	Y
B.11. Quality Control (QC) and Quality Assurance (QA) Procedures				
B.11.1. Is the selection of data undergoing quality control and quality assurance procedures complete?	VVM Para. 121 Refer to all data within the PDD Inc. B.6.2-B.7.1	DR	The WEC supplier is ISO certified and followed the QA/QC procedure for the monitoring data. QA/QC procedures have been described for all the parameters in the PDD.	Y
B.11.2. Is the belonging determination of uncertainty levels done correctly for each ID in a correct and reliable manner?	Refer to all data within the PDD Inc. B.4/B.7.2/Annex 4	DR	The uncertainty levels for each parameter have been addressed for each sub-bundle in section B.7.2 of the PDD.	Y
B.11.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?	VVM Para 121	DR	The WEC supplier is ISO certified and followed the QA/QC procedure for the monitoring data. QA/QC procedures have been described for all the parameters in the PDD.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
B.11.4. Is it ensured that data will be bound to national or internal reference standards?	VVM Para. 86d	DR SV	The data provided will be bound by national references and this was cross-checked during the site visit.	Y
B.11.5. Is it ensured that data provisions will be free of potential conflicts of interests resulting in a tendency of overestimating emission reductions?	VVM Para. 19	DR	The WEC supplier is ISO certified and followed the QA/QC procedure for the monitoring data. QA/QC procedures have been described for all the parameters in the PDD thorough which data manipulation can be avoided..	Y
B.12. Operational and Management Structure				
B.12.1. Is the authority and responsibility of project management clearly described?	PDD Section B.8/Annex 1	DR SV	Management and operational structure for the project activity has been correctly described in the PDD. It is consistent with that observed during the site visit.	Y
B.12.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	PDD Section B.8/Annex 1	DR	The same has been correctly described in the PDD and was cross-checked during the site visit.	Y
B.12.3. Are procedures identified for training of monitoring personnel?	PDD Section B.8/Annex 1	DR	The Enercon Training Academy provides need-based training to meet the training requirements. The same has been mentioned in section B.7.2 of the PDD	Y
B.13. Monitoring Plan (Annex 4)				
B.13.1. Is the monitoring plan developed in a project specific manner clearly	VVM Para. 122a	DR	The monitoring plan has been developed specifically for this project activity and is mentioned in Section B.7.2 and annex 4 of the PDD.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
addressing the unique features of the CDM activity?				
B.13.2. Does the monitoring plan completely describe all measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring data quality?	VVM Para. 122b EB55 Annex 35	DR	Section B.7.2 and annex 4 of the PDD describes all measures to be implemented for monitoring all parameters, including measures to be implemented for ensuring data quality.	Y
B.13.3. Does the monitoring plan provide information on monitoring equipment and respective positioning in order to safeguard a proper installation?	VVM Para. 122b	DR	Section B.7.2 and annex 4 of the PDD provides information about the meters to be used for the monitoring.	Y
B.13.4. Are procedures identified for calibration of monitoring equipment?	VVM Para. 123a-b EB55 Annex 35	DR	The PDD has described the calibration procedure, frequency of calibration and has identified the entity responsible for the same.	Y
B.13.5. Are procedures identified for maintenance of monitoring equipment and installations?	VVM Para. 123a-b	DR	The maintenance of monitoring equipment and installations will be carried out by the EPC contractor.	Y
B.13.6. Are procedures identified for day-to-day	VVM Para.	DR	PP has mentioned procedure for day to day records and storage of records. The same	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
records handling (including what records to keep, storage area of records and how to process performance documentation)	123a-b EB55 Annex 35	SV	was checked during site visit.	
B.13.7. Are procedures identified for dealing with possible monitoring data adjustments and missing data allowing reconstruction of data in case of monitoring problems?	VVM Para. 124a-c	DR	The procedures for dealing with monitoring problems have been covered in section B.7.2 and annex 4 of the PDD.	Y
B.13.8. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	VVM Para.124a-c	DR SV	Management structure for the project activity has been correctly described in the PDD. It is consistent with that observed during the site visit.	Y
B.13.9. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	VVM Para. 124a-c	DR	Reviewing the data is a part of the O&M service of the EPC contractor and is covered under the management structure mentioned in section B.7.2 of the PDD.	Y
B.13.10. Describe the ability of	VVM Para.	DR	The project activity is already commissioned and the PP can implement the monitoring	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
the project participants to implement the monitoring plan.	124c	SV	plan since the O&M contractor is experienced in the same.	
B.14. Baseline Details				
B.14.1. Is there any indication of a date when determining the baseline?	PDD Section B.8/Annex 3	DR	The baseline has been determined on 30/12/2010, as mentioned in the PDD.	Y
B.14.2. Is this consistent with the time line of the PDD history?	Also see revision history of the PDD	DR	The date of the webhosted PDD is 30/12/2010. The PDD has been webhosted on 06/01/2011. The baseline has been determined on 30/12/2010 which is before PDD publication	Y
B.14.3. Is all data required provided in a complete manner by annex 3 of the PDD?	PDD Annex 3	DR	All the data required for baseline determination is mentioned in section B.6.2 of PDD.	Y
C. Duration of the Project / Crediting Period				
C.1.1. Are the project's starting date and operational lifetime clearly defined and reasonable?	VVM Para. 102a-c PDD Section C.1.1/C.1.2	DR	The operation lifetime is 20 years as described in the PDD which is same as that of other wind power projects. PP has provided purchase orders as evidence to support the start date of the project activity which is as per para 67 of EB 41 meeting report. Hence the start date is appropriate.	Y
C.1.2. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed	VVM Para. 102a PDD Section C.2/C.2.1/C.2.2	DR	Fixed crediting period of 10 years has been selected for the project activity and it is reasonable. PP has carried out the investment analysis for the entire lifetime of the project activity i.e. 20 years. PP has mentioned 01/07/2011 or date not earlier than the date of registration as the start date of the crediting period, which is appropriate.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
crediting period of max. 10 years)?				
C.1.3. Does the project's operational lifetime exceed the crediting period	VVM Para. 102a PDD Section C.1.2/C.2.1.1/C.2.1.2	DR	The project operational life is expected to be 20 years, which exceeds the crediting period of 10 years.	Y
C.1.4. Does the start date indicate whether this is a new project activity or a pre-existing project activity?	VVM Para. 102a/ 98 PDD Section C.1.1/C.2.1.1	DR	The start date of the project activity 05/04/2010 which is after 2nd August 2008 and thus it is a new project activity.	Y
D. Environmental Impacts				
D.1.1. Does the project comply with environmental legislation in the host country?	VVM Para. 131/134d PDD section D	DR	PP has provided the latest applicable EIA notification. The project complies with the environmental legislation in the host country.	Y
D.1.2. Has an analysis of the environmental impacts of the project activity been sufficiently described?	VVM Para. 131 PDD section D	DR	The proposed project activity involves the establishment of a wind energy based power plant and hence there are no adverse environmental impacts. Also, as per the latest applicable EIA notification, an EIA need not be carried out for the proposed project activity.	Y
D.1.3. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an	VVM Para. 131 PDD section D	DR	As per the notification dated 14th September 2006 by Ministry of Environment and Forests (MoEF), Govt. of India, wind projects are not included in the list of projects that have to get Prior Environmental Clearance either from State or Central Govt. authorities and hence no EIA study required to be carried out.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
EIA approved?				
D.1.4. Will the project create any adverse environmental effects?	VVM Para. 131 PDD section D	DR	The proposed project activity involves the establishment of a wind energy based power plant and hence there are no adverse environmental effects.	Y
D.1.5. Are trans-boundary environmental impacts considered in the analysis?	VVM Para. 131 PDD section D	DR	Not applicable since an EIA is not required to be carried out for the project activity.	Y
D.1.6. Have identified environmental impacts been addressed in the project design?	VVM Para. 131 PDD section D	DR	Not applicable since an EIA is not required to be carried out for the project activity.	Y
E. Stakeholder Comments				
E.1.1. Have relevant stakeholders been consulted?	VVM Para. 128a PDD Section E.1	DR SV I	The PP has identified the farmers, gram panchayat members, etc as the local stakeholders. The relevance of the stakeholders identified will be verified during the site visit. The stakeholders identified are relevant to the proposed project activity.	Y
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	VVM Para. 128a PDD Section E.1	DR SV I	The stakeholders have been invited through individual invitation letters and a public notice. PP has submitted evidence for the same and it was cross verified during the site visit.	Y
E.1.3. Is the undertaken stakeholder process described in a complete and transparent	VVM Para. 128b PDD Section E.1	DR SV I	The stakeholder process has been completely described in section E.1 of the PDD. It was cross verified during the site visit.	Y

Checklist Question	Ref. ID	MoV*	Comments	Conclusion/ CARs/CLs
manner?				
E.1.4. Is a summary of the stakeholder comments received provided?	VVM Para. 128b PDD Section E.2	DR SV I	The summary of stakeholder comments has been provided in section E.2 of the PDD. It was cross verified during the site visit.	Y
E.1.5. Has due account been taken of any stakeholder comments received?	VVM Para. 128b PDD Section E.3	DR SV I	The comments received from the stakeholder are positive in nature and hence no action needs to be taken. This is reflected in section E.3 of the PDD and was cross verified during the site visit.	Y

A.3 Annex 3: Overview of Findings

Findings Overview Summary

	CARs	CLs	FARs
Total Number raised	5	3	-

Date:	11/02/2011		Raised by:	Assessment Team	
Type:	CAR	Number:	#1	Reference:	1.3
Lead Assessor Comment:					
PP is requested to submit the Host Country Approval for the project activity					
Project Participant Response:				Date: 16/05/2011	
PP has submitted the Host Country Approval to the DOE.					
Documentation Provided by Project Participant:					
Host Country Approval by Ministry of Environment & Forest (MoEF), Government of India, Letter No. 4/17/2010-CCC dated 28/04/2011					
Information Verified by Lead Assessor:					
Project activity name, project proponents authorised by the host country DNA has been checked for the project activity					
Reasoning for not Acceptance or Acceptance and Close Out:				Date: 18/05/2011	
Project participant has submitted the Host Country Approval from Designated National Authority, MoEF for the proposed project activity. The reference number for the same is 4/17/2010-CCC dated 28/04/2011. The name of the project activity and PP mentioned in HCA is the same as in the section A.1 of the PDD. This is acceptable. CAR #1 closed out					
Acceptance and Close out by Lead Assessor:				Date: 18/05/2011	

Date:	11/02/2011		Raised by:	Assessment Team	
Type:	CAR	Number:	#2	Reference:	B.4
Lead Assessor Comment:					

INVESTMENT ANALYSIS RELATED COMMENTS (Part 1 of 2)	
<ol style="list-style-type: none"> 1. PP is requested to confirm that the PLF and Effective PLF considered is as per EB 48 Annex 11 and as per paragraph 6 of EB 51 annex 58. 2. PP is requested to provide documentary evidence for consideration of 100% equity in the project 3. PP is requested to provide documentary evidence (Eg. invoice) to check the actual project cost, O&M cost and escalation in O&M 4. PP is requested to address the gap between the actual cost (obtained in point 3 above) and the cost considered during the investment decision in the sensitivity analysis in the PDD 5. PP is requested to include the threshold limit i.e. the scenario in which the calculated IRR crosses the benchmark and explain the likelihood of that scenario in the PDD 6. As in wind project gestation period is normally less than 1 year. Initial cash outflow can be matched against cash inflow in year 1 7. PP is requested to provide the screen shots of beta value used from Bloomberg 	
Project Participant Response:	Date: 19/02/2011
<ol style="list-style-type: none"> 1. PP has considered the PLF figure 23.9% from the supplier offer report which was available during the Investment Analysis considering Para 6 of EB 51 annex 48. Referring Para 3(b) of EB 48 Annex 11, PP has also done the third party assessment. The PLF provided by third party is 24.5% i.e. 2.5 % variation over the base case and falls under the sensitivity range 2. PP has provided Board Resolution and CA declaration to DOE wherein PP has mentioned that the project is 100% equity based project. 3. The PP has taken the project cost, O&M cost and escalation on O&M based on offer provided by the supplier. The actual cost for the project can be checked from purchase order and therefore same has been provided to the DoE 4. PP has considered the project cost as the project cost mentioned in the supplier offer during the investment analysis. The actual project cost is INR 352 Million as per purchase order for Vish Wind Infrastructure LLP and INR 176 Million for J.N. Investment & Trading Co. Pvt. Ltd, which is 7.9% lower than project cost mentioned in offer letter. The sensitivity on project cost is conducted at the variation of +/-10% which is greater than the actual gap between the project cost provided in Offer and Purchase order. 5. The sensitivity analysis is extended to the point at which the equity IRR crosses the benchmark cost of equity. The realistic likelihood of that being achieved against each case has been explained in the PDD of section B.5. 6. For accounting the cash flow; XIRR is more appropriate function compared to IRR as XIRR takes to consideration the time of cash inflow and outflow from the project. We have included the cash outflow as per offer received from the supplier and applied the XIRR function to compute the equity returns. The revised spreadsheet has been provided to DoE for verification. 7. Beta Snapshot has been provided in the PDD as appendix 2. 	
Documentation Provided by Project Participant:	
Third party PLF report, Purchase Order, Insurance Letter, Board Resolution, CA Declaration	
Information Verified by Lead Assessor:	

<p>Enercon offer letters to both PPs and the third party PLF report issued by M/s Ravi Enteck Limited dated 24/11/2010 have been checked for the values of PLF.</p> <p>The board resolution and CA certificates for both PPs were checked to confirm 100% equity in the project.</p> <p>The Purchase Orders and the Invoices for the project activity have been checked for project cost</p> <p>Section B.5 of the PDD was checked for the sensitivity analysis and the threshold limit of the parameters undergoing sensitivity analysis.</p>	
<p>Reasoning for not Acceptance or Acceptance and Close Out:</p>	<p>Date: 24/02/2011</p>
<ol style="list-style-type: none"> 1. The PP has used the PLF from the WEC supplier offer letter (23.90%) for the investment analysis, since it was available at the time of investment decision. This is appropriate as per paragraph 6 of EB 51 Annex 58. Further, as per the UN guidelines in paragraph 3(b) of EB 48 Annex 11, the PP has contracted a third party (24.50%) to determine the PLF at the WEC site. The difference in the values of PLF have been addressed in the sensitivity analysis in the PDD. Thus the PLF considered for the project activity satisfies the requirements of EB 48 Annex 11 (paragraph 3b) and EB 51 annex 58 (paragraph 6). 2. The extracts of the board resolutions of both PPs clearly states that the project will be funded by equity alone. The CA certificates also certifies that the PP has not availed any term loan or credit facilities from any banks or financial institutions. This confirms that the project is 100% equity funded. 3. The Purchase Orders and the Invoices have been checked to confirm that the total project cost mentioned in both the documents is consistent. As per the O&M details in the proposal issued by the WEC supplier to both PPs, the O&M will be carried out free of charge for the 1st year. The WECs of the project activity have been commissioned between 27/09/2010 and 30/09/2010. The O&M is free till September 2011. The O&M agreement for the period after the free period has not been signed. Hence the PP has subjected the O&M cost to a sensitivity analysis where it has been seen that even if the O&M cost is reduced to zero, the IRR does not cross the benchmark. 4. PP has addressed the gap between the project cost considered for the investment analysis and the actual project cost in section B.5 of the PDD under the sensitivity analysis. The actual project cost is 7.3% lower than the project cost considered for the investment analysis. PP has carried out a sensitivity analysis considering a range of +/- 10% in the PDD. Even with a 10% decrease in the project cost, the IRR does not cross the benchmark. 5. PP has included the threshold limit, i.e. the scenario in which the IRR crosses the benchmark, for the parameters included in the sensitivity analysis, in section B.5 of the PDD. The IRR does not cross the benchmark under any scenario. PP is requested to verify the threshold limit after addressing issue 7, as it may lead to a change in the benchmark. 6. PP has used the XIRR function instead of the IRR function in the excel sheet since it takes into consideration the time of cash inflow and outflow. The same has been correctly applied in the investment analysis excel sheet for the calculation of return on equity. This has been checked and is accepted. 7. PP has provided the screenshots from Bloomberg used for the beta value. The value of raw beta in the benchmark excel sheets is inconsistent with that mentioned in the screenshots. PP is requested to address this inconsistency. <p>CAR #2 is open</p>	
<p>Project Participant Response:</p>	<p>Date: 03/03/2011</p>
<p>5. After addressing issue 7, the threshold limit mentioned in section B.5 of the PDD has been revised.</p> <p>7. PP has incorporated the BETA Snapshot under Appendix 2 of the PDD. The inconsistency has been also addressed in the Excel Sheet</p>	
<p>Documentation Provided by Project Participant:</p>	
<p>Beta Snapshot</p>	
<p>Information Verified by Lead Assessor:</p>	

The raw beta values mentioned in the benchmark excel sheet have been verified for consistency against the beta snapshots.	
The threshold limit mentioned in section B.5 of the has been checked.	
Reasoning for not Acceptance or Acceptance and Close Out:	Date: 08/03/2011
<p>5. The threshold limits for the parameters considered for the sensitivity analysis mentioned in section B.5 of the PDD have been checked and are found to be correct.</p> <p>7. The value of raw beta mentioned in the snap shots have been checked against that used in the benchmark excel sheet and is found to be consistent. This has been checked and is accepted.</p> <p>CAR #2 closed out</p>	
Acceptance and Close out by Lead Assessor:	Date: 08/03/2011

Date:	11/02/2011	Raised by:	Assessment Team		
Type:	CAR	Number:	#3	Reference:	B.4
Lead Assessor Comment:					
INVESTMENT ANALYSIS RELATED COMMENTS (Part 2 of 2)					
<ol style="list-style-type: none"> 1. PP is requested to explain the calculation of the benchmark in section B.5 of the PDD 2. PP is requested to mention appropriate references/sources for all values in the investment analysis and the benchmark excel sheets. 3. PP has mentioned both 'Equity IRR' and 'Project IRR' in section B.5 of the PDD. PP is requested to clarify which is the selected financial indicator and consistently mention the same in the PDD 4. PP is requested to provide appropriate references and values for market return, risk free return and beta in line with paragraph 6 of EB 51 Annex 58. 					
Project Participant Response:				Date: 19/02/2011	
<ol style="list-style-type: none"> 1. The detailed calculation of benchmark calculation is provided under Appendix 1. 2. The references for all the values used in the investment analysis have been provided to DoE for verification. Appropriate references wherever required have now been mentioned. 3. PP has considered equity IRR as the financial indicator. The same has been revised in section B.5 of the PDD and also made consistent. 4. Appropriate references and values for market return, risk free return and beta in line with paragraph 6 of EB 51 Annex 58 have now been mentioned in the benchmark excel sheet. 					
Documentation Provided by Project Participant:					
Revised PDD, PLF Report, Beta Snapshot, Revised Benchmark sheet, Revised Investment Analysis excel sheet					
Information Verified by Lead Assessor:					
The revised PDD, benchmark excel sheet and investment analysis excels sheet were checked for correctness of the benchmark calculations, appropriateness of values and references.					
Reasoning for not Acceptance or Acceptance and Close Out:				Date: 24/02/2011	

1. PP has explained in detail the calculation of the benchmark in appendix 1 of the PDD. This has been checked and is accepted. 2. The references/sources for all values in the investment analysis and the benchmark excel sheets have been checked and found to be appropriate and hence is accepted. 3. PP has considered 'Equity XIRR' as the financial indicator and the same has been consistently mentioned in the PDD. This has been checked and is accepted. 4. The references and values for market return, risk free return and beta mentioned in the benchmark excel sheet have been checked. The values have been found to be in line with paragraph 6 of EB 51 Annex 58. CAR #3 closed out.	
Acceptance and Close out by Lead Assessor:	Date: 24/02/2011

Date:	11/02/2011	Raised by:	Assessment Team		
Type:	CL	Number:	#4	Reference:	B.1
Lead Assessor Comment:					
1. PP is requested to mention all the applicability criteria as per the applicable methodology in section B.2 of the PDD					
2. PP is requested to clarify the following statement in section B.6.1 of the PDD “Since the project activity is the installation of a new grid connected renewable power plant the $EG_{PJ,y}$ is calculated as : $EG_{PJ,y} = EG_{facility,y}$ ”					
3. PP is requested to clarify the “Justification of the choice of data” of the parameters in section B.6.2 of the PDD					
Project Participant Response:				Date: 19/02/2011	
1. PP has revised the section B.2 of the PDD as per the approved methodology.					
2. PP has removed the same from the PDD. The PDD is revised to maintain the consistency as per approved methodology AMS I.D, EB 54 Version 16.					
3. The data for operating and build margin is taken from CEA database ver 5.0. The detailed approach has also been explained under section B.6.1 of the PDD.					
Documentation Provided by Project Participant:					
Revised PDD has been submitted					
Information Verified by Lead Assessor:					
Section B.2 of the PDD was checked for the applicability criteria					
Section B.6.2 of the PDD was checked for the “Justification of the choice of data”					
Reasoning for not Acceptance or Acceptance and Close Out:				Date: 24/02/2011	

1. PP has mentioned all the applicability criteria as per the applicable methodology in section B.2 of the PDD. This has been checked against the selected methodology and is accepted.
2. PP has deleted the following statement from section B.6.1 of the PDD "Since the project activity is the installation of a new grid connected renewable power plant the $EG_{PJ,y}$ is calculated as $:EG_{PJ,y} = EG_{facility,y}$ ". This has been checked and is accepted.
3. PP has revised the "Justification of the choice of data" for the parameters in section B.6.2 of the PDD. The justification provided is appropriate and hence accepted.
CL #4 closed out
Acceptance and Close out by Lead Assessor:
Date: 24/02/2011

Date:	11/02/2011	Raised by:	Assessment Team		
Type:	CAR	Number:	#5	Reference:	Table 1 (3)
Lead Assessor Comment:					
1. PP is requested to mention in the PDD the correct references to the latest EB guidance's and the version numbers of the tools used					
2. PP is requested to complete section B.6.3 of the PDD as per the guidelines for completing the CDM-SSC-PDD					
Project Participant Response:				Date: 19/02/2011	
1. PP has been revised to incorporate the latest references of EB guidance and version numbers of the tools.					
2. PP has revised the section B.6.3 of the PDD as per the guidance for completing the PDD.					
Documentation Provided by Project Participant:					
Revised PDD has been submitted					
Information Verified by Lead Assessor:					
The revised PDD has been checked to confirm that the references to the latest version of the EB guidelines and toll have been mentioned.					
Section B.6.3 of the PDD was checked against the guidelines for completing the CDM-SSC-PDD.					
Reasoning for not Acceptance or Acceptance and Close Out:				Date: 24/02/2011	
1. PP has referred to the latest available EB guidelines and tools used and has mentioned the correct references for the same in the revised PDD. This has been checked and accepted.					
2. Section B.6.3 of the revised PDD has been checked against the guidelines for completing the CDM-SSC-PDD and is found to be complete. This has been checked and accepted.					
CAR #5 closed out.					
Acceptance and Close out by Lead Assessor:				Date: 24/02/2011	

Date:	11/02/2011		Raised by:	Assessment Team		
Type:	CL	Number:	#6		Reference:	B.9, B.10
Lead Assessor Comment:						

MONITORING	
<ol style="list-style-type: none"> 1. Since the parameter "EG_{BL,y}" alone is sufficient for the calculation of emission reductions, PP is requested to clarify the monitoring of other parameters mentioned in section B.7.1 of the PDD. 2. As per section B.1 of the PDD, the selected baseline and monitoring methodology for the project activity is AMS I.D./Version 16. PP is requested to clarify the reference to ACM0002 Version 11 in section B.7.2 of the PDD. 	
Project Participant Response:	Date: 19/02/2011
<ol style="list-style-type: none"> 1. PP has removed all the parameters except "EG_{PJ,y}" from the section B.7.1 of the PDD. The parameters that are used by GEDA for allocation of electricity exported to the grid are provided under section B.7.2 of the PDD. 2. The PDD uses AMS I.D version 16 for the project activity. The PDD is revised for consistency. 	
Documentation Provided by Project Participant:	
Revised PDD and GEDA sharing certificate has been submitted	
Information Verified by Lead Assessor:	
Section B.7 was checked for the monitoring parameters and correct reference to the monitoring methodology	
Reasoning for not Acceptance or Acceptance and Close Out:	Date: 24/02/2011
<ol style="list-style-type: none"> 1. PP has retained only the parameter "EG_{BL, y}" in section B.7.1 of the PDD and has deleted the other parameters. The value of "EG_{BL, y}" is directly obtained from the GEDA certificates and is sufficient for the calculation of emission reductions for the project activity. This has also been verified during the site visit and hence is accepted. 2. PP has revised the monitoring plan giving the reference of the selected methodology AMS I.D version 16. This is appropriate and hence is accepted. 	
CL #6 closed out.	
Acceptance and Close out by Lead Assessor:	Date: 24/02/2011

Date:	11/02/2011	Raised by:	Assessment Team		
Type:	CL	Number:	#7	Reference:	B.4.4
Lead Assessor Comment:					
PP is requested to justify how the prior consideration of CDM is in line with EB 49 Annex 22.					
Project Participant Response:				Date: 19/02/2011	
<p>The start date of the project activity was 5 Apr 2010. PP has intimated to UNFCCC and MOEF for prior CDM consideration on 14 September 2010. Further PP received the mail from UNFCCC on 28 Sep 2010 regarding incompleteness of the form (The form was incomplete as the exact precise details or the geo coordinates of the project activity which was stated in Annex 1 of the form was not pointed out under section 2 in the prior CDM consideration form). PP replied on 6 Oct 2010 and submitted the revised form after incorporating the reference of annex 1 in section 2 of the form. On 15 Oct 2010, PP received the confirmed receipt from UNFCCC regarding completion of the CDM prior consideration process. As per the guidance of prior consideration of CDM in EB 49, Annex 22, the EB has framed the timeline of 6 months from the date of start of the project to send the notification to UNFCCC and DNA. PP has intimated DNA and UNFCCC within 6 months of the start date of the project activity.</p>					
Documentation Provided by Project Participant:					
Prior consideration forms and corresponding email communication					

Information Verified by Lead Assessor:	
<p>Prior CDM consideration form dated 10/09/2010</p> <p>Prior CDM consideration form dated 05/10/2010</p> <p>Letter dated 10/09/2010 addressed to the host Party DNA (MoEF) informing them about the project activity</p> <p>Email dated 14/09/2010 address to host Party DNA (MoEF) with the prior consideration form</p> <p>Email response dated 16/09/2010 from the host Party DNA (MoEF) acknowledging the submission</p> <p>Email dated 14/09/2010 address to UNFCCC with the prior consideration form</p> <p>Email response dated 28/09/2010 from UNFCCC informing the PP to mention "exact precise details of the project in sections 1 - 4 (geo-coordinates)."</p> <p>Email dated 06/10/2010 address to UNFCCC with the revised prior consideration form</p> <p>Email response dated 15/10/2010 from UNFCCC confirming the receipt of the revised form</p>	
Reasoning for not Acceptance or Acceptance and Close Out:	Date: 09/03/2011

JNI has authorized VWIL to carry out all CDM related activities on its behalf through a letter dated 12/07/2010. Hence, VWIL has communicated with the host Party DNA and the UNFCCC secretariat about the prior consideration of CDM using the standardised prior consideration form.

VWIL has sent a letter dated 10/09/2010 and an email dated 14/09/2010 informing the host party DNA about the commencement of the project activity and intention to seek CDM status. The host party DNA has responded through email dated 16/09/2010 acknowledging the same. Thus, the PP has informed the host party DNA within 6 months of the project activity start date. This is as per the requirements of paragraph 2 of EB 49 Annex 22.

The dates to be taken into account while validating prior consideration of CDM as per EB 49 Annex 22 with respect to intimating the UNFCCC secretariat are as follows:

- **05/04/2010** – Start date of the project activity
- **14/09/2010** – VWIL has also sent an email to UNFCCC secretariat with prior consideration form dated 10/09/2010 as per EB 48 annex 62
- **28/09/2010** – Email response from the UNFCCC informing the PP to mention “exact precise details of the project in sections 1 - 4 (geo-coordinates).”
- **06/10/2010** – VWIL responded back to UNFCCC secretariat with revised prior consideration form dated 05/10/2010
- **06/10/2010** – “Date Received” as mentioned on the UNFCCC website
- **15/10/2010** – UNFCCC has acknowledged the receipt of the revised form

In the prior consideration form dated 10/09/2010, the geographical coordinates of the WEC have been mentioned as an annexure 1 at the end of the form and not under point 2 in section 1. In the revised prior consideration form dated 05/10/2010, the PP has given a reference to the annexure 1 under Section 1, point 2 by mentioning the text “Find the details of latitude and longitude, enclosed in Annexure 1.”

As per the above chronology and discussion, it can be observed that the PP has notified the UNFCCC on 14/09/2010 which is within 6 months of the project activity start date. This notification has been done using the standardized prior consideration form dated 10/09/2010. The precise geographical location of the project activity was mentioned as an annexure 1 to the form.

This is as per the requirements of EB 49 annex 22 paragraph 3 which states that, “*Such notification must be made within six months of the project activity start date and shall contain the precise geographical location and a brief description of the proposed project activity, using the standardized form F-CDM-Prior Consideration.*”

Thus, the CDM consideration is in line with EB 49 Annex 22.

CL #7 closed out

Acceptance and Close out by Lead Assessor:	Date: 09/03/2011
PP has brought to the notice of the DOE on 23/06/2011 that the “Date Received” as mentioned on the prior consideration webpage of the UNFCCC website is 14/09/2010. The same can be confirmed from the snapshot of the prior consideration page of the UNFCCC website, which has been added in section 4.7.2 of this report. This date is within 6 months of the project activity start date of 05/04/2010 and hence is as per the requirements of EB 49 Annex 22 paragraph 3.	
Acceptance and Close out by Lead Assessor:	Date: 24/06/2011

Date:	02/02/2011		Raised by:	Babloo		
Type:	ISHC	Number:	#1		Reference:	Table 1 (2)
Lead Assessor Comment:						

The PP states that they have considered 80% accelerated depreciation. However the PDD is silent on the tax shielding as a result from accelerated depreciation.	
PPs cleverly do not consider the accounting tax offsetting in their companies while calculating the IRR. This is evident from the recently registered projects and those requesting registration.	
The DOE is therefore requested to critically analyze how the accelerated depreciation benefit has been taken into account and confirm the accounting of the cash inflows as a result of the negative tax liability in the initial years. DOE should not be misguided by the financial presented by the PP or consultant which are custom made for CDM purposes and not the actual financial considered at the investment decision.	
Note that considering cash inflows results in an increase in the IRR making wind projects a profitable venture.	
Project Participant Response:	Date: 19/02/2011
PP has considered the tax shield in calculation of equity IRR. The same can be cross verified from the sheet named "Cash Flow" of Financial Model Excel sheet	
Documentation Provided by Project Participant:	
Financial Model	
Information Verified by Lead Assessor:	
Investment analysis excel sheet for both PPs	
Reasoning for not Acceptance or Acceptance and Close Out:	Date: 09/03/2011
The investment analysis excel sheet submitted by the PPs has considered 80% accelerated depreciation and has also taken into account the tax shielding as a result of the accelerated depreciation. This is evident from the 'cash flow statement' in both the excel sheets. The project 'p&l' statement also takes into account the tax exemption for the project activity.	
The investment analysis submitted by the PP has been checked to confirm that the tax benefits under 80 IA sections of the IT act has been included. In spite of this, it is observed that the chosen financial indicator i.e. equity IRR does not cross the benchmark. This indicates that the project is not financially viable even after the tax benefits have been considered. Hence, the tax benefits under 80 IA sections of the IT act cannot be the main motive of the proposed CDM project activity.	
The financial analysis has been verified and accepted by the financial expert.	
Hence, closed out.	
Acceptance and Close out by Lead Assessor:	Date: 09/03/2011

Date:	04/02/2011	Raised by:	Hiral Mehta/Mahesh Pandya		
Type:	ISHC	Number:	#2	Reference:	Table 1 (2)
Lead Assessor Comment:					
<ol style="list-style-type: none"> 1. PDD does not contain four sustainability criteria set by DNA to justify project. 2. How much grazing land has been acquired for setting up wind farm? 3. What would be impact of negative environmental conditions in area upon project? What would be alternatives? 4. How many skilled/unskilled people from surrounding area were employed at this project during commissioning and operation? 5. Whether NOC from state departments has been issued to this project? 6. Which CSR activities are planned for local people? Please explain in detail. 					

Project Participant Response:		Date: 19/02/2011	
<ol style="list-style-type: none"> 1. PP has incorporated the four sustainability criteria set by DNA in the PDD 2. Grazing land has not been acquired for setting up Wind farms. As refer to section 6 (d) of the sale deed, it is clearly mentioned that the land used for setting of wind turbine is government revenue land. These lands do not require any separate permission for installing of WECs. 3. The project activity does not fall under the purview of the Environmental Impact Assessment (EIA) notification of the Ministry of Environment and Forest, Government of India. 4. During the installation of WECs at Wind farms, about 40 skilled labours and 140 unskilled labours from surrounding were employed. 5. PP has received GEDA clearances for all the WECs from state nodal agency. 6. CSR activities are not mandatory for small scale project. 			
Documentation Provided by Project Participant:			
Revised PDD, Land lease deed, GEDA clearance			
Information Verified by Lead Assessor:			
<p>The PDD has been checked for the sustainability criteria.</p> <p>The land lease deeds have been checked to confirm that the WECs have been installed on government revenue land.</p> <p>GEDA clearance has been checked to confirm clearance to implement the project activity.</p> <p>Notification S.O. 1533 published by the Ministry of Environment and Forests (MoEF) has been checked to confirm EIA requirements for the project activity.</p>			
Reasoning for not Acceptance or Acceptance and Close Out:		Date: 09/03/2011	
<ol style="list-style-type: none"> 1. PP has incorporated the four sustainability criteria in section A.2 of the project. This has been checked and is accepted. 2. The land on which the wind farm has been set up is government revenue land as per paragraph 6(b) of the land lease agreement. 3. The schedule of the notification S.O. 1533 published by the Ministry of Environment and Forests (MoEF), Government of India gives a list of the project activities that require a prior environmental clearance. According to this schedule wind power projects do not require a prior environmental clearance. This project involves generation of electricity using the renewable source of wind. Hence, there are no negative environmental effects. 4. PP has provided employment to skilled and unskilled people during the implementation of the project activity. This was verified from the local stakeholders during the site visit. 5. GEDA has issued clearances for the project activity. This has been checked and is accepted. 6. Due to the implementation of the project activity, roads have been constructed; water supply infrastructure has been developed, medical camps have been conducted for the local people and the local schools have been supported through donation of books, etc. These activities have been verified by talking to the local stakeholders during the site visit. <p>Hence, closed out.</p>			
Acceptance and Close out by Lead Assessor:		Date: 09/03/2011	

Date:	25/04/2011		Raised by:	Technical reviewer	
Type:	CAR	Number:	# 8	Reference:	PDD

Technical reviewer Comment:	
1. PP did not mention detail chronology of events for notifications to UNFCCC in PDD. 2. Please clarify how the project is meeting the methodology requirement of Monitoring/recording frequency Continuous monitoring, hourly measurement and at least monthly recording 3. PP needs to update PDD and ER calculation as per latest version of tool to calculate emission factor.	
Project Participant Response:	Date: 26/05/2011
Chronology of events regarding prior CDM consideration notification to UNFCCC is incorporated in revised PDD	
Documentation Provided by Project Participant:	
Revised PDD version 05 dated 26/05/2011	
Information Verified by Lead Assessor:	
Revised PDD is checked for the modifications made in relevant sections as per the issue raised	
Reasoning for not Acceptance or Acceptance and Close Out:	Date: 26/05/2011
PP has mentioned the detail chronology of events regarding prior CDM consideration notification to UNFCCC in section B.5 of revised PDD, found appropriate hence accepted. Recording and monitoring frequency of parameters inline with methodology is now mentioned in section B.7 of revised PDD. This is accepted PDD has been updated including reference of latest version of tool to calculate emission factor. It is confirmed that there is no change in ER calculation using latest version of tool. CAR #8 is closed.	
Acceptance and Close out by Lead Assessor:	Date: 26/05/2011

A.4 Annex 4: Team Members Statements of Competency

Name: Ravikant
Soni

Status

- Lead Assessor	<input checked="" type="checkbox"/>	- Expert	<input checked="" type="checkbox"/>
- Assessor	<input checked="" type="checkbox"/>	- Financial Expert	<input type="checkbox"/>
- Local Assessor	<input type="checkbox"/>	- Technical Reviewer	<input type="checkbox"/>

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	<input checked="" type="checkbox"/>
Technical Area(s): TA 1.2 Energy generation from renewable energy sources	
2. Energy Distribution	<input type="checkbox"/>
Technical Area(s):	
3. Energy Demand	<input type="checkbox"/>
Technical Area(s):	
4. Manufacturing	<input type="checkbox"/>
Technical Area(s):	
5. Chemical Industry	<input type="checkbox"/>
Technical Area(s):	
6. Construction	<input type="checkbox"/>
Technical Area(s):	
7. Transport	<input type="checkbox"/>
Technical Area(s):	
8. Mining/Mineral Production	<input type="checkbox"/>
Technical Area(s):	
9. Metal Production	<input type="checkbox"/>
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	<input type="checkbox"/>
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	<input type="checkbox"/>
Technical Area(s):	
12. Solvent Use	<input type="checkbox"/>
Technical Area(s):	
13. Waste Handling and Disposal	<input type="checkbox"/>
Technical Area(s):	
14. Afforestation and Reforestation	<input type="checkbox"/>
Technical Area(s):	
15. Agriculture	<input type="checkbox"/>
Technical Area(s):	
Approved Member of Staff by: Siddharth Yadav	Date: 05/01/2011

Statement of Competence

Name: **Sudeep
Kodialbail**

Status

- Lead Assessor	x	- Expert	<input type="checkbox"/>
- Assessor	x	- Financial Expert	<input type="checkbox"/>
- Local Assessor	Indi a	- Technical Reviewer	<input type="checkbox"/>

Scopes of Expertise

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

Approved Member of Staff by: **Siddharth
Yadav** Date: **07/06/2011**

Statement of Competence

Name: **Vikas Bankar**

Status

- Lead Assessor	x	- Expert	x
- Assessor	x	- Financial Expert	
- Local Assessor	Indi a	- Technical Reviewer	

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)

x

Technical Area(s): TA 1.2 Energy generation from renewable energy sources

2. Energy Distribution

x

Technical Area(s): TA 2.1 Electricity distribution
TA 2.2 Heat distribution

3. Energy Demand

x

Technical Area(s): TA 3.1 Energy Demand

4. Manufacturing

Technical Area(s):

5. Chemical Industry

Technical Area(s):

6. Construction

Technical Area(s):

7. Transport

Technical Area(s):

8. Mining/Mineral Production

Technical Area(s):

9. Metal Production

Technical Area(s):

10. Fugitive Emissions from Fuels (solid, oil and gas)

Technical Area(s):

11. Fugitive Emissions from Production and

Consumption of Halocarbons and Sulphur Hexafluoride

Technical Area(s):

12. Solvent Use

Technical Area(s):

13. Waste Handling and Disposal

Technical Area(s):

14. Afforestation and Reforestation

Technical Area(s):

15. Agriculture

Technical Area(s):

Approved Member of Staff by: **Siddharth Yadav**

Date: **14/02/2011**

Statement of Competence

Name: Anshul
Sharma

Status

- Lead Assessor		- Expert	
- Assessor	x	- Financial Expert	x
- Local Assessor	Indi a	- Technical Reviewer	

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)

Technical Area(s):

2. Energy Distribution

Technical Area(s):

3. Energy Demand

Technical Area(s):

4. Manufacturing

Technical Area(s):

5. Chemical Industry

Technical Area(s):

6. Construction

Technical Area(s):

7. Transport

Technical Area(s):

8. Mining/Mineral Production

Technical Area(s):

9. Metal Production

Technical Area(s):

10. Fugitive Emissions from Fuels (solid, oil and gas)

Technical Area(s):

11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride

Technical Area(s):

12. Solvent Use

Technical Area(s):

13. Waste Handling and Disposal

Technical Area(s):

14. Afforestation and Reforestation

Technical Area(s):

15. Agriculture

Technical Area(s):

Approved Member of Staff by: Siddharth
Yadav Date: 19/05/2011

Statement of Competence

Name: Ramkrishna Patil

Status

- Lead Assessor	<input checked="" type="checkbox"/>	- Expert	<input checked="" type="checkbox"/>
- Assessor	<input checked="" type="checkbox"/>	- Financial Expert	<input type="checkbox"/>
- Local Assessor	<input checked="" type="checkbox"/>	- Technical Reviewer	<input checked="" type="checkbox"/>

Scopes of Expertise

1. Energy Industries (renewable / non-renewable)	<input checked="" type="checkbox"/>
Technical Area(s): TA 1.2 Energy generation from renewable energy Sources	
2. Energy Distribution	<input checked="" type="checkbox"/>
Technical Area(s): TA 2.1 Electricity distribution TA 2.2 Heat distribution	
3. Energy Demand	<input checked="" type="checkbox"/>
Technical Area(s): TA 3.1 Energy Demand	
4. Manufacturing	<input type="checkbox"/>
Technical Area(s):	
5. Chemical Industry	<input type="checkbox"/>
Technical Area(s):	
6. Construction	<input type="checkbox"/>
Technical Area(s):	
7. Transport	<input type="checkbox"/>
Technical Area(s):	
8. Mining/Mineral Production	<input type="checkbox"/>
Technical Area(s):	
9. Metal Production	<input type="checkbox"/>
Technical Area(s):	
10. Fugitive Emissions from Fuels (solid, oil and gas)	<input type="checkbox"/>
Technical Area(s):	
11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride	<input type="checkbox"/>
Technical Area(s):	
12. Solvent Use	<input type="checkbox"/>
Technical Area(s):	
13. Waste Handling and Disposal	<input type="checkbox"/>
Technical Area(s):	
14. Afforestation and Reforestation	<input type="checkbox"/>
Technical Area(s):	
15. Agriculture	<input type="checkbox"/>
Technical Area(s):	

Approved Member of Staff by: Siddharth Yadav Date: 20/01/2011