VALIDATION REPORT

GUJARAT FLUOROCHEMICALS LIMITED

19.5 MW WIND POWER PROJECT IN OSSIYA, RAJASTHAN BY GUJARAT FLUOROCHEMICALS LIMITED (GFL)

Report No: 8107113254- 10/427

Date: 2013-01-30

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Validation Report:	***Report No.***	***Rev. No.***	***Date of 1st issue:***	***Date of this rev.***
	8107113254 – 10/427 V01	0	2013-01-30	-
Project:	***Title:***		***Initial PDD Version:***	***Final PDD Version***
	19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL)		2010-09-13	2012-12-13
Client:	Gujarat Fluorochemicals Limited		***Client ref:***	Mr. Deepak Asher
Project Participant(s):	***Host Party:***		***Other involved parties:***	
	India		N.A.	
Applied methodology/ies:	***Title:***		***No.:***	***Scope / TA:***
	Consolidated methodology for grid-connected electricity generation from renewable sources		ACM0002 Version 13.0.0	1/1.2
Validation team / Technical Review and Final Approval	***Validation Team:***		***Technical review:***	***Final approval:***
	Pankaj Mohan (TL) Lokesh Chandra Dube (TM) Vineet Kumar (TM) Abhishek K. Srivastava[2]		B J M Amarnath (OR) Stefan Winter	Stefan Winter
Expected Emission reductions: [t CO_2e]	***Expected emission reductions over the first crediting period:***		***(Expected) project starting date:***	
	234,185 t CO_{2e}		2008-01-04	
Confidential content:	☐ Yes		☒ No	
Summary of Validation Opinion:	☒ Positive validation opinion		☐ Negative validation opinion	
	In detail the conclusions can be summarised as follows: ☒ The project is in line with all relevant host country criteria (India) and all relevant UNFCCC requirements for CDM. Project activity approval have been obtained from DNA of India (Ministry of Environment and Forests) vide the Letter of Approval (HCA) dated 2010-09-23. ☒ The project additionality is sufficiently justified in the PDD. ☒ The monitoring plan is transparent and adequate. ☒ The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 234,185 tCO_2e are most likely to be achieved within the (1st renewable) crediting period. ☒ The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation.			
Document information:	*Filename:*			*No. of pages:*
	2013-01-30_FValR_10-427_GFL_TR			142

[2] TL from 10.10.2011 till 07.01.2013

Abbreviations

BAU	Business as usual
CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO_2	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
DNA	Designated National Authority
EB	CDM Executive Board
EIA	Environmental Impact Assessment
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GFL	Gujarat Fluorochemicals Limited
IPCC	Intergovernmental Panel on Climate Change
O&M	Operation and Maintenance
PDD	Project Design Document
PLF	Plant Load Factor
RRVPNL	Rajasthan Rajya Vidhyut Prasaran Nigam Ltd.
RERC	The Rajasthan Electricity Regulatory Commission
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
VT	Validation team
WTG	Wind Turbine Generator

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1 OBJECTIVE / SCOPE

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

- the requirements of Article 12 of the Kyoto Protocol;
- the CDM modalities and procedures as agreed in the Marrakech Accords under decision 3/CMP.1
- the annex to the decision;
- subsequent decisions made by COP/MOP & CDM Executive Board and
- other relevant rules, including the host country legislation and sustainability 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 on the quality of the project and its intended generation of certified emission reductions (CERs).

The validation scope is given as a thorough independent and objective assessment of the project design including especially: the correct application of the methodology, the project's baseline study, additionality justification, local stakeholder commenting process, environmental impacts and monitoring plan, which are included in the PDD and other relevant supporting documents, to ensure that the proposed CDM project activity meets all relevant and applicable CDM criteria.

The information included in the PDD and the supporting documents were reviewed against the requirements as set out by the UNFCCC. The validation team has, based on the requirements in the Validation and Verification Manual[/VVM/], carried out a full assessment of all evidences to assess the compliance of the project with the key areas as outlined in section V.E. and V.F. of the VVM (version 01.2, EB 55).

The validation is based on the information made available to TÜV NORD JI/CDM CP and on the contract conditions.

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

2 GHG PROJECT DESCRIPTION

2.1 Project Characteristics

Essential data of the project is presented in the following Table 2-1.

Table 2-1: Project Characteristics

Item	Data		
Project title	19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL)		
Project size	☒ Large Scale ☐ Small Scale		
Project Scope *(according to UNFCCC sectoral scope numbers for CDM)*	☒	1	Energy Industries (renewable- /non-renewable sources)
	☐	2	Energy distribution
	☐	3	Energy demand
	☐	4	Manufacturing industries
	☐	5	Chemical industry
	☐	6	Construction
	☐	7	Transport
	☐	8	Mining/Mineral production
	☐	9	Metal production
	☐	10	Fugitive emissions from fuels (solid, oil and gas)
	☐	11	Fugitive emissions from production and consumption of halocarbons and hexafluoride
	☐	12	Solvents use
	☐	13	Waste handling and disposal
	☐	14	Afforestation and Reforestation
	☐	15	Agriculture
Applied Methodology	ACM0002 Version 13.0.0 - “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”		
Technical Area(s)	1.2 Renewable Energies		
Crediting period	☒ Renewable Crediting Period (7 y) ☐ Fixed Crediting Period (10 y)		
Start of crediting period	2013-04-01		

2.2 Involved Parties and Project Participants

The following parties to the Kyoto Protocol and project participants are involved in this project activity (Table 2-2).

Table 2-2: Project Parties and project participants

Characteristic	Party	Project Participant
Host party	India	Gujarat Fluorochemicals Limited
Other involved party/ies	-	-

2.3 Project Location

The details of the project location are given in table 2-3:

Table 2-3: Project Location

<table>
<tr><th>No.</th><th>Project Location</th></tr>
<tr><td>Host Country</td><td>India</td></tr>
<tr><td>Region:</td><td>Rajasthan</td></tr>
<tr><td>Project location address:</td><td>Village: Ossiya

District: Jodhpur</td></tr>
<tr><td>Latitude:</td><td>
<table>
<tr><th>S.No.</th><th>Unique ID</th><th>Latitude N</th></tr>
<tr><td>1.</td><td>J741</td><td>N 26° 45’ 10.1”</td></tr>
<tr><td>2.</td><td>J742</td><td>N 26° 44’ 59.2”</td></tr>
<tr><td>3.</td><td>J743</td><td>N 26° 44’ 48.4”</td></tr>
<tr><td>4.</td><td>J745</td><td>N 26° 44’ 29.2”</td></tr>
<tr><td>5.</td><td>J746</td><td>N 26° 44’ 19.9”</td></tr>
<tr><td>6.</td><td>J747</td><td>N 26° 43’ 32.7”</td></tr>
<tr><td>7.</td><td>J748</td><td>N 26° 43’ 14.0”</td></tr>
<tr><td>8.</td><td>J749</td><td>N 26° 43’ 13.6”</td></tr>
<tr><td>9.</td><td>J750</td><td>N 26° 43’ 00.5”</td></tr>
<tr><td>10.</td><td>J751</td><td>N 26° 42’ 45.2”</td></tr>
<tr><td>11.</td><td>J752</td><td>N 26° 42’ 38.5”</td></tr>
<tr><td>12.</td><td>J753</td><td>N 26° 42’ 23.8”</td></tr>
<tr><td>13.</td><td>J754</td><td>N 26° 42’ 04.2”</td></tr>
</table>
</td></tr>
<tr><td>Longitude:</td><td>
<table>
<tr><th>S.No.</th><th>Unique ID</th><th>Longitude E</th></tr>
<tr><td>1.</td><td>J741</td><td>E 73° 02’ 54.6”</td></tr>
<tr><td>2.</td><td>J742</td><td>E 73° 03’ 03.5”</td></tr>
<tr><td>3.</td><td>J743</td><td>E 73° 03’ 11.1”</td></tr>
<tr><td>4.</td><td>J745</td><td>E 73° 03’ 11.2”</td></tr>
<tr><td>5.</td><td>J746</td><td>E 73° 03’ 21.8”</td></tr>
<tr><td>6.</td><td>J747</td><td>E 73° 03’ 14.0”</td></tr>
<tr><td>7.</td><td>J748</td><td>E 73° 02’ 49.7”</td></tr>
<tr><td>8.</td><td>J749</td><td>E 73° 03’ 09.9”</td></tr>
<tr><td>9.</td><td>J750</td><td>E 73° 03’ 13.6”</td></tr>
<tr><td>10.</td><td>J751</td><td>E 73° 03’ 08.8”</td></tr>
<tr><td>11.</td><td>J752</td><td>E 73° 03’ 22.2”</td></tr>
<tr><td>12.</td><td>J753</td><td>E 73° 03’ 25.0”</td></tr>
</table>
</td></tr>
</table>

No.	Project Location			
	13.	J754	E 73° 03' 16.7"	

2.4 Technical Project Description

The proposed project activity involves the installation of 13 number of WTGs of 1.5 MW each (19.5 MW) of model S-82, in the state of Rajasthan by Gujarat Fluorochemicals Limited. Suzlon Energy Ltd is the equipment supplier and operation and Maintenance contractor for the project activty. The main purpose of the project activity is to generate electricity using wind power, a renewable energy source to meet the increasing demand of energy in the region. The genrated power will be supplied to NEWNE grid of India. Thus the project activity will reduce the anthropogenic emissions of GHGs (Greenhouse Gases) in to the atmosphere by displacing the equivalent amount of electricity, which would have been generated through the operation of existing fossil fuel based power plants connected to grid.

The project activity harnesses wind energy to generate and supply electricity to the NEWNE grid of India. The WTGs can convert wind energy in to electrical energy without using any other fuel as input for electricity generation. The emission factor assosiated with the NEWNE grid fossil fuel dominated and published by CEA. The project activity is expected to reduce emissions of GHGs by an estimated 33,455 tCO_2e per year by displacing equivalent amount of the electricicty from the NEWNE grid.

The technical key data are provided in table 2-4 below

Table 2-4: Technical data of the project activity

Parameter	Unit	Value
Rotor		
Diameter	m	82.0
Cut in Wind speed	m/s	4
Rated wind speed	m/s	14
Generator		
Rated output	kW	1500
Operating voltage	V	690
Frequency	Hz	50
Number of units	-	13
Total installed capacity	MW	19.5

3 METHODOLOGY AND VALIDATION SEQUENCE

3.1 Validation Steps

The validation of the project consisted of the following steps:

- Contract review
- Appointment of team members and technical reviewers
- Publication of the project design document (PDD)
- Desk review of the PDD and supporting documents
- Validation planning
- On-Site assessment
- Background investigation and follow-up interviews with personnel of the project developer and its contractors
- Draft validation reporting
- Resolution of corrective actions (if any)
- Final validation reporting
- Technical review
- Final approval of the validation

The sequence of the validation is given in the table 3.1 below:

Table 3.1: Validation sequence

Topic	Time
Assignment of validation	2010-08-04
Submission of PDD for global stakeholder commenting process	2010-09-25
On-site visit date	2010-10-26
Draft reporting finalised	2010-12-14
Final reporting finalised	2013-01-30
Technical review on final reporting finalised	2013-01-30

3.2 Contract review

To assure that

- the project falls within the scopes for which accreditation is held,
- the necessary competences to carry out the validation can be provided,

- Impartiality issues are clear and in line with the CDM accreditation requirements

a contract review was carried out before the contract was signed.

3.3 Appointment of team members and technical reviewers

On the basis of a competence analysis and individual availabilities, a validation team, consisting of one team leader and 3 additional team members, as well as the Technical Review personnel were appointed.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 3-2 below.

Table 3-2: Involved Personnel

	Name	Company	Function [1]	Qualification Status [2]	Scheme competence [3]	Technical competence [4]	Host country Competence	On-site visit
☒ Mr. ☐ Ms.	Abhishek Kumar Srivastava	TUV India Pvt.Ltd	TL[6] A)	LA	☒	1.2	☒	☒
☒ Mr. ☐ Ms.	Pankaj Mohan	TUV India Pvt.Ltd	TL[7] A)	SA	☒	1.2	☒	☐
☒ Mr. ☐ Ms.	Lokesh Chandra Dube	TUV India Pvt.Ltd	TM A)	LA	☒	1.2	☒	☐
☒ Mr. ☐ Ms.	Vineet Kumar	TUV India Pvt.Ltd	TM A)	A	☒	-	☒	☒
☒ Mr. ☐ Ms.	B J M Amarnath	TUV Nord Cert GmBH	OR B)	LA	☒	1.2	☒	☐
☒ Mr. ☐ Ms.	Stefan Winter	TUV Nord Cert GmBH	TR/FA B)	SA	☒	1.2	☐	-

1) TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval
2) GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert
3) GHG auditor status (at least Assessor)
4) As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, …)
5) In case of verification projects

[6] TL from 10.10.2011 till 07.01.2013
[7] Since 08.01.2013

A) Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

B) No team member

All team members contributed to the review of documents, the assessment of the project activity and to the preparation of this report under the leadership of the team leader.

Technical Experts contributed to the assessment of special aspects of the project activity, e.g. technical or host country aspects.

In order to qualify further personnel the project team was accompanied by observers and/or trainees as indicated in the table above. They are usually not considered as team members.

Statements of competence for the above mentioned team members are enclosed in annex 6 of this report.

3.4 Consideration of Public Stakeholder Comments

Acc. to the modalities and procedures the draft PDD, as received from the project participants, has been made publicly available on the dedicated UNFCCC CDM website prior to the validation activity commenced. Stakeholders have been invited to comment on the PDD within the 30 days public commenting period.

In case comments are received, they are taken into account during the validation process. The comments and the discussion of the same are documented in annex 5 of this report.

3.5 Validation Protocol

In order to ensure consideration of all relevant assessment criteria, a validation protocol is used. The protocol shows, in a transparent manner, criteria and requirements, means of validation and the results from pre-validating the identified criteria. The validation protocol reflects the generic CDM requirements each CDM project has to meet as well as project specific issues as applicable. The validation protocol serves the following purposes:

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

The validation protocol is described in Figure 1.

Validation Protocol Table A-1: Requirement checklist				
Checklist Item	***Validation Team Comment***	***Reference***	***Draft Conclusion***	***Final Conclusion***
The checklist items in Table A-1 are linked to the various requirements the project should meet. The checklist is organised in various sections. Each section is then further sub-divided as per the requirements of the topic and the individual project activity.	*The section is used to elaborate and discuss the checklist item in detail. It includes the assessment of the validation team and how the assessment was carried out. The reporting requirements of the VVM shall be covered in this section.*	*Gives reference to the information source on which the assessment is based on*	*Assessment based on evidence provided if the criterion is fulfilled (OK), or a CAR, CL or FAR (see below) is raised. The assessment refers to the draft validation stage.*	*In case a corrective action or a clarification the final assessment at the final validation stage is given.*

Figure 1: Validation protocol table

The completed validation protocol is enclosed in Annex 1 to this report.

3.6 Review of Documents

The published PDD and supporting background documents related to the project design and baseline were reviewed.

Furthermore, the validation team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

3.7 Site Visit and Follow-up Interviews

The validation team has carried out a site visit in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for CDM.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 3-3.

Table 3-3: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Project proponent representatives/IM01/ Project consultant/IM02/	- Chronological description of the project activity with documents of key steps of the implementation. - Current status of plant design

Interviewed Persons / Entities	Interview topics
	- Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project - Host Government Approval - Approval procedures and status - Monitoring and measurement equipment and system. - Financial aspects - Crediting period - Project activity starting date - CER allocation / ownership - Baseline study assumptions - Additionality - Sustainable development issues - Monitoring - Analysis of local stakeholder consultation - Roles & responsibilities of the project participants w.r.t. project management, monitoring and reporting - National Legislation - Editorial issues of the PDD

A comprehensive list of all interviewed persons is part of section 7 ‘References’.

3.8 Project comparison

The validation team has compared the proposed CDM project activity with similar projects or technology that have similar or comparable characteristics and with similar projects in the host country in order to achieve additional information esp. regarding:

- Project technology
- Additionality issues
- Reasons for reviews, requests for reviews and rejections within the CDM registration process.

3.9 Resolution of Clarification and Corrective Action Requests

3.9.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,

- the requirements deemed relevant for validation of the project with certain characteristics have not been met or
- there is a risk that the project would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first verification.

3.9.2 Draft Validation

After reviewing all relevant documents and taken all other relevant information into account, the validation team issues all findings in the course of a draft validation report and hands this report over to the project proponent in order to respond on the issues raised and to revise the project documentation accordingly.

3.9.3 Final Validation

The final validation starts after issuance of the proposed corrective action (CA) of the CARs, CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are “closed out” by the validation team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the first verification. The validation team has to assess whether the proposed action is adequate or not.

In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive validation opinion can be issued by the validation team.

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4.

3.10 Technical review

Before submission of the final validation report a technical review of the whole validation procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the validation opinion and the topic specific assessments as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

3.11 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the request for registration can be started (in case of a positive validation opinion).

4 VALIDATION FINDINGS

In the following table the findings from the desk review of the published PDD, visits, interviews and supporting documents are summarised**:**

Table 4-1: Summary of CARs, CLs and FARs issued

Validation topic [1)]	No. of CAR	No. of CL	No. of FAR
General description of project activity (A) - Project specification - Technical project description - Participation - Contribution to sustainable development - PDD editorial aspects - Technology to be employed	1	4	0
Project Baseline, Additionality and Monitoring Plan (B) - Application of the Methodology - Project Boundary - Baseline identification - Calculation of GHG emission reductions Project emissions Baseline emissions Leakage - Additionality determination - Monitoring Methodology - Monitoring Plan - Project management planning	15	7	0
Duration of the Project / Crediting Period (C)	1	0	0
Environmental impacts (D)	0	0	0
Stakeholder Comments (E)	1	0	0
SUM	**18**	**11**	**0**

[1)] The letters in brackets refer to the validation protocol

Table 4-2: PDD versions used for assessments

Version Nr.	Assessment Round

Version Nr.	Assessment Round
PDD v. 1 (Published)	DOE Assessment #0
PDD v. 2	DOE Assessment #1
PDD v. 3	DOE Assessment #2
PDD v. 4	DOE Assessment #3
PDD v. 5	DOE Assessment #4
PDD v. 6	During TR process

The following tables include all raised CARs, CLs and FARs. For an in depth evaluation of all validation items it should be referred to the validation protocols (see Annex 1).

The findings of validation process are summarized in the tables below.

Finding	**A1**		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The date of HCA mentioned on page 14 of PDD is not consistent with what mentioned in HCA. Please clarify.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The date has been revised to 23rd September 2010 as per HCA notification. The same has been revised and incorporated in the PDD.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Validation team checked the revised PDD/PDD2/ and found that now the date of HCA mentioned in PDD/PDD2/ is consistent with the date mentioned in HCA. Hence CL A1 is successfully closed.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Finding	**A2**		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	In Section B.5 of the PDD at page no. 13, in the chronology of event, the contract with DOE has been shown at 2008-04-26, however, date of contract of PP with TUV Nord (DOE) is different from this date. Pl. clarify.		

Finding	A2
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The project was developed as 31.5 MW Wind Based Power Project. Bureau Veritas was contracted by PP as DOE on 26th April 2008 for the same (Annexure 21). Later the PP decided to split the project into two separate projects as 19.5 MW and 12 MW each, because these two projects were planned to get commissioned at different time intervals (12 MW Sadiya project activity got commissioned on 30/03/2008 (6 WTG) and 31/03/2008 (2 WTG), whereas the 19.5 MW Ossiya project got commissioned on 26/09/2009), thus, in order to avoid losing out on the CDM benefits, it was decided by the PP to split the project into two separate CDM projects of 19.5 MW and 12 MW capacities. And hence the project was withdrawn from validation after webhosting. Project proponent developed the project as a 19.5 MW project. TUV Nord was appointed as validator for the proposed project on 6th of August 2010 (Annexure 25). The same has been updated in chronology of event in Section B.5 of the PDD.
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Validation team has checked the revised PDD/PDD2/ and supporting documents/CD/ provided i.e. copy of PP contract with Bureau Veritas dated 26.04.2008 and contract with TUV Nord CERT GmbH, and found that the PP had earlier appointed the Bureau Veritas as DOE for its 31.5 MW wind based power project, this project was webhosted on 12/07/2008, HCA was also taken for 31.5 MW project on 25/07/2008, Later this project was split into two different projects, as components of this project was planned to get commissioned at different time intervals (12 MW Sadiya project activity of GFL got commissioned on 30/03/2008 (6 WTG) and 31/03/2008 (2 WTG), whereas this 19.5 MW Ossiya project by GFL got commissioned on 26/09/2009), and in order to simplify the validation process, monitoring plan, and reduce the time required to avail CDM benefits avoid losing out on the CDM benefits, PP decided to split the earlier project into these two separate CDM projects of 19.5 MW and 12 MW capacities. For this 19.5 MW wind based power project, PP has signed the contract with TUV Nord CERT GmbH. Now the date of contract of GFL with both the DOEs is appropriately corrected. Hence the CL A2 is successfully closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	A3		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	PP is requested to justify how the technology used is 'state of the art' as mentioned in section A.2 of the webhosted PDD.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The same has been removed from the PDD and the PDD has been revised.		

Finding	A3
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Validation team checked that the term 'state of the art' is now removed from the section A.2 of the revised PDD, however based on VT's sectoral expertise it is found that the technology used i.e. Suzlon WTG S-82 of 1.5 MW capacity are designed for generating the optimal power output even at sites with a modest wind speed regime, which are better than the commonly used technology used in the host country. It is one of the most advanced technologies from the reputed manufacturer Suzlon Energy Limited (India). Hence CL A3 is successfully closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	A4		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The webhosted PDD mentions that the training and maintenance requirements would be fulfilled by Suzlon Energy Limited, but the submitted training certificates to DOE for the same are from SAFEPRO. Please clarify.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	GFL confirms the undertaking of training programme by Suzlon officials. Suzlon has outsourced the training services to third party i.e. SAFEPRO and hence the certificate states the name of the training agency. The same was observed by the DOE agency during the site visit as well.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Clarification provided by the PP is acceptable to the validation team but the same is not reflecting in the PDD hence CL A4 is open.		
Corrective Action #2	The PDD has been revised to include the fact that monitoring personnel receive intensive training at the Suzlon Manufacturing facility, conducted by Suzlon themselves or an external agency, before being appointed at the site to look after the operations.		
DOE Assessment #2	Clarification provided by PP is acceptable and it is also included in the revised PDD. Hence CL A4 is closed successfully.		

Finding	A4
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

General description	A5		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding	The project activity PDD version 1 applies the approved large scale methodology ACM0002 Version 12.0.0; However, during the course of validation, the updated version has come at Unfccc website and now this applied methodology version is no more valid,		
Corrective Action #1	The PDD has been revised in accordance with the methodology ACM0002 Version 13.0 and its associated tools.		
DOE Assessment #1	The PDD has been revised in line with the latest applicable and valid methodology, ACM0002 Version 13.0.0. The revised PDD has been thoroughly checked by the validation team for the same and found to be appropriate. The PDD is in line with the latest version of the methodology as cross checked from the UNFCCC website. Moreover all the ACM0002 Version 13.0.0 applicability criteria were again checked and assessed and found that project activity fulfils the applicability criteria. Hence, CAR A5 is closed.		
Conclusion	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Finding	B1		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Though Latitude and longitude of all the WTGs are clearly mentioned in the webhosted PDD, PP has not substantiated the location of each and every WTG involved in the proposed project activity.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The Commissioning certificate uniquely identifies each and every WTGs through Loc No. The same has been provided in the PDD in the section A.4.1.4. The commissioning certificate and letter from Suzlon identifying latitude and Longitude of individual WTGs are provided to DOE as documentary evidence in Annexure 1		

Finding	B1
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Commissioning certificates and letter from Suzlon was checked by validation team, all the latitude, longitude and location numbers written in the PDD are matching with the provided evidences, hence CL B1 is successfully closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B2		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The starting date for the proposed project activity is 04-01-2008 (the date of agreement with supplier has been taken as start date of the project activity). However PP is requested to substantiate the project start date.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	As per the CDM Glossary of terms Version 05, the start date is defined as the date on which the project participant has committed to expenditures related to the implementation or related to the construction of the project activity. Hence, in line with the definition, the date of contract of the Equipment Supply dated 04-01-2008 is considered as the project start date. Copy of contract is provided to the DOE as documentary evidence as Annexure 2		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Validation team checked the date of contract of the equipment supply agreement from the provided contract and found that the start date of the project activity is taken appropriately by PP as per CDM glossary of terms and same is reflected in PDD/PDD2/, hence CAR B2 is successfully closed.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

<table>
<tr><td>Finding</td><td colspan="3">B3</td></tr>
<tr><td>Classification</td><td>☐ CAR</td><td>☒ CL</td><td>☐ FAR</td></tr>
<tr><td>Description of finding
Describe the finding in unambiguous style; address the context (e.g. section)</td><td colspan="3">All the chronological events have not been substantiated as described in section B.5 of PDD. Documentary evidences for chronology are missing. Please clarify.</td></tr>
<tr><td>Corrective Action #1
This section shall be filled by the PP. It shall address the corrective action taken in details.</td><td colspan="3">The documentary evidences for all chronological events are provided to DOE.
Following documents evidences have been provided to DOE:

<table>
<tr><th>Annexure Number</th><th>Name of document</th></tr>
<tr><td>2</td><td>Equipment supply Contract with Suzlon dated 4th of January 2008</td></tr>
<tr><td>3</td><td>Board resolution</td></tr>
<tr><td>4</td><td>Email communications with Cantor CO_{2e}</td></tr>
<tr><td>5</td><td>Erection, Installation and Commissioning Agreement for Ossiya Wind Farm</td></tr>
<tr><td>6</td><td>Agreement for Civil works and Site Development at Ossiya Wind Farm</td></tr>
<tr><td>7</td><td>Operation and maintenance agreement</td></tr>
<tr><td>8</td><td>Stakeholder notification</td></tr>
<tr><td>9</td><td>Minutes of meeting of stakeholder consultation</td></tr>
<tr><td>10</td><td>Loan sanction letter from IOB</td></tr>
<tr><td>11</td><td>Initial host country approval</td></tr>
<tr><td>13</td><td>Revised host country approval</td></tr>
<tr><td>21</td><td>Contract with Bureau Veritas</td></tr>
</table></td></tr>
<tr><td>DOE Assessment #1
The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</td><td colspan="3">Full list of documents given in chronology of section B.5 is missing in the revised PDD. CL is open.</td></tr>
</table>

<table>
<tr><th>Finding</th><th>B3</th></tr>
<tr><td>Corrective Action #2</td><td>Following documents have been provided to DOE in line with chronology of events of revised PDD

<table><tr><th>Name of document</th></tr><tr><td>Equipment supply Contract with Suzlon dated 4th of January 2008</td></tr><tr><td>Board resolution</td></tr><tr><td>Email communications with Cantor CO_{2e}</td></tr><tr><td>Erection, Installation and Commissioning Agreement for Ossiya Wind Farm</td></tr><tr><td>Agreement for Civil works and Site Development at Ossiya Wind Farm</td></tr><tr><td>Operation and maintenance agreement</td></tr><tr><td>Stakeholder notification</td></tr><tr><td>Minutes of meeting of stakeholder consultation</td></tr><tr><td>Loan sanction letter from IOB</td></tr><tr><td>Initial host country approval</td></tr><tr><td>Revised host country approval</td></tr><tr><td>Contract with Bureau Veritas</td></tr><tr><td>Agreement for maintenance (with parts & consumables) for Ossiya Wind farm</td></tr><tr><td>Web hosting of PDD on UNFCCC for global stakeholder comments</td></tr><tr><td>Appointment of TUV-Nord for project validation</td></tr></table></td></tr>
<tr><td>DOE Assessment #2</td><td>All the chronological events have been substantiated as described in section B.5 of revised PDD, documentary evidences have been received by the DOE. VT has checked the respective supporting documents and found them acceptable. VT has observed that PP had earlier appointed Bureau Veritas as DOE for its 31.5 MW wind based power project, this project was webhosted on 12/07/2008, HCA was also granted to 31.5 MW project on 25/07/2008, Later this project was split into two different projects, as components of this project was planned to get commissioned at different time intervals (12 MW Sadiya project activity of GFL got commissioned on 30/03/2008 (6 WTG) and 31/03/2008 (2 WTG), whereas this 19.5 MW Ossiya project by GFL got commissioned on 26/09/2009), and in order to simplify the validation process, monitoring plan, and reduce the time required to avail CDM benefits, PP decided to split the earlier project into these two separate CDM projects of 19.5 MW and 12 MW capacities. PP has appointed new DOE (TUV Nord) and new consultant (E & Y India Pvt. Ltd.) for 19.5 MW project activity. Also VT has noted as evident from the chronology of events given above, that the gap between any two CDM activities is less than 2 years. Also the chronology given is found in line with site visit interviews/IM01/. The project start date is before 2nd August 2008. The CDM benefit was also critically considered in the decision to go ahead with the project as reflected in the extract of minutes of meeting/MD/. The evidences prove that real actions were taken continuously to secure CDM status. CL is closed.</td></tr>
</table>

Finding	B3
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B4		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Documentary evidence for the minutes of the meeting and the board resolution passed by the board of directors, held on 2007-10-22 has not been provided. Please clarify.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The copy of Board resolution of GFL for implementing the project dated 22nd of October 2007 is provided to DOE as Annexure 3.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Validation team has checked the copy of Board resolution of GFL for implementing the project dated 22nd of October 2007, provided to DOE and found that the board of directors of GFL has decided to proceed with the project, which is the sole authority to take decision on such projects. VT has observed that the decision to set up wind power project was taken by Board of Directors, considering CDM benefits. The CER revenue was involved in the decision making process as stated in certified true copy of resolutions/MD/. Hence CL B4 is closed successfully.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Finding	B5		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	1. PDD reveals that DOE was appointed as early as April 2008 and HCA from DNA was also received in June 2008. However, the PDD was webhosted for GSC only on September 25, 2010. Clarify the reasons for the delay in web hosting the PDD for GSC. 2. In this context, it may be explained as to how the project participant committed funds to the project in advance of even web hosting the PDD for GSC, leave alone receiving a positive validation opinion, if the CDM benefits were considered imperative for the viability of the		

Finding	B5
	project.
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	1. The earlier project was envisaged as one project of 31.5 MW comprising of wind farms at two locations – a 12 MW wind farm at Sadiya and a 19.5 MW wind farm at Ossiya. The Project Design Document, encompassing both these wind farms as one project, was web-hosted in July 2008. the two projects were planned to get commissioned at different time intervals (12 MW Sadiya project activity got commissioned on 30/03/2008 (6 WTG) and 31/03/2008 (2 WTG), whereas the 19.5 MW Ossiya project got commissioned on 26/09/2009), thus, in order to simplify the validation process, monitoring plan, and reduce the time required to avail CDM benefits, it was decided by the PP to split the project into two separate CDM projects of 19.5 MW and 12 MW capacities. Accordingly, a letter of withdrawal of the 31.5 MW project was submitted to BVC on 04 May 2010 (Annexure 26), to terminate the validation of this project, and TUV Nord was requested to initiate the fresh validation considering both these wind farms as separate projects 2. Board of Directors of GFL decided to implement the project on the basis of proposal provided by Suzlon in its board meeting held on 22nd of October 2007. As stated in the respective board note, proposed project was financially unviable and project was taken up by board only because of associated CDM benefits. Decision to develop project as a CDM project was taken by GFL's board in the meeting of 22nd of October itself. CDM benefits were extremely important for the proposed project and hence, project proponent initiated the process of securing CDM benefits within 23 days of the investment decision (much before making financial commitment for the project). Project proponent had received a proposal from Cantor CO2 related to CDM consultancy services on 13 November 2007, which is within 23 days of the board resolution (reference email from Cantor CO2 dated 13 November 2007). CDM receivables were also considered as part of project revenues by debt financers of the project proponent as well. In letter dated 21st of June 2008, Indian Overseas bank which issued debt for proposed project activity, acknowledges that project is financially unviable without CDM revenues and they would not have funded the project in absence of CDM revenues. As demonstrated using CDM chronology , there is less than 2 years of a gap between two consecutive real actions towards securing CDM status for the project activity, Hence, as per paragraph 8 of Annex 22 of EB 49 Guidance on the demonstration and assessment of CDM awareness, continuing and real actions were taken to secure CDM status for the project activity; Decisiveness of Board resolution of GFL's board meeting in which investment decision for the project was resolved demonstrates serious consideration for CDM.

Finding	B5
	Letter from IOB acknowledging significance of CDM revenues in making project financially viable is provided to DOE as Annexure 14
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	**1.** VT has observed that PP had earlier appointed the Bureau Veritas as DOE for its 31.5 MW wind based power project, this project was webhosted on 12/07/2008, HCA was also granted to 31.5 MW project on 25/07/2008, Later this project was split into two different projects, as components of this project was planned to get commissioned at different time intervals (12 MW Sadiya project activity of GFL got commissioned on 30/03/2008 (6 WTG) and 31/03/2008 (2 WTG), whereas this 19.5 MW Ossiya project by GFL got commissioned on 26/09/2009), and in order to simplify the validation process, monitoring plan, and to reduce the time required to avail CDM benefits avoid losing out on the CDM benefits, PP decided to split the earlier project into these two separate CDM projects of 19.5 MW and 12 MW capacities. PP has appointed new DOE (TUV Nord) and consultant (E & Y India pvt ltd) for 19.5 MW project activity. PP has submitted the appointment and cancellation fo appointment letter relating to BVC. Therefore the explanation offered by PP for the delay is acceptable. CAR B5 (#1) is closed. 2. Since the project activity conforms to the stipulations given vide paragraph 6 and 8 of Annex 22, EB 49, the response is accepted. CAR B5 (#2) is closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B6		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Clarify how the CDM revenues were considered essential to overcome the investment barrier to this project activity, in particular that the benchmark represents a rate below which the investment could not be made.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Board of Directors of GFL decided to implement the project on the basis of proposal provided by Suzlon in its board meeting held on 22nd of October 2007. As stated in the respective board note, proposed project was financially unviable and project was taken up by board only because of assocaited CDM benefits. Decision to develop project as a CDM project was taken by GFL's board in the meeting of 22nd of October itself. CDM benefits were extremely important for the proposed project and hence, project proponent initiated the process		

Finding	B6
	of securing CDM benefits within 20 days of the investment decision (much before making financial commitment for the project). CDM receivables were also considered as part of project revenues by debt financers of the project proponent as well. In letter dated 21st of June 2008, Indian Overseas bank which issued debt for proposed project activity, acknowledges that project is financially unviable without CDM revenues and they would not have funded the project in absence of CDM revenues. As demonstrated using CDM chronology , there is less than 2 years of a gap between two consecutive real actions towards securing CDM status for the project activity, Hence, as per paragraph 8 of Annex 22 of EB 49 Guidance on the demonstration and assessment of CDM awareness, continuing and real actions were taken to secure CDM status for the project activity; Decisiveness of Board resolution of GFL's board meeting in which investment decision for the project was resolved demonstrates serious consideration for CDM. Letter from IOB acknowledging significance of CDM revenues in making project financially viable is provided to DOE as Annexure 14
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Though it is true that CDM benefits were considered, the very fact that the financial indicator does not equal benchmark even with CDM benefits indicates that it is not reasonable to assume that the investment would have taken place, rather had taken place at a return lower than the benchmark. In the above background, though CDM benefits were considered, it does not seem to have enabled the project developer to achieve the objective. CAR is open
Corrective Action #2	Project proponent would like to clarify that CDM benefits were considered as an integral part of the project financial returns since the inception stage of the project. The project activity was developed by project proponent with a primary aim of reducing Green House Gas emission and hence abating of environmental pollution through deployment of cleaner technology for generation of electrical energy despite lower financials returns from the project. In line with the Step 3. Barrier Analysis of the Tool to demonstrate additionality, the CDM revenues help bring financial returns closer to the benchmark and hence helps in alleviating the financial barrier. Hence, project proponent would like to clarify that CDM revenues were indeed considered essential to overcome the investment barrier to the proposed project activity.
DOE Assessment #2	The question is specific and is based on VVM. Qualitative response is not acceptable. Moreover, it is observed that CER income has been reckoned from September 2009, which is not in conformity with UNFCCC regulations. CAR is open
Corrective Action #`3	Project Proponent would like to clarify that CDM benefits were considered as an integral part of the project financial returns since the inception stage of the project.

Finding	B6
	The price of CER at the time of investment decision was considered as 21 euros (Source: http://www.cd4cdm.org/Publications/CostEffectivenessProjectsCDMPipeline.pdf). Project proponent would like to clarify that the financial indicator exceeds the benchmark with CDM benefits (if project cost is taken at actuals as given in the webhosted PDD) and hence CDM revenues were indeed considered essential in alleviating financial barrier to the project activity. The CER income has been reckoned from 01/01/2012 and the same has been changed in the financial indicator calculation sheet
DOE Assessment #3	Even with CDM income the financial indicator does not equal the benchmark. The financial indicator breaches the benchmark if the actual project cost and O&M cost is taken into consideration. Hence, it is reasonable to assume that the investment would not have taken place at a return lower than the benchmark. CL B6 is closed
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B7		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Though it does not affect the additionality demonstration, PP has not mentioned and taken into consideration the status –quo situation in the list of alternatives.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The only alternative of the project activity is undertaking of the project activity without consideration of CDM revenues. It has been demonstrated in the PDD that the project activity faces prohibitory barriers and is not feasible without CDM revenues. Hence, project activity would not have developed by project proponent without CDM benefits. The same has been included in the revised PDD.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Validation Team has checked the revised PDD and found that appropriate change has been made in the PDD. CAR B7 is closed.		
Conclusion *Tick the appropriate*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken		

Finding	B7
checkbox	☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B8		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Though benchmark analysis has been selected to demonstrate additionality, PDD does not explain the conformity of chosen investment analysis to guidance 16 of Annex 58, EB 51		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Project proponent has chosen benchmark analysis to demonstrate investment barrier in accordance with the Guidance 16 of Annex 58, EB 51. The guidance states that "If the alternative to the project activity is the supply of electricity from a grid this is not to be considered an investment and a benchmark approach is considered appropriate". The same has been explained and incorporated in the PDD.		
DOE Assessment #1	PDD has been appropriately modified and the appropriateness of the benchmark analysis has been explained in the revised PDD. However, latest investment guidelines have not been used.		
Corrective Action #2	Project proponent has now used latest investment guideline.		
DOE Assessment #2	VT has checked the revised PDD and found that now the latest investment guidelines EB 62 Annex 5 has been used. CAR closed.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Finding	B9		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The chosen period for the investment analysis is equal to the technical life time (20 years) of the project activity i.e WTGs. However Financial indicator calculation does not include salvage value and to that extent does not seem to conform to guidance 4 of Annex 58, EB 51		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Project proponent has included the salvage value in the financial analysis. Revised IRR sheet is provided to DOE.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In*	Though the salvage value has been provided in the financial indicator calculation, the reasons for providing salvage value only on WTG and blades are not clear. The basis for providing salvage value at 5% has not been explained. Moreover, there seems to be an arithmetical error in the computation of salvage value. It is suggested that the PP uses either Rs.		

Finding	B9
case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.	Mn. or Rs. lakhs instead of X10000 in some places and X100000 in some places. CAR is open
Corrective Action #2	The salvage value has been revised to include WTG, blades, tower, transformer, electrical items and evacuation facility. A value of 10% is now being used based on the paper "Appraising Equipment for Structured Finance Transactions Creating Residual Value Curves to Reflect Physical Depreciation, Obsolescence and Useful Life" by: D. Gregg Dight, ASA (http://www.marshall-stevens.com/pdf/pub_ValueCurves.pdf) and RERC Tariff Regulations, 2009 (http://www.rerctest.rajasthan.gov.in/Regulations/Reg%2076.pdf). The currency units are being retained as INR x 100,000 (or lakhs) throughout the IRR sheet.
DOE Assessment #2	Salvage value has been provided at 10% of the windmill cost, which appears reasonable. International practices estimate the the salvage value at 5 to 10%. This is also found to be in line with the CERC tariff order dated 15/05/2009. Since the salvage value has been considered as per the international best practices, therefore it is in line with the para 4 of EB 62 Annex 5. Therefore, the validation team considers the salvage value as correct and appropriate. CAR B9 is closed
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B10		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	The technical life time of WTG has not been substantiated.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The certificate from WTG manufacturer Suzlon which substantiates the technical life time of WTG is provided to DOE as Annexure 15		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE*	The submitted letter is for 31.5 MW (21 WTGs x 1.5 MW) wind power project in the state of Rajasthan at the Suzlon wind farms located at Ossiyan and Sadiya, which mentions the technical life time as 20 years of the WTGs. At the time of decision making, another wind project (UN Ref No. 1615) of PP was under validation process and PP was aware about the technical life time of Wind project, as the same was available in document "supply agreement dated 04/01/2007" of PP with wind technology supplier. VT has checked the same and found that information		

Finding	B10
assessments (#2, #3, etc.) shall be added.	regarding technical life time of WTG was available with PP at the time of decision making. Hence, technical life time of WTG taken by PP is acceptable. CAR B10 is closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B11		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Book depreciation rate has been considered at 5.28%. Though it does not affect additionality, the rate assumed in worksheet is different from the information given in the notes forming the part of balance sheet in the Annual Report of the company for the year 2007-08. It is observed that while IT depreciation has been provided for the year 2007-08, book depreciation has not been provided and no reasons are given.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Book depreciation rate has been considered at 5.28% SLM basis as per http://taxonline.net.in/resources/dep%20rate_co.doc Also, as per the point 2 of notes for the GFL balance sheet depreciation on Plant and Machinery and Windmills is considered on Straight line method at the rates and in the manner specified in Schedule XIV to the companies Act, 1956. As stated company will follow this depreciation 2007-08 onwards. Since, the project activity is commissioned in 2009, hence depreciation as per companies act is applicable. Therefore, depreciation of 5.28% on SLM basis is appropriate for the proposed project activity. Project proponent would like to clarify IT depreciation has been provided since 2009-10 onwards only.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Explanation on book depreciation is accepted. However, it is observed that book depreciation has been provided for full year in 2009-10, while the project was operational for only 6 months in that year. Though it does not affect additionality, providing full year depreciation when the project was operational for less than a year, is not in conformity with accepted accounting principles. Further, pre-operative expenses and service tax have neither been capitalized nor amortised. Likewise, the land cost is also not amortised. CAR is open		
Corrective Action #2	The book depreciation for the number of days the WEGs were in operation in 2009-10 has been accounted for in that year. The pre-operative expenses and land cost have now been amortised. The service tax has also been capitalized.		
DOE Assessment #2	Book depreciation has been corrected. Pre-operative expenses and land cost have been amortised over the life of the project. The formula used for the first year was checked and found to be appropriate. CAR B11 is closed.		
Conclusion *Tick the appropriate*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken		

Finding	B11
checkbox	☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B12		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Service tax has been provided at 12.36% on civil works cost also, which is not correct.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Service tax is applicable on services used by project proponent in the proposed project activity. Following service tax rates are applicable for respective services for the proposed project activity: **Civil works:** 12.36% (12% Service tax + 2% Education cess on service tax +1% higher education cess on service tax) **Erection and commissioning:** 10.30% (10% Service tax + 2% Education cess on service tax +1% higher education cess on service tax) **Electrical lines:** Service tax is applicable on only 33% of total contract at rates: 12.36% (12% Service tax + 2% Education cess on service tax +1% higher education cess on service tax) The Service tax rates are revised in PDD and Financial sheets. The respective invoices by Suzlon are provided to DOE as documentary evidence as Annexure 16.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Service tax taken does not seem to be correct. PP/Consultant should check the tax rate once again. Please clarify how the various input parameters considered in the financial indicator calculation conforms to Guidance 6 of Annex 5, EB 62. CAR is open.		
Corrective Action #2	The service tax on civil works and electrical works has not been considered. This is a conservative approach as a lower cost leads to a higher IRR value. Further, the project cost and O&M cost have been revised to offer letter basis, which was available at the time of decision making and hence conforms to Guidance 6 of Annex 5, EB 62. The term loan and the terms of the loan are based on the board note, a copy of which is enclosed. Since the board note is based on the information available at the time of decision making, the loan amount and the terms of the loan considered in the financial indicator calculations conform to Guidance 6, Annex 5 EB 62. Incidentally the loan amount and the terms thereof is also in conformity with the loan sanction letter and therefore takes care of Guidance 11, Annex 5, EB62. Insurance premium has however been reduced from Rs. 0.1 million per WTG per annum to Rs. 0.032 million per WTG per annum based on our experience, which is also forming part of the board note. We enclose two sets of worksheets - One		

Finding	B12
	with costs based on purchase order as given in webhosted PDD and the other based on the offer letter conforming to Guidance 6, Annex 5, EB 62.
DOE Assessment #2	Service tax has now been removed. Two sets of worksheets have been presented and the worksheet based on the offer letter has formed the basis for additionality demonstration in the PDD. Offer letter, board note have been received. Validation team checked and found that various input parameters considered in the financial indicator calculation are now in line with the Guidance 6 of Annex 5, EB 62. 4.1 Since the insurance premium considered is lower than what has been given in the webhosted PDD and is supported by the proposal to the board of directors upon which investment decision was made, the revised insurance premium is accepted. CAR B12 is closed
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B13		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	1. Transmission losses have been provided at 5%. RERC order does not seem to provide for more than 1% towards transmission losses. 2. The cost of project is stated to be Rs.59.48 mn. RERC has recommended a cost of Rs.44.2 mn./MW and even the machinery supplier (Suzlon) had recommended a cost of only Rs. 44.7 mn./MW for wind power projects 'for the financial year 2007-08 after including inflationary increase'. In the above background, the cost of Rs.59.48 mn./MW is high and does not appear to be correct and acceptable. 3. Since the order for WEGs is reported to have been placed on 04/01/2008, WEGs must have commenced generation before March 31, 2008. Hence, the assumption of operation of the project from 2009-10 does not appear to be correct. This may be checked.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	1. PLF has been considered by project proponent on the basis of PLF report prepared by a third party engineering consultant retained by the PP. The report estimates the PLF at 21.23% which was available at the time of investment decision. 2. The investment decision for the project was taken by board in board meeting on 22nd of October 2007. The decision was taken on the basis of Suzlon proposal dated 20th of September 2007 which is being provided as Annexure 12. As per the proposal cost per WTG is 9.72 Crores which works to 6.48 Crore/MW. The cost considered for the		

Finding	B13
	proposed project is 5.93 Crores/MW which is based on purchase orders placed by project proponent to Suzlon. Hence, the capital costs considered for the financial analysis are conservative. Copy of Equipment Supply Agreement, Civil agreement and Erection and Installation agreement with Suzlon is provided to DOE as Annexure 2, 5 and 6. However, in response to the assesment made vide CAR B12 above, two sets of worksheets have been presented – One based on actual cost as presented in the webhosted PDD and the other based on the offer letter conforming to Guidance 6, Annex 5, EB62. Copies of offer letter and board note are enclosed. 3. The Commissioning Certificate by RRVPNL confirms that WEGs have commenced generation on 26th September 2009. Commissioning certificates for the same are provided to DOE as Annexure 17. However, as requisitioned by the DOE a worksheet based on the offer letter has also been submitted wherein the COD has been taken as 31st March 2008.
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	1. Since the net PLF is 21.23%, which is more than the PLF recommended by RERC PLF is accepted. In the worksheet, the basis for PLF is stated to be loan application to IOB. Loan application does not provide the PLF assumed. The source for the PLF given in the worksheet is incorrect. Moreover, PP may furnish the actual generation since COD till May 2011. CAR is open 2. The cost is based on the purchase order and is lower than the offer letter. The cost works out to Rs.59.3 mn/MW, which is in line with the cost of other projects[9]. The worksheet based on offer letter duly supported by the quotations and board note have been received. This worksheet conforms to Guidance 6, Annex 5, EB 62. In this context, it is observed that a sum of Rs.14.28 lakhs has been provided for pre-operative expenses, which does not find place in the board note. Several expenses listed in the pre-operative expenses cannot be attributed to Rajasthan projects. A sum of Rs.14.28 lakhs/WTG is very high and this cost is unacceptable; none of the other projects validated by DOE has considered Preoperative expenses at all and even where they have considered, it is not so high. Moreover, the agreement for erection and commissioning is not complete and the pages containing important clauses are missing. Further, the ST, as per agreement is only Rs.8.29 lakhs. CAR is open

[9] Allgrow Ventures (Reg. No. 4992) – Rs. 60.01 mn./MW; Gupta Coal Fields (Reg. No. 3494) – Rs. 60.67 mn./MW; Vikram Traders (Reg. No. 3575) – Rs. 62.67 mn./MW; KPR Fertilizers (Reg. No. 3445) – Rs.60.37 mn./MW; Asian Fabricks (Reg. No. 5076) – Rs. 66.10 mn./MW; Terapanth Foods (Reg. No. 4050) – Rs.65.00 mn./WTG

Finding	B13
	In this connection, it is observed from the Agreement that there was another LOI issued on 27/08/2007 and some advance is sought to be adjusted against the advance paid under the LOI dated 27/08/2007. Clarify whether there was another LOI and the reasons for the signing this new agreement The Power performance annexure enclosed to the Agreement belongs to Tamil Nadu. 3. Commissioning certificate confirms the COD. Hence, the computation of first year generation is correct. Another worksheet based on the offer letter with 31st March 2008 as COD has been presented. In this context, DOE has observed that the PO requires the project to be commissioned by March 31, 2008 and in any case not later than May 31, 2008. However, the 13 WTGs were commissioned only 26/09/2009. Clarify the reasons for not accounting for the penalty collected from the machinery supplier for the delay in the first year cash inflow in the worksheet based on the actual project cost. CAR is open 4. The total insurance premium as per evidence submitted is divided by 20 in the worksheet based on actual costs. Clarify whether the insurance premium receipts furnished is for 20 WTGs and whether it is stated anywhere in the receipt. Moreover, as per Insurance policies furnished, the insurance premium is inclusive of ST. Pl. check 5. Tariff has been increased by 2 paise in 2010-11, though the WTGs were operational for only 6 months in the previous FY. Pl. check whether this is correct 6. The number of operating days in 2009-10 should be 187 and not 186. (For reasons not clear, the formula used for computing number of days is creating problem once it is downloaded into the system and becomes 'Value". Hence the number of days has been entered manually here. The formula may be checked to avoid the recurrence of the problem) 7. O&M cost in 2010-11 cannot be for full year as the project commenced operation only on 26/09/2009. Accordingly, the escalation in 2011-12 cannot be 5% as it is only for 6 months. Pl. check 8. It is observed that administrative expenditure has been provided at Rs. 6 lacs per annum and subjected to 5% escalation every year from 2nd year onwards. This cost does not find place in the webhosted PDD though it is mentioned in the board note. Introduction of costs after the PDD has been webhosted is inappropriate. 9. Tax computation is not in conformity with IT Act and ruling given on Sec. 80IA. Please see the comment in worksheet.

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	10. Various nomenclatures (P.O. new, P.O. old etc) used in IRR worksheet is not correct.
Corrective Action #2	1. The source for the PLF given in the worksheet has been corrected. Further, the historical generation since COD till June 2011 is also being submitted. The net PLF, works out to 20.10% which is lower than the assumptions made in IRR computation. 2. The pre-operative expenses have been removed. The Erection, Installation and Commissioning Agreement is being submitted as Annexure 2. The Erection, Installation and Commissioning Agreement mentions in Clause 5.1 that the service tax shall be subject to a limit of Rs. 2,65,122 per WTG which has been maintained in the IRR sheet. GFL had issued work orders to Suzlon on 27.08.2007 for installation of one S-82 1.5 MW Wind Turbine in the state of Maharashtra. This order was subsequently cancelled on 15.11.2007 and the advance of Rs. 1,72,39,580 paid towards the project was adjusted in the contract signed for equipment supply for 19.5 MW project in Ossiya, Rajasthan. The original work orders and their cancellation letters along with payment receipts are being submitted. The Power performance annexure in the Agreement belongs to Tamil Nadu because that is where Suzlon conducts the testing of its turbines. 3. As per the Guidelines on Assessment of Investment Analysis Version 5, paragraph 6 “Input values used in all investment analysis should be valid and applicable at the time of the investment decision taken by the project participant.” Since the delay in commissioning of the project could not have been foreseen at the time of investment decision, it is not required to be accounted in the project cash flows. Additionally, it is also being clarified that GFL did not levy any penalty on Suzlon under Article 14 “Liquidated Damages” of the Erection, Installation and Commissioning Agreement. The commissioning of the project got delayed because of delay in getting permission for grid interconnection from Rajasthan Rajya Vidyut Prasaran Nigam Limited (RRVPNL). There were various procedural requirements from RRVPNL that were beyond Suzlon’s control and hence caused the delay in commissioning. Documentary evidence in this regard is being submitted as Annexure 7. Since Suzlon was not directly responsible for the delay, hence as per the clause on “Force Majeure” Clause 17.1 (c) a penalty was not levied by GFL. 4. The insurance premium receipt from Oriental Insurance Company for the period of 3 Nov 2010 to 2 Nov 2011 is being submitted. The document mentions consideration of 20 WTGs under the policy. Further, the insurance premium inclusive of service tax as per the premium receipt is now being considered in the IRR Sheet. 5. The IRR sheet has been revised to consider tariff escalation every

Finding	B13
	year based on the tariff order from the date of commissioning. 6. The number of operating days in FY 2009-10 has been considered as 187 days in the IRR sheet. 7. The O&M cost has been revised in the IRR sheet as per the commissioning schedule of the project activity. 8. We wish to submit that the administrative expenditure has to be incurred by the company as a separate team is employed for overseeing the implementation and operation of the project involving cash outflows in the form of salaries, travel and conveyance, communication expenses, inspectorate, calibration charges and other miscellaneous expenses. Moreover, as per section 80 IA of the income tax act, income tax officer has the right to reckon certain expenditure while computing the profit from this business. We also submit a CA certificate which provides the details of the expenditure incurred on this project activity as evidence. 9. The tax computation has been revised to ensure conformity to IT Act. 10. The nomenclature used in IRR worksheet has now been corrected.
DOE Assessment #2	1. The source for the PLF has been corrected in the worksheet, which is in conformity with PLF report submitted. Generation since COD till June 2011 has been submitted and the PLF achieved is less than the projected PLF in the financial indicator calculation. CAR is closed 2. The pre operative expenses have been removed now. The Erection, Installation and Commissioning Agreement submitted by PP as Annexure 2 has also been checked, which mention in Clause 5.1 that the service tax shall be subject to a limit of Rs. 2,65,122 per WTG which has been revised appropriately in the IRR sheet. VT has also observed that PP had issued work orders to Suzlon on 27/08/2007 for installation of one 1.5 MW WTG (S-82) in the state of Maharashtra. This order was subsequently cancelled on 15/11/2007 and the advance of Rs. 1,72,39,580 paid towards the project was adjusted in the contract signed for equipment supply for 19.5 MW project in Ossiya, Rajasthan. The original work orders and their cancellation letters along with payment receipts have also been checked by the VT. Explanation regarding the power performance annexure in the Agreement, which belongs to Tamil Nadu is also acceptablebecause Suzlon conducts the testing of its turbines in Tamil Nadu. CAR is closed . 3. Since PP has declared that no penalty has been collected from Suzlon, the CAR is no pursued upon. CAR is closed 4. Document has been submitted. Insurance premium has been taken

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	correctly and the ST has not been double counted in the revised worksheet. CAR is closed. 5. The WEG commenced operation in September 2009, i.e., FY 2009-10. All wind mills commencing generation in 2009-10 are eligible for a tariff of Rs.4.28/kWh as per RERC order. Clarify whether the project is entitled to the tariff of Rs.4.28/kWh or not. CAR is open 6. The number of operating days in the first year has been corrected. CAR is closed 7. O&M cost has been revised in the submission. CAR is closed 8. The explanation regarding the administrative expenditure is accepted as it is evidenced by the board note and subsequently by the CA certificate. The expenditure is conservative and is accepted. CAR is closed. 9. Tax computation has been corrected. Though pre operative expenses (which are not acceptable) and land cost have been amortised, they have been added back while computing tax liability and in the process tax benefit arising out of amortisation has not been reckoned in the financial indicator calculation. CAR is open 10. Nomenclature used in IRR worksheet has been corrected. CAR is closed
Corrective Action #3	5. Project Proponent would like to clarify that in line with the RERC tariff order dated 09/03/2007 available at the time of investment decision (22/10/2007), the tariff of Rs 3.48/kWh has been considered to determine the project returns based on financial indicator. Subsequently nearly two years after the investment decision the tariff has been revised to Rs 4.28/kWh in the subsequent RERC tariff order dated 16/07/2009. Hence the only tariff available at the time of investment decision was Rs 3.48/kWh, which was used to evaluate project returns. The revised tariff order came much after the investment decision and hence even though the project is eligible for the revised tariff, it has not been considered for calculation of financial indicator at the time of investment decision. 9. The tax benefit arising out of amortisation of land cost has been reckoned in the financial indicator calculation
DOE Assessment #3	1. CAR was already closed

Finding	B13
	2. CAR was already closed 3. CAR was already closed 4. CAR was already closed 5. The explanation regarding the tariff is accepted. Tariff has been subjected to sensitivity analysis to cover the difference in tariff (tariff considered in the worksheet and applicable tariff). Since the project remains additional even when the applicable tariff is taken into consideration, CAR is closed 6. CAR was already closed 7. CAR was already closed 8. CAR was already closed 9. Land cost amortisation has been added back in the cash inflow. CAR is closed 10. CAR was already closed
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B14		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Clarify the reasons for not capitalizing the cost of Blades, Tubular Tower and Erection & Commissioning charges with wind turbine.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The cost of Blades, Tubular Tower and Erection & Commissioning charges with wind turbine has been capitalized. Please refer to the Project cost tab of IRR sheet on PO basis.		

Finding	B14
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Cost of blades, tubular tower and erection & commissioning charges have been capitalised with WTG in the IRR sheet (based on actual POs). However for the IRR sheet based on proposals costs are already included in the project cost. CL B14 is closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B15		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Net PLF as given in the PDD (26.17%) differs from the Net PLF given in the worksheet (22.09%). This has resulted in giving incorrect information to the Global stakeholders, which is neither appropriate nor acceptable.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Para 3(b) of Annex 11 of EB 48: Guidelines for the reporting and validation of plant load factor Version 1, states that the plant load factor shall be defined ex-ante in the CDM-PDD as 'determined by a third party contracted by the project participants' PLF is therefore based on the estimation of generation by a third party engineering company contracted by the project participant, which was available at the time of decision making. Hence it conforms to Annex 11, EB 48.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The PLF considered is more than the PLF recommended by RERC, and is based on the PLF report prepared by a third party engineering company which was available to the PP at the time of decision making and hence conforms to Annex 11, EB 48. However, PP is requested to furnish the actual generation by the project since COD till June 2011. CAR is open.		
Corrective Action #2	The historical generation since COD till June 2011 is being submitted as Annexure 3.		
DOE Assessment #2	Actual generation is much less than 20%. Hence, the generation assumed is appropriate. CAR B15 is closed		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly		

Finding	B15
	☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B16		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	PDD does not explain the appropriateness of the project IRR (selected as financial indicator) to the project type and decision making context.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Project proponent has chosen benchmark analysis to demonstrate investment barrier in accordance with the Guidance 16 of Annex 58, EB 51. The guidance states that "If the alternative to the project activity is the supply of electricity from a grid this is not to be considered an investment and a benchmark approach is considered appropriate". Since benchmark analysis approach is considered, hence as per the guidelines any one of the project IRR or equity IRR can be used for calculating financial returns from the projects. Since, the project has huge debt component (80% as compared to 20% equity), hence project proponent has used project IRR for calculating financial returns for the project. Accordingly WACC has been used for determining the benchmark for the project.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Benchmark approach does not restrict the financial indicator to equity or project IRR only. The conclusion has no relation to the CAR raised. Even the revised PDD does not explain the appropriateness of the financial indicator selected to the project type and decision making context. CAR is open		
Corrective Action #2	Project Internal Rate of Return (IRR) is one of the most commonly used financial indicators in capital budgeting. It represents the rate of growth a project is expected to generate and may be used to rank several prospective projects that a firm is considering or used to assess the returns of a prospective project against an established benchmark for investment by the firm. Project IRR for a project activity needs to be adequate enough to service debt as well as provide a return to shareholders i.e. it has to be worthy enough from the point of view of both investors as well as creditors. A project IRR below the cost of capital for the proposed project activity can be considered to be financially unviable. Therefore, the Project IRR was found to be the most appropriate financial indicator for feasibility analysis of this project activity. The same justification has also been included in the revised PDD.		
DOE Assessment #2	Revised PDD explains the appropriateness of the financial indicator used. CAR B16 is closed.		

Finding	B16
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B17		
Classification	☐ CAR	☒ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Interest on term loan has been computed as if the loan is repayable in half yearly instalments. Clarify whether the interest computation and repayment schedule, repayment holiday are in conformity with loan sanction letter		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Interest term loan has been computed as per loan sanction letter which was also envisaged at the time of making investment decision. The loan was issued on 4th of April 2008 (Annexure 10) and as per the loan sanction letter 36 equal principal payments had to be paid starting from April 2009 onwards after the end of 1 year holiday period. Hence, loan repayment has been scheduled in the financials in accordance with loan repayment schedule. The same is revised and updated in the financial analysis of the project.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Even the revised interest computation is not in order. As per sanction letter, first instalment is due on April 2009. However, the project itself commenced operation only in Sept. 2009. However, in the worksheet based on offer letter the COD was assumed as 31st March 2008 in conformity with the offer letter. Therefore assuming repayment in first two quarters tantamount to repayment during implementation period, which is not correct; Interest computation is incorrect; For reasons not clear, first year interest has not been reckoned in 'IRR' worksheet. Since, in the worksheet based on the offer letter, the COD is considered as 31st March 2008, one day interest should be reckoned in 2007-08. CAR is open		
Corrective Action #2	The interest calculation has been revised to include the year 2008-09 as per the sanction letter, and 2007-08 in the case of the worksheet based on the offer letter. The formula for interest calculation and its reckoning in P&L sheet has also been corrected. The Interest for first year has been included in the revised IRR sheet.		
DOE Assessment #2	Interest computation has been corrected, CL B17 is closed.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Finding	B18		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in*	Sec. B.5. of the PDD does not explain how the WACC chosen as benchmark conforms to guidance 12 and 13 of Annex 58, EB 51. Since		

Finding	B18
unambiguous style; address the context (e.g. section)	the calculations supporting the benchmark have not been furnished, comments on the benchmark are reserved.
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Paragraph 12 of Guidelines on investment analysis Version 3.1, Annex 58 EB 51 states that 'In cases where a benchmark approach is used the applied benchmark shall be appropriate to the type of IRR calculated. Local commercial lending rates or weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR'. Since the project has used project IRR to determine financial returns from the project. Hence, WACC has been used to determine benchmark for the project. The explanation is provided in Section B.5 of the PDD and excel sheet for calculating WACC is provided to DOE.
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Revised PDD explains the appropriateness of using WACC as benchmark and its conformity to Guidance 12 of Annex 58, EB 51. However, on WACC, validation team has following issues: a) RoE of 24.84% is very high compared to RoE recommended by RERC and by EB in its 61st meeting and hence it is not acceptable b) Considering MAT rate for computing the post tax cost of debt is not acceptable as the company is not in MAT bracket c) PP should furnish the market return based on SENSEX also d) Several figures given in 'beta' worksheet and the formula used to compute stock returns in almost all cases are not correct e) Risk free return figure is not found in the website given and moreover, this publication could not have been available to PP at the time of decision making. f) Beta has been computed for duration of 4.16 years except in the case of JP Hydro, which is for 2.5 years. There is no explanation in PDD on whether any standard text book recommend the consideration of the duration of 4.16 years and combining beta computed for different periods g) All power generating companies listed in BSE are not included and no explanation has been given for their omission. CAR is open
Corrective Action #2	a) As per paragraph 15 of the Guidelines on the assessment of Investment Analysis Version 5, "If the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in Appendix A; or by (b) calculating the cost of equity using best financial practices, based on data sources which can be clearly validated by the DOE,

Finding	B18
	while properly justifying all underlying factors." The project proponent has selected option (b) for calculation of the cost of equity. The capital asset pricing model (CAPM) has been used which is a well accepted practice used to determine the theoretically appropriate required rate of return of an asset. All inputs for the calculation are also based on data sources that are publically available as well as reliable. The same has also been mentioned in the PDD. b) As per paragraph 13 of the Guidelines on the assessment of Investment Analysis Version 5, "In the cases of projects which could be developed by an entity other than the project participant the benchmark should be based on parameters that are standard in the market." Therefore, since interest on loan is tax deductible, the cost of debt is required to be adjusted as per the tax rate applicable during the repayment period. Further, in line with the provisions of Indian Income Tax Act Section 80 IA, a deduction of an amount equal to 100% of the profit and gain derived from an undertaking or enterprise that generates power is allowed for any ten consecutive years out of fifteen years beginning from the year of commencement of power generation. Hence in such cases, power generating companies are allowed to use Minimum Alternative Tax rate (11.33%) till the repayment period of the loan. Therefore, it is appropriate to use the MAT rate as the applicable tax rate for calculation of the post-tax cost of debt. c) The market returns and beta calculations have also been done based on BSE SENSEX data. The same have been provided as Annexure 1. d) The figures in 'beta' worksheet and formulae used to compute stock returns have been corrected. e) The source for the risk free return has been revised to a publication available to PP at the time of decision making. f) The beta values have been computed for power generating companies either from the period when the Electricity Act, 2003 came in to force or the date of listing of the company on the index, whichever falls later. This has been done because the Electricity Act after its enforcement, set the terms and conditions for determination of tariff for electricity generation, transmission and distribution activities in the power sector thereby drastically changing the investment scenario for power generating companies. Hence, it is appropriate to consider the post-Electricity Act data for risk premium calculation. g) NTPC and Torrent Power have now been included in the list for calculation of beta values of power sector companies. The revised sheet has been provided as Annexure 2.

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DOE Assessment #2	The observations on the response are as follows: a) Guidelines states, "....calculating the cost of equity using best financial practices, based on data sources which can be clearly validated by the DOE, while properly justifying all underlying factors". DOE is unable to accept the cost of equity has been calculated using best financial practices or the underlying factors have been properly justified. It cannot be without any basis RERC must have arrived at a return of 16% on equity and so too EB. Mere presentation of figures which can be verified by DOE or using a CAPM formula does not render the ROE automatically acceptable. DOE is unable to accept both the arguments and the ROE. CAR is open b) PP/consultant should check the main objective of setting up wind power projects by majority of the projects including the candidate project. The project itself uses regular corporate tax rate in the financial indicator calculation, of course in conformity with IT Act and the rulings given on sec. 80IA. Therefore, the 'standard' cannot be any different from what most of the PPs adopt. The argument is not acceptable. CAR is open c) Benchmark with stock returns regressed on Sensex has been submitted. Though the benchmark computed with Sensex is full of mistakes, a comparison should prove that how the methodology adopted is not foolproof and the claim made by the PP/consultant vide response to (a) above is not correct. Moreover, a cursory glance at the benchmark reveals that market return has been considered only from Feb 28, 1999 onwards though Sensex data are available for much longer period; stock price considered for Torrent Power does not seem to be correct; computation of stock return in the case of one of the projects is incorrect; besides, a few errors are identified in the data used for unlevering the beta. These comments are over and above the comments given on benchmark computed with BSE 500. CAR is open d) Mistakes in the input parameters and error in formula have been corrected. However, a few errors are identified in the data used for unlevering the beta. Please see the worksheets. CAR is open e) The source for risk free return has been revised. Clarify whether this publication was available at the time of decision making. CAR is open f) The explanation is neither satisfactory nor convincing. No reference from a standard text book has been given advocating the use of different duration for computing beta and combining such beta to arrive at industry beta. CAR is open g) Majority of the companies seems to have been included. CAR is closed

Finding	B18
Corrective Action #3	a) Return on Equity (RoE) has been revised and calculated as per Appendix of Guidelines on the assessment of investment analysis (version 5,EB 62), which states that "In situations where an investment analysis is carried out in nominal terms, project participants can convert the real term values provided in the table below to nominal values by adding the inflation rate. The inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period. If this information is not available, the target inflation rate of the central bank shall be used. If this information is also not available, then the average forecasted inflation rate for the host country published by the IMF (International Monetary Fund World Economic Outlook) or the World Bank for the next five years after the start of the project". As, the inflation forecast of the central bank and target inflation rate of the central bank for India are not available, the average forecasted inflation rate for the host country published by the IMF (International Monetary Fund World Economic Outlook) has been used. Accordingly, the real term value provided in the Appendix of Guidelines on the assessment of investment analysis (version 5,EB 62) has been converted to nominal value by adding inflation rate provided by International Monetary Fund . The Compounded Annual Growth Rate of inflation for period of five years both after the Board decision and start of project activity have been calculated and the conservative value has been considered. The inflation rates has been taken from the source:http://www.imf.org/external/pubs/ft/weo/2011/02/weodata/weorept.aspx?sy=2007&ey=2016&scsm=1&ssd=1&sort=country&ds=.&br=1&c=534&s=PCPI&grp=0&a=&pr1.x=15&pr1.y=10 b) Corporate tax rate has been considered for calculating post tax cost of debt and the same has been incorporated in the benchmark analysis c) Benchmark analysis has been revised as per Appendix of Guidelines on the assessment of investment analysis (version 5,EB 62). d) Benchmark analysis has been revised as per Appendix of Guidelines on the assessment of investment analysis (version 5,EB 62). e) Benchmark analysis has been revised as per Appendix of Guidelines on the assessment of investment analysis (version 5,EB 62). f) Benchmark analysis has been revised as per Appendix of Guidelines on the assessment of investment analysis (version 5,EB 62).
DOE Assessment #3	Since the return on equity forming part of WACC has been computed based on Appendix to Annex 5, EB 62 and the calculations are in order, the benchmark is accepted. The resultant benchmark is also lower than the benchmark given in the web hosted PDD (14.82%) and hence conservative. CAR B18 is closed.

Finding	B18
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B19		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Common practice analysis does not seem to conform to step 4 of additionality tool. PP is requested to check the conformity of requirements of additionality tool and revise the explanation accordingly.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Since, the project is not a first of its kind project. Hence, in accordance with 'Tool for demonstration and Assessment of additionality' Version 5.2, Annex 10, EB 39, Common practice analysis has been carried out to analyse the extent to which the proposed project has already diffused in the relevant sector and region. The Common practice analysis is revised in Section B.4 of the PDD in line with the tool		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	PDD states, "And most of the wind power projects that are established after 2001 are being structured as CDM projects and are at various stages in the CDM project cycle". Clarify, if most of the wind power project are CDM projects, what about the remaining projects. The list of projects given should cover all wind power projects in the selected geographical region, which has not been defined and the projects should be eliminated based on the criteria adopted to prove that setting up wind power projects without CDM benefits is not a common practice. What is given here is select projects, which are all CDM projects. This does not meet the requirements of step 4 of Additionality tool. CAR is open		
Corrective Action #2	The common practice analysis has been revised in the PDD to include all large scale wind power projects in the state of Rajasthan using the Directory on Indian Windpower 2010. It has further been demonstrated that all the projects similar to the project activity are in process of pursuing CDM benefits.		

Finding	B19
DOE Assessment #2	a) Common practice analysis does not explain the reasons for considering Rajasthan as geographical area b) From the information given it appears that all the projects in Rajasthan are CDM projects, which is not true. PP/consultant may submit either soft copy or photocopies of all pages of Indian Wind Power 2010 containing all wind power projects in Rajasthan. c) PP/consultant should list all wind power projects in Rajasthan and then eliminate them based on the criteria given in Step 4 of Additionality Tool. CAR is open
Corrective Action #3	a) Project Proponent would like to clarify that an investment climate comparison analysis has been done for Rajasthan and its neighbouring states Gujarat and Maharashtra. The analysis indicates that the investment climate at the time of investment decision is different in all the three states with reference to the parameters considered. Hence, state of Rajasthan is considered as geographical area for Common Practice Analysis. b) The photocopies of all pages of Directory on Indian Wind Power 2010 detailing out all installed wind power projects in Rajasthan, has been submitted c) Common Practice Analysis has been carried out in accordance with 'Tool for demonstration and Assessment of additionality' Version 5.2, Annex 10, EB 39.
DOE Assessment #3	Common practice analysis does not conform to step 2 of Additionality Tool. CAR is open.
Corrective Action #4	Common practice analysis has been carried out in revised PDD taking host country "India" as applicable geographical area.
DOE Assessment #4	Common practice analysis now conforms to step 2 of Additionality Tool, as now the applicable geographical region has been chosen as the host country India and all the analysis has also been done accordingly. CAR B19 is closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B20		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding	The accuracy class of the meters and monitoring frequency has not been		

Finding	B20
Describe the finding in unambiguous style; address the context (e.g. section)	mentioned in the section B.7.1 of the webhosted PDD.
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Monitoring methodology has been revised in Section B.7.1 of the PDD. Information on Accuracy class for the meters and monitoring frequency is included in the PDD. Calibration certificates of respective meters in provided to DOE as Annexure 19
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Monitoring frequency of the parameters is still missing in the revised PDD hence CAR B20 is open.
Corrective Action #2	Monitoring Frequency of the parameters is included in the revised PDD
DOE Assessment #2	The accuracy class of the meters and monitoring frequency have been mentioned in the section B.7.1 of the revised PDD. CAR B20 is closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B21		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	As evidenced during site visit, monitoring plan as described in the section B.7. of PDD is not in line with the actual monitoring practice. PP is requested to change the monitoring plan accordingly. Moreover as per the site visit it was found that the power generated from the WTGs is being fed to grid using a step up transformer (690/33 KV), which is not identical with the webhosted PDD, hence PP is requested to correct the same.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Project proponent has revised monitoring plan in Section B.7.1 and B.7.2 of the PDD as per actual monitoring practice. Project proponent will like to acknowledge that power generated from WTGs is fed into 33 KV line of grid using a step up transformer (690/33 KV). The same has been revised in the PDD.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3,*	VT has checked the revised PDD and found that now monitoring plan described in the section B.7. of PDD is in line with the actual monitoring practice observed during the site visit[IM01//IM02/]. Also the information provided in PDD regarding transformer has been corrected. CAR B21 is closed.		

Finding	B21
etc.) shall be added.	
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	B22		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	PP is requested to provide response to the comments received during GSP.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Following comment was received during the global stakeholders: *"It is a well known fact that the wind projects are mainly installed considering CDM revenues and offsetting of tax liability of the company as a result of accelerated depreciation of 80%.* *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 proponent will like to clarify that the depreciation benefits in the Wind power project have been considered by the PP and the same has been included in the IRR sheet. Despite considering depreciation benefits, project is financially unviable and faces investment barrier as demonstrated in Section B.4 of the PDD.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	a) Financial indicator calculations take into consideration tax saving. b) Tax shield enjoyed by the company has been reckoned in the financial indicator calculation c) DOE has verified and confirms that the cash flow takes into account the tax shield arising on account of accelerated depreciation d) That the cash inflows result in increase in the IRR is evidenced by the financial indicator calculation enclosed. CAR B22 is closed.		

Finding	B22
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

Finding	C1		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	Crediting period start date to is not a reasonable date.		
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	The start date of crediting period is revised to 01.10.2011 and is incorporated in Section C.2 of the PDD.		
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	The start date of crediting period is revised to 01/01/2012 in revised PDD, which is acceptable. However same date needs to be reflected in corrective action. CAR is open.		
Corrective Action #2	The start date of crediting period is revised to 01/01/2012 and is incorporated in Section C.2 of the PDD.		
DOE Assessment #2	Date needs to be revised. CAR is open		
Corrective Action #3	The start date of crediting period has been further revised to 01/09/2012 and is incorporated in the section C.2 of the PDD.		
DOE Assessment #3	VT has checked the revised PDD, now the crediting period start date has been updated to 2013-04-01. CAR C1 is closed.		
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements		

Finding	E1		
Classification	☒ CAR	☐ CL	☐ FAR
Description of finding *Describe the finding in unambiguous style; address the context (e.g. section)*	MoM and attendance sheet of the stakeholder meeting held on 9th March 2008 has not been submitted.		

Finding	E1
Corrective Action #1 *This section shall be filled by the PP. It shall address the corrective action taken in details.*	Minutes of meeting as Annexure 9 and attendance sheet as Annexure 20 for the stakeholder consultation is provided to DOE.
DOE Assessment #1 *The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.*	Validation team has checked the MoM and attendance sheet of the meeting held on 9th March, 2008, and found these documents appropriate. CAR E1 is closed.
Conclusion *Tick the appropriate checkbox*	☐ To be checked during the first periodic verification ☒ Appropriate action was taken ☒ Project documentation was corrected correspondingly ☐ Additional action should be taken ☒ The project complies with the requirements

5 VALIDATION ASSESSMENT SUMMARY

5.1 General Description of the Project Activity

5.1.1 Participation

LOA

Host Party for this project activity is India. India has ratified the Kyoto protocol on 26/08/2002, also confirmed from the UNFCCC web site[10]. The host country approval/HCA/ (No. 4/7/2008-CCC, dated on 23/09/2010) issued by the National CDM Authority (NCDMA), Ministry of Environment and Forests (MoEF)/moef/, Government of India, which is the authorised DNA for India, confirms voluntary participation by Gujarat Fluorochemicals Limited in the proposed CDM project activity. However, initially the project proponent Gujarat Fluorochemicals Limited had taken the same host country approval/HCA/ (No. 4/7/2008-CCC, dated on 25/06/2008) issued by the National CDM Authority (NCDMA), Ministry of Environment and Forests (MoEF)/moef/, Government of India for the proposed project activity "31.5 MW wind power project in Rajasthan by GFL". Later the project activity "19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL)" consisting 13 WTGs were taken out from the project activity "31.5 MW wind power project in Rajasthan by GFL" and were treated as completely separate proposed CDM project activity.

The HCA (No. 4/7/2008-CCC, dated on 23/09/2010)/HCA/ also states that the host party is a party to the Kyoto Protocol, and has ratified the same in August 2002. MoEF has stipulated social well being, economic well being, environmental well being and technological well being as the four indicators for sustainable development for host country approval eligibility criteria for CDM project activities[11]. PDD/PDD2/ describes all the sustainable development indicators correctly and appropriately which is deemed sufficient to prove that the project activity will lead to sustainable development. The HCA has the precise project title "19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL)" as given in the PDD/PDD2/ and also confirms that the project contributes to sustainable development. An Annex-I party will be identified by the project participants in due course of time, as per the post registration involvement by Annex I party provisions (no. 57) made in 18th EB meeting.

Nevertheless in the Host Country Approval, it is stated that the project participant (PP) has to comply with the following conditions:

- M/s Gujarat Fluorochemicals Limited (GFL) shall not sell the CERs to any agency/ company/ organization which purchases the CERs using ODA Funds.

[10] http://maindb.unfccc.int/public/country.pl?country=IN
[11] http://www.cdmindia.in/approval_process.php

- M/s Gujarat Fluorochemicals Limited (GFL) shall inform the national CDM Authority regarding all transaction details of CERs including the name and address of the party to which CERs were sold within 30 days of transfer of the CERs.
- M/s Gujarat Fluorochemicals Limited (GFL) shall furnish expeditiously any information, during the lifetime of the project as requested by the National CDM Authority.
- M/s Gujarat Fluorochemicals Limited (GFL) shall obtain all statutory clearances and other approvals as required from the competent authorities for setting up of the project
- All transaction shall be subject to supervision of the Executive Board of the CDM, under the authority and guidance of the COP/MOP.
- This approval is not transferable. The authority reserves the right to revoke this Host Country Approval if the conditions stipulated in this approval are not complied with to the satisfaction of the National CDM Authority.

Project Participants

Name of the Project Participant mentioned in the PDD[/PDD2/] and LoA[/HCA/] is consistent. Gujarat Fluorochemicals Limited is mentioned as the name of the PP in the HCA[/HCA/] and in the PDD[/PDD2/].
Moreover it is also confirmed that the DOE has established direct contractual relationship with the PP (Gujarat Fluorochemicals Limited) for the validation service vide service contract[/CON/] no. 10CDMIN040048 dated 23/07/2010.

5.1.2 Contribution to Sustainable Development

The issued host country approval[/HCA/] confirms the contribution to sustainable development of India from the proposed project activity.

5.1.3 PDD editorial Aspects

The proposed project activity has been described in latest PDD template (CDM-PDD ver 03) according to the latest PDD guidelines (Annex 12, EB 41 version 07.0).

5.1.4 Technology to be employed

The project is a Greenfield project activity. In the PDD section A.2 and A.4.3, technical aspects of the proposed project activity are described. The description is found to be in accordance with the latest PDD guidelines and found to be complete and accurate. It is confirmed during the site visit that the description provided is correct and is in line with the actual conditions on the project site. There is no

technology transfer involved in the proposed project activity. Moreover, as the wind turbines harness renewable sources of energy viz. wind power for electricity generation, the technology employed is environmentally safe and sound.

5.1.5 Small Scale Projects

The proposed project activity is large scale project activity, hence it is not applicable .

5.2 Project Baseline, Additionality and Monitoring Plan

5.2.1 Application of the Methodology

The selected baseline methodology is the approved baseline methodology "Consolidated baseline methodology for grid-connected electricity generation from renewable sources" (ACM0002 Ver.13.0.0), available on UNFCCC web site. The applied methodology is of latest version and is valid from 11 May 2012 onwards.

The selected baseline methodology, i.e., ACM0002 is correctly applied to this type of wind project. All the applicability criterion of applied methodology is appropriately justified in section B.2 of the PDD. Moreover as assessed by the DOE during site visit and by desk review of technical design of project there is no other significant emissions are involved with the proposed project activity except listed in the methodology. Methodology applicability criteria are assessed in annex I in detail. Also PI. refers to CAR A5 which was raised and successfully closed.

5.2.2 Project Boundary

As required by the applied methodology ACM 0002 ver.13.0.0 and latest PDD guidelines, project boundaries are described and depicted correctly in the PDD. The same was observed during site visit by the validation team. Project boundary was physically checked during site visit. Carbon dioxide is the only gas taken into account for the baseline emission which complies with the applied methodology. There are no other sources affected by the project. Project boundary description complies with the applied methodology and VVM[/VVM/] requirements.

5.2.3 Baseline Identification

The selected baseline methodology is the approved baseline methodology "consolidated baseline methodology for grid-connected electricity generation from renewable sources" (ACM0002 Ver.13.0.0).

The selected baseline methodology, i.e., ACM0002 is correctly applied to this type of wind project activity. The baseline scenario under the adopted methodology

ACM0002 is "*Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system".*

Baseline emissions include only CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The baseline emissions are calculated by multiplying the electricity baseline emission factor which is grid emission factor ($EF_{gridCM,y}$) in this case, and the quantity of net electricity generation that is produced and fed into the grid ($EG_{PJ,y}$) as a result of the implementation of the CDM project activity in year y (MWh/yr).

The grid emission factor ($EF_{gridCM,y}$) is estimated as a combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) factors. In this case the Combined Margin (weighted average of Simple Operating Margin and Build Margin) is estimated based on three years generation weighted average (2006-07, 2007-08, 2008-09) of Simple Operating Margin and Build Margin of year 2008-09 in line with steps of tool to calculate the emission factor for an electricity system (ver. 02.2.1). Both the value of Simple Operating Margin and Build Margin are selected under ex-ante approach. The grid boundary w.r.t the connected state grid is NEWNE grid.

In accordance with tool to calculate the emission factor for an electricity system (ver 02.2.1), 'Dispatch Data Analysis' is one methodological choice out of four options of calculating OM emission factor. Nevertheless the "Dispatch data analysis operating margin" is ruled out in India due to lack of necessary dispatch data of the grids and simple OM is applied to calculate the OM emission factor. The same fact is also considered by the Central Electricity Authority/cea/ {Ref the user guide for CO_2 Baseline Database for the Indian Power Sector (version 05.0, November 2009)}.

Out of other 3 options of calculating OM, GFL has rightly selected simple OM emission factor calculation as the share of low cost / must run resources of the selected grid over the three most recent years (2006-07, 2007-08, 2008-09) is < 50% of the gross grid generation/cea/.

In accordance with tool to calculate emission factor for an electricity system, version 02.2.1 weight factors of w_{OM} = 0.75 and w_{BM} = 0.25 have been used and the resultant grid emission factor ($EF_{grid,CM,y}$) works out as 0.9225 tCO_2/MWh. The calculation of Emission factor is publicly available and published by the Central Electricity Authority on its web-site/cea/. The validation team confirms the result of the emission coefficient calculation/XCS/ based on recalculation of the same. It is deemed to be adequate and transparent.

The annual net electricity supplied to the grid is estimated to 36,269.72 MWh.

Altogether the project activity reduces emissions of **234,185** tCO_2e over the seven years renewable crediting period.

Relevant national & sectoral policies have been considered such as decisions of the Gujarat Electricity Regulatory Commission and the energy policy of the Government of India. The project is also in line with New Renewable Energy Policies. Nevertheless, some CARs had to be raised and were successfully closed (ref Annex: Validation Protocol - Table A-1).

In addition to ACM0002 for baseline emission and steps of Additionality Tool (Ver 06.1.0 which is the latest version has been applied. From the above discussion it can be concluded that the chosen baseline scenario is plausible and in accordance with the applied methodology for the project activity.

5.2.4 Calculation of GHG Emission Reductions

Methodologies for calculating emission reductions are documented. The project intends to reduce carbon dioxide (CO_2) emissions by generating electricity from a renewable energy wind project, which would be exported to the NEWNE grid.

There are no GHG emissions arising from the project being a wind project. Hence, the project emissions are zero. As per the methodology ACM0002 version 13.0.0, there are no emissions related to leakage in this project.

The calculation approach and calculation of the baseline emission and emission reduction are documented in section B.6.3 of PDD. For assessment please refer to section 5.2.3 of this report.

Acc. to the final PDD the project is expected to reduce emissions of **234,185** tCO_{2e} over a 7 years renewable crediting period. The DOE has assessed the emission reduction calculation sheet[/XLS2/] and parameters used therein, and found that estimated emission reductions are according to the applied methodology and tool and thus concluded them plausible and conservative for the proposed project activity.

5.2.5 Additionality Determination

This project involves installation of 13 WTGs of 1.5 MW each at Jodhpur District of Rajasthan by Gujarat Fluorochemicals Limited (GFL) and exporting the entire generation to connected grid.

Consideration of CDM in decision making (if project start before validation)

The project start date is given as 04-01-2008; the date on which GFL signed the Equipment Supply Agreement with M/s. Suzlon Energy Ltd. Copy of the Equipment Supply Agreement has been verified. As this document signifies the financial commitment of the PP, considering this as the start date is in accordance with the CDM glossary of terms.

The project was webhosted for GSC on 25-09-2010. The project start date is before the webhosting of PDD for GSC and 02-08-2008. Therefore, the project falls under 'existing project activity'. Accordingly, the Project participant was asked to demonstrate the serious consideration of CDM while taking the decision to implement the project activity as required vide paragraphs 102 (a) and (b) of VVM [ver.1.2] read with paragraphs 6 (a) & (b) and 8 of Annex 13, EB 62.

Project developer informed that he was aware of the CDM benefits as another project (Wind power Project by GFL at Gudhepanchgan – Reg. No. 1615) was webhosted on 28/08/2007 and the machinery supplier had also informed them about the eligibility of the project to get registered with UNFCCC as CDM activity. Project developer had submitted a certified copy of the Board Resolution dated 22-10-2007, which take into consideration the CDM benefits. Validation team was therefore convinced that the project developer was aware of CDM benefits before the investment decision was taken and that CDM benefits were the decisive factor in going ahead with the project activity.

As regards demonstration of continuing and real action were taken to secure CDM status for the project in parallel with its implementation, the project developer submitted a chronology of events [which forms part of PDD] a summary of which is given below:

Activity	Date
1. Management Decision	22/10/2007
2. Local Stakeholders' Meeting	09/03/2008
3. Appointment of CDM Consultant	5.3 27/03/2008
4. Appointment of BVCI as DOE	26/04/2008
5. HCA (Initial and revised)	25/06/2008 (Initial), 23/09/2010 (revised)
6. Webhosting of PDD (for two projects put together)	12/07/2008
7. Appointment of alternate CDM consultant	13/01/2010
8. Termination of BVCI as DOE	04/05/2010
9. Termination of Cantor CO2 as CDM consultant	11/05/2010
10. Appointment of Ernest & Young as CDM consultant	13/01/2010
11. Appointment of TUV Nord as DOE	04/08/2010
12. Revised HCA	23/09/2010
13. Webhosting of PDD for GSC (separately)	25/09/2010

To a CL sought (CL B.5) on the reasons for the termination of BVCI as DOE, project developer stated that originally 19.5 MW Ossiya and 12 MW Sadiya projects were combined as one project and BVCI was contracted for the validation. HCA/HCA/ was also obtained for combined project of 31.5 MW. Later this project was split into two

different projects, as components of this project was planned to get commissioned at different time intervals (12 MW Sadiya project activity of GFL got commissioned on 30/03/2008 (6 WTG) and 31/03/2008 (2 WTG), whereas this 19.5 MW Ossiya project by GFL got commissioned on 26/09/2009), and in order to simplify the validation process, monitoring plan, and reduce the time required to avail CDM benefits to avoid losing out on the CDM benefits, PP decided to split the earlier project into these two separate CDM projects of 19.5 MW and 12 MW capacities. Therefore, the GFL 31.5 MW PDD was withdrawn and the contract with BVCI was terminated. Subsequently, TUV Nord was appointed as DOE for the split projects and HCA was also obtained separately for both the projects. Project developer has submitted the appointment and termination letters of BVCI, HCA for combined and separated projects as evidence. As evident from the chronology of events given above, the gap between any two CDM activities is less than 2 years.

Based on the documents submitted and discussions held, Validation Team is convinced that

a) PP was aware of the CDM benefits prior to the start date of the project activity;
b) project activity would not have taken place without CDM benefits;
c) benefits of the CDM were a decisive factor in the decision to proceed with the project;
d) continuing and real action were/are being taken to secure CDM status for the project in parallel with its implementation;

In the light of the above and the documentary evidence submitted, Validation Team concludes that there was a prior consideration of CDM and the CDM benefits were considered necessary in the decision to undertake the project as a CDM project activity. Therefore, the project conforms to paragraphs 102 (a) and (b) of VVM [ver.1.2] read with paragraphs 6 (a) & (b) and 8 of Annex 13, EB 62

Application of methodology / methodological tools

PP has applied approved methodology ACM 0002 (Ver.13.0.0) and demonstrated additionality based on Additionality Tool (Ver 06). The methodology and tool applied are, therefore, correct and appropriate

Alternatives

As methodology ACM 0002 prescribes the baseline, as per paragraph 105 of VVM (ver 1.2), no further alternatives is required for the project activity.

Investment analysis

Since the alternative to the project activity is the supply of electricity from a grid, project developer has adopted benchmark analysis in conformity with guidance 19 of Annex 5, EB 62. As the project is funded by a mix of debt and equity, project developer has chosen project IRR as the financial indicators for additionality demonstration. Project IRR is one of the financial indicators recommended by Tool for additionality demonstration. Therefore, the investment analysis and the financial indicator are considered appropriate for the project type and decision making context.

In accordance with guidance 12 of Annex 5, EB 62, project developer has chosen Weighted Average Cost of Capital as benchmark. Return on equity has been computed based on the methodology recommended vide Appendix "Default values for the expected return on equity" to Annex 5, EB 62 and the PLR has been chosen as the cost of debt. RERC recommended debt equity ratio of 70:30 has been considered as weights. Based on the above the benchmark works out to 12.44%. PDD explains in details the sources of data and the methodology adopted. Validation team checked the data and found that the data used are from reliable and credible sources, methodology adopted is correct and the calculations are in order. The benchmark chosen is suitable for the type of financial indicator selected, and is in conformity with the Additionality Tool and guidance 112 (a) of VVM (1.2).
The project proponent has also demonstrated that the expected return from the project activity, i.e., project IRR (6.91%) is lower than determined benchmark (12.44%). Considering the fact that the company has been earning return in excess of the benchmark in the past[12] and that the financial indicator, with CDM benefits, breaches the benchmark when the actual project and O&M cost is taken into consideration, validation team is convinced that no investment would have taken place at a return less than the benchmark. Therefore the benchmark conforms to paragraph 112 (a), (b) and (c) of the VVM (1.2).

Financial indicator calculation is based on the offer letter, RERC Tariff Order and PLF assessment report, which were all available at the time of decision making and hence conforms to guidance 6 of Annex 5, EB 62. The project remains additional even if the cost (project cost and O&M cost) is based on the purchase orders issued (IRR works out to 8.71%)[13]. Copies of offer letter, purchase orders, insurance premium receipt and wind assessment study have been submitted to DOE. Validation team checked the values with the documents furnished by PP and also those publicly available. The input parameters used, basis thereof and appropriateness of the input parameters used are given in Annex 3. CARs/CLs have been raised on non-conformities and errors and they have been duly corrected. After closure of all CARs/CLs, validation team arrived at the conclusion that the assumptions and computations in the IRR spreadsheet are in conformity with guidance 6 of Annex 5, EB 62 read with paragraphs 95 and 111 of VVM.

The financial indicator – project IRR works out to 6.91%, which is lower than the benchmark of 12.44%. Select input parameters, viz., generation, tariff, O&M cost and project cost have been subjected to appropriate variation. Since the actual project cost is 12% lower than the cost as per offer letter, project cost has been subjected to -10% and +10% variation; since the applicable tariff for the project is Rs.4.28/kWh which is 23% higher than the tariff considered, tariff has been subjected to +10% and -10% variation; the O&M cost as per O&M agreement signed is lower than the O&M cost assumed in financial indicator calculation, O&M cost has been subjected to

[12] As per the Annual Report 2007-08, the company earned a return of 32% in 2007-08, 34% in 2006-07, and 19.5% in 2005-06on net worth, which is much higher than the benchmark

[13] Worksheet based on the cost as per purchase order is also enclosed

+10% and -10% variation. Though the PLF achieved is much less than the PLF reckoned in financial indicator calculation, as a conservative measure, energy generation has been subjected to ± 10% in conformity with guidance 20 and 21 of Annex 5, EB 62. The results of sensitivity analysis are given below

	-10%	Baseline	+10%
Energy generation	5.43%	6.91%	8.30%
Tariff	5.49%	6.91%	8.25%
O&M	7.22%	6.91%	6.58%
Project Cost	9.13%	6.91%	5.15%

The analysis and the results reveal that the financial indicator does not equal the benchmark even when the critical parameters are subjected to reasonable variation. Further analysis reveals that for the financial indicator to equal the benchmark, when

PLF goes up by	37.8%
Tariff goes up by	39.1%
O&M cost goes down by	185%
Project cost goes down by	21.1%

An increased in the PLF by 37.8% (i.e. PLF ~ 29.26 %) will lead to IRR crossing the benchmark. RERC, after exhaustive study, has recommended PLF of only 20%; the actual PLF achieved by the windmills since COD till June 2011 was less than 20%. Therefore, the possibility of achieving PLF of 29.26% for 20 years is hypothetical. The completed cost of the project (including IDC) is only 7% less than the actual project cost. Therefore, any further reduction in the project cost is not realistic. O&M cost is not at all critical, as even a 100% reduction in O&M cost does not render the project non-additional. Though tariff has been subjected to sensitivity analysis, it is hypothetical, because the applicable tariff for the project is fixed for 20 years and power purchase agreement has already been signed by PP. Validation team observed that the project has been commissioned already and actual project cost comes out to be 6.91% less than the project cost considered in the investment analysis, therefore any further reduction is unrealistic, and project cost can not go down by 21.1%. Therefore the project is additional and will continue to remain additional.

In sum the validation team concluded that the project activity complies with all relevant additionality requirements and deemed the investment barrier to be

significant in order to prevent the project activity from being implemented without additional revenues from CERs.

Barrier analysis

Not applicable.

Common practice analysis

Project activity is not a common practice which can be evident from the following arguments:

Since it is a large scale project, as per paragraph 119 of VVM (01.2), common practice analysis is required to be carried out as a credibility check of the other available evidence used by the project participants to demonstrate additionality.

Section B.5 of the PDD includes the stepwise approach for carrying out the common practice analysis for the project activity. Results of common practice analyzed by validation team are mentioned below:

Step-1: Applicable output range as per the guidelines is correctly considered as 9.75 MW to 29.25 MW considering 19.5 MW capacity of the project activity.

Step-2:

a. Entire Host country is considered as applicable geographical area which is appropriate.

b. PP has selected same measure as the proposed activity as renewable energy projects falling under para 2(b) of the guidelines.

c. As project activity is a wind projects only wind projects are considered.

d. All wind projects considered are correctly taken as providing similar goods and services.

e. Applicable output range of the capacity is considered as 9.75 MW to 29.25 MW as per step-1

f. The projects commissioned before 04/01/2008 (start date for the project activity) have been considered under this analysis

Accordingly PP has correctly identified total114 numbers of projects under step-2.

Step-3: As per step 3, out of 114 projects (both CDM and non CDM), 23 projects are non cdm projects. Hence N all is identified as 23 projects.

Step-4 : Out of 23 projects following criteria are identified to assess the N Diff.

a. As the energy source/fuel is same as per step 2 (C), no project is identified under this criteria..

b. This is not applicable as project activity is a wind project

c. Under size of installation as project activity is a large scale, projects between 9.75 MW to 15 MW are identified under this criterion.

d. Based on investment climate, considering the fact that as a part of legal regulations and policy requirement under host country regarding electricity act came in force in 2003. Major reforms were initiated in power sector in India in the year 2003 when Electricity Act 2003/MOP/, came into force. Hence projects commissioned prior to 2003 are considered as different projects.

e. Under nature of investment no project is identified.

So we can conclude that, for the purpose of common practice analysis, project developer has chosen all power generating projects in operation as on the start date of the project with a capacity ranging from 9.75 MW to 29.25 MW (installed capacity of the project being 19.5 MW) in the host country India (applicable geographical region), commissioned before 04/01/2008 (start date for the project activity) have been considered under this analysis. There were in all 23 wind projects (N_{All}) engaged in power generation, excluding CDM projects, in applicable cap range; of them, projects using 'different technologies' (N_{diff}) were 22. PP has considered small scale wind power projects (with capacity 15MW or less) and wind power projects commissioned prior to the Electricity Act 2003 as different from the project activity. This complies with definition of different technologies given in para 4 (c) and 4 (d) of EB 69, annex 8, As size of installation (power capacity) for small scale category is different and wind power projects commissioned prior to the Electricity Act 2003, are implemented under a different investment climate and therefore considered different from the project activity. Therefore, Factor F = 1- (22/23) = 0.043. Since F is less than 0.2 and N_{All} - N_{diff} = 1, it is concluded that the project activity is not a common practice in the country as per EB 69 Annex 8. The details of the projects, the source of data and the calculations are given in the PDD and separate spreadsheet.

Summary

Additionality of the project activity demonstrated conforms to the methodology and methodological tools; input parameters are evidenced by documents and the calculation has been presented transparently. Therefore, it is concluded that the project activity is additional.

5.3.1 Monitoring Methodology

The project complies the monitoring methodology ACM0002 Version 13.0.0., for grid-connected electricity generation from renewable sources.

5.3.2 Monitoring Plan

This methodology stipulates that monitoring shall consist of metering the electricity supplied by the project activity to the grid (ex-post) by the renewable technology.

The power generated by GFL WTGs is fed into fed into the 33 kV Feeder line and subsequently to 33 kV/220 kV Rajasthan Rajya Vidhyut Prasaran Nigam Ltd. (RRVPNL) substation. The WTGs from other project activities are also fed into RRVPNL substation. The joint meter reading is taken at the 33 kV/220 kV RRVPNL substation, which has shared Main meter and check meter. Each WTG has WTG controller, which shows readings of the electricity metered. On the basis of respective WTG controller readings, the metered net electricity is apportioned among the various project activities. Suzlon issue the credit notes on the basis of this apportioning done by Suzlon to the respective project proponents. Credit notes provide the information regarding net electricity exported to grid, total electricity exported to grid, total electricity imported from grid.

RRVPNL issues the JMR certificates to all the WTGs connected to the respective substation.

Data and parameters monitored are Net electricity supplied to grid ($EG_{facility,y}$), Total quantity of Electricity exported to grid by all WEGs connected to feeder ($EG_{y,\ Export}$), Total quantity of Electricity imported from grid by all WEGs connected to feeder ($EG_{y,\ Import}$), Total electricity fed into feeder line by all WTGs connected to the feeder ($EG_{y,\ WEG,}$), Total electricity fed into feeder line by all WTGs of proposed project activity ($EG_{y,\ WEG,\ PA}$).

Calibration, periodical testing and maintenance procedures of monitoring equipment are clearly mentioned in the section B.7.2 as per QA/QC procedure of PDD /PDD2/.

The OM and BM are calculated as fixed for the whole crediting based on ex-ante monitoring published by CEA /cea/. Hence data needed to recalculate OM and BM does not apply. According to the monitoring plan of the PDD this requirement is fulfilled.

All the monitored data will be archived electronically for a period of 2 years after the crediting period.

5.3.3 Project Management Planning

GFL has formed a structured project management team to ensure proper operation and continuous monitoring of proposed project activity. GFL has also entered into a comprehensive Operation and Maintenance agreement with the Suzlon Energy Limited which is also the manufacturer of WTGs. All the personnel are qualified and trained for the type of work. Moreover Suzlon is certified to quality management system /ISO/. From whole the assessment during site visit and desk review by the

DOE, the project management planning is found to be adequate and appropriate for type of project monitoring.

5.3.4 Crediting Period

The choice of the crediting period (renewable vs. non-renewable) unambiguously given in entire PDD.

The intended crediting period of the project is 01-04-2013 to 31-03-2020 (which can be renewed twice).

The starting date of the crediting period is 01-04-2013.

5.3.5 Environmental Impacts

Social & environmental impacts of the project have been sufficiently addressed. No adverse environmental impacts as well as trans-boundary impacts have been envisaged from this project activity. Environmental Impact Assessment (EIA) is not required for this type of project activity as per the rules and regulations of host country (India)[14].

5.3.6 Comments by Local Stakeholders

Stakeholders have been directly asked to comment on the project through an open meeting among local stakeholders, project participant (GFL); GFL displayed a notice to representatives of various stakeholder groups inviting representatives of various stakeholder groups with a brief on the project informing them of the proposed meeting at 12.30 PM on 9th March 2008 at Village Begadia, Ossiya, District Jodhpur requesting all to attend meeting or depute representatives. This notice was displayed at the gram panchayat office and posted at public places of Village from 11/02/2008 to 09/03/2008.

No adverse comments were received and this is addressed in the PDD.

A summary of the comments received during the public consultation are included in PDD. All comments are positive in nature.

[14] http://envfor.nic.in/legis/eia/so1533.pdf

6 VALIDATION OPINION

Gujarat Fluorochemicals Limited (GFL) has commissioned the TÜV NORD JI/CDM Certification Program (CP) to validate the project: "19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL)" with regard to the relevant requirements of the UNFCCC for CDM project activities, as well as criteria for consistent project operations, monitoring and reporting. UNFCCC criteria include article 12 of the Kyoto Protocol, the modalities and procedures for CDM (Marrakech Accords) and the relevant decisions by COP/MOP and CDM Executive Board

In the course of the validation 18 Corrective Action Requests (CARs) and 11 Clarification Requests (CLs) were raised and successfully closed.

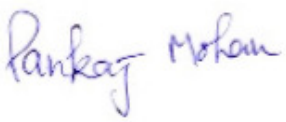
The review of the project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and review of comments by parties, stakeholders and NGOs have provided TÜV NORD JI/CDM CP with sufficient evidence to validate the fulfillment of the stated criteria.

In detail the conclusions can be summarized as follows:

- The project is in line with all relevant host country criteria (India) and all relevant UNFCCC requirements for CDM. Project activity approval have been obtained from DNA of India vide the Letter of Approval (HCA) ref. no. 4/7/2008-CCC, dated on 23/09/2010.
- The project additionality is sufficiently justified in the PDD.
- The monitoring plan is transparent and adequate.
- The calculation of the project emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 234,185 tCO2e are most likely to be achieved within the (1st renewable) crediting period.

The conclusions of this report show, that the project, as it was described in the project documentation, is in line with all criteria applicable for the validation.

Delhi, 2013-01-30



Pankaj Mohan

TÜV NORD JI/CDM CP

Validation Team Leader

Essen, 2013-01-30

Stefan Winter

TÜV NORD JI/CDM CP

Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
/**ADD1**/	1. Proposal submitted for board meeting dated 2007/10/18 2. Offer letter for Investment in 42 MW Wind Power Project dt. 2007/09/20. 3. Equipment Supply Agreement dt. 2008/01/04 4. Erection, Installation and Commissioning Agreement dt. 2008/01/04 5. Agreement for Civil Works and Site Development dt. 2008/01/04 6. http://taxclubindia.com/CHARTS/21%20USEFUL%20CHARTS%2012-13.pdf
/**ADD2**/	1. Annual Report of GFL for the years 2007-08 and 2008-09 2. Letter from Suzlon Energy dt. Nil on the life time of the windmill 3. Sanction letter dated 2008/04/04 from Indian Overseas Bank 4. Loan application dated 2008/02/12 submitted by the company to Indian Overseas Bank 5. Declaration from Indian Overseas Bank dated 2008/06/21. 6. Supply agreement of PP with technology supplier (for UN Ref No. 1615) dated 04/01/2007"
/**CC**/	Commissioning Certificates dated 2009/10/15 for all WTGs.
/**CD**/	Proof of all the events described in chronology given in PDD except listed in this table: 1. Appointment of Cantor Co2 as consultant dated 2008/03/27 2. Appointment of BVCI as DOE – letter dated 2008/04/26 3. Termination of contract with Cantor CO2 dated 2010/05/11 4. Termination of contract with BVCI – letter dated 2010/05/04 5. Appointment of E&Y as CDM consultant dated 2010/01/13 6. Appointment of TUV Nord as DOE – dated 2010/08/04
/**CON**/	The signed contract between TUV NORD Cert GmbH and Gujarat Fluorochemicals Limited for carrying out validation of the CDM project activity dated 2010-08-04.
/**HCA**/	• Initial Host Country Approval dated 2008/06/25 • Revised Host Country Approval dated 2010/09/23

Reference	Document
/**INS**/	Insurance premium receipt dated 2009/11/03 from Oriental Insurance Co. Ltd.
/**IRR1**/	Internal Return Rate Calculation Sheet and benchmark sheet corresponding to /PDD1/
/**IRR2**/	Internal Return Rate Calculation Sheet and benchmark sheet corresponding to /PDD2/
/**LSC**/	Proof of local stakeholder consultation : - Invitation dated 2008/02/11 for the LSH meeting - List of participants who attended the LSH meeting - Minutes of the LSH meeting dated 2008/03/09
/**MD**/	Board resolution on serious consideration of CDM benefits dated 22/10/2007
/**O& M**/	1. Agreements for Maintenance (with Parts and Consumables) dated 2008/01/04 2. Operation and Management Agreement for services dated 2008/01/04
/**PDD1**/	Project Design Document entitled “19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL) (ver.01) dated 2010/09/13, web hosted from <2010/09/25> to <2010/10/23>.
/**PDD1.1**/	Project Design Document entitled “19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL) (ver.2) dated 2011/04/18.
/**PDD1.2**/	Project Design Document entitled “19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL) (ver. 03) dated 2011/08/04.
/**PDD1.3**/	Project Design Document entitled “19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL) (ver. 04) dated 2012/07/10.
/**PDD1.4**/	Project Design Document entitled “19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL) (ver. 05) dated 2012/08/01.
/**PDD2**/	Project Design Document entitled “19.5 MW wind power project in Ossiya, Rajasthan by Gujarat Fluorochemicals Limited (GFL) (ver. 06) dated 2012/12/13.
/**PLF**/	Wind Resource Assessment of of Proposed 19.5 MW Wind Power Project at Osiya, District Jodhpur, Rajasthan by Power & Energy Consultants dated

Reference	Document
	2007/10/10.
/**PPA**/	Power Purchase Agreements dated 2009/09/22
/**SD**/	Proof of start date - Equipment Supply Agreement dt. 2008/01/04 signed with Suzlon Energy Ltd.
/**XLS1**/	Excel sheet CER calculation corresponding to /PDD 1/.
/**XLS2**/	Excel sheet CER calculation corresponding to /PDD2/.

Table 7-2: Background investigation and assessment documents

Reference	Document
/**ACM2**/	ACM 0002 - Consolidated baseline methodology for grid-connected electricity generation from renewable sources (Ver 13.0.0)
/**CDM**/	• Tool for the demonstration and assessment of additionality – Ver 06.1.0 (Annex 20, EB 69) • Guidance on the Assessment of Investment Analysis – Ver.05 (Annex 5, EB 62) • Guidelines on the demonstration and assessment of prior consideration of the CDM –Ver 03 (Annex 13, EB 62) • Guidelines for the reporting and validation of plant load factors- Ver. 01 (Annex 11, EB 48) • Glossary of CDM terms version 07.0.
/**CPM**/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/**EIA**/	EIA notification by the MoEF, India dated 14 September 2006 (http://envfor.nic.in/legis/eia/so1533.pdf)
/**GCP**/	UNFCCC: Guidelines for completing CDM-PDD and CDM-NM
/**IPCC-GP**/	IPCC Good Practice Guidance & Uncertainty Management in National Greenhouse Gas Inventories, 2000
/**IPPC-RM**/	Revised 2006 IPCC Guidelines for National Greenhouse Gas Inventories: Reference Manual

Reference	Document
/**KP**/	Kyoto Protocol (1997)
/**MA**/	Decision 3/CMP. 1 (Marrakesh – Accords & Annex to decision (17/CP.7))
/**TE**/	Tool to calculate emission factor for an electricity system.
/**VVM**/	Validation and Verification Manual (Version 01.2, Annex 1, EB 55)

Table 7-3: Websites used

Reference	Link	Organisation
/act/	http://www.incometaxindia.gov.in/ http://www.mca.gov.in/Ministry/pdf/Companies_Act_1956_13jun2011.pdf http://indiabudget.nic.in/ub2007-08/bill.htm	Income Tax Act, Income Tax Rules 7.1.1 Companies Act Finance Act 2007
/cea/	www.cea.nic.in	Central Electricity Authority
/cwet/	www.cwet.tn.nic.in	Centre for Wind Energy Technology
/moef/	www.moef.nic.in	Ministry of Environment and Forest
/plr/	http://rbidocs.rbi.org.in/rdocs/Wss/PDFs/81004.pdf	PLR published by Reserve Bank of India
/rbi/	www.rbi.org.in	Reserve Bank of India
/rerc/	http://www.rerc.rajasthan.gov.in/	Rajasthan Electricity Regulatory Corporation
/unfccc/	http://cdm.unfccc.int	UNFCCC
/wpi/	www.windpowerindia.com	Wind Power India

Table 7-4: List of interviewed persons

Reference	Mol[1]		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms.	Shashikant Verma	Joint General Manager, GFL
/IM01/	V	☒ Mr. ☐ Ms.	Shyam S. Jangid	Engineer S/I,Suzlon
/IM01/	V	☒ Mr. ☐ Ms.	Nafees Khan	Engineer S/I, Suzlon
/IM01/	V	☒ Mr. ☐ Ms.	Prem Prakash	Admin. ,Suzlon

Reference	MoI[1]		Name	Organisation / Function
/**IM01**/	V	☒ Mr. ☐ Ms.	Swadia Shekhawat	Assistant Manager, Suzlon
/**IM02**/	V	☒ Mr. ☐ Ms.	Atin Prakash	Senior consultant, E&Y
/**IM03**/	V	☒ Mr. ☐ Ms.	Mahipal Singh	Villager
/**IM03**/	V	☒ Mr. ☐ Ms.	Bhiaroo Singh	Villager
/**IM03**/	V	☒ Mr. ☐ Ms.	Machiram	Villager
/**IM03**/	V	☒ Mr. ☐ Ms.	Tari Singh	Villager

[1)] Means of Interview: (**T**elephone, **E**-Mail, **V**isit)

ANNEX

A1: Validation Protocol

A2: Assessment of Baseline Identification

A3: Assessment of Financial Parameters

A4: Assessment of Barrier analysis

A5: Outcome of the GSCP

A6: Appointment certificates of the team members

ANNEX 1: VALIDATION PROTOCOL

Table A-1: Requirements Checklist

Checklist Item (incl. guidance for the validation team)	**Validation Team Comments** (justification and substantiation of information, data and evidences)	**Ref.**	**Draft Concl.**	**Final Concl.**
A. General Description of Project Activity				
A.1. Approval *The written approval of the parties involved is a mandatory requirement*				
A.1.1. Has the project provided written approvals of all parties involved? (EB 55 Annex 1, § 44) *Indicate whether a letter of approval has been received, with a clear reference to the supporting documentation.* *Indicate whether this letter was provided to the DOE by the project participants or directly by the DNA*	Description: Yes, the project has provided the written approval from the host party i.e India. India is the only party involved in the proposed project activity. Letter of approval vide ref. no. 4/7/2008-CCC dated 23 September 2010 has been received by the project participant from Indian DNA and the copy of the letter is provided to the DOE by the project participant. Justification of evidences: The submitted copy of the HCA has been thoroughly assessed by the validation team and found to be authentic. This was also crosschecked with original copy during site visit. Conclusion: The approval from host party India has been obtained. However the date of HCA mentioned on page 14 of PDD is not consistent with what mentioned in HCA. Hence, CAR A1 is raised.	/PDD1/ /HCA/	~~CAR A1~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A.1.2. Are the approvals issued from orgainsations listed as DNAs on the UNFCCC CDM website? (EB 55 Annex 1, §§ 44, 47, 48, 49 (b), 49 (c), 53) *Indicate the means of validation employed to assess the authenticity, i.e. in case of doubt whether LoA has been verified with the DNA. Further describe which entity submitted the LoA for validation.*	Description: Yes, the host country approval is issued from Ministry of Environment and Forest, India which is among the listed organisations as DNAs on the UNFCCC CDM website. DOE has done the web search to assess the authenticity of DNA. Justification of evidences: Same has been cross checked with the MOEF and UNFCCC website. Conclusion: The letter of approval obtained from the Indian DNA which satisfies the requirement of the VVM.	/HCA/ /unfccc/ /moef/	OK	OK
A.1.3. Do the written approvals confirm that the corresponding party is a Party to the Kyoto Protocol? (EB 55 Annex 1, § 45(a))	Description: The HCA states that Government of India has ratified the Kyoto protocol in August 2002. The same has been corroborated from UNFCCC website as well. Justification of evidences: Copy of the HCA along with original has been checked by the validation team. Conclusion: The written approval confirms that the corresponding party i.e. India is a party to the Kyoto Protocol	/HCA/ /unfccc/	OK	OK
A.1.4. Do the written approvals confirm that the participation is voluntary? (EB 55 Annex 1, § 45(b))	Description: Yes the written approval confirms that the participation is voluntary in the proposed project activity.	/HCA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	Justification of evidences: Copy of the HCA was matched with original by the validation team and has been found consistent. Conclusion: Project activity satisfies the requirement § 45(b) of the VVM.			
A.1.5. Does the written approval from the host country confirm7 that the project contributes to the sustainable development in the country? (EB 55 Annex 1, § 45(c))	Description: Yes the host country approval confirms that the project contributes to the sustainable development in the country. Justification of evidences: Same has been checked with the copy of HCA. Conclusion: Project activity satisfies the requirement § 45(c) of the VVM.	/HCA/	OK	OK
A.1.6. Do the written approvals refer to the precise project title in the PDD submitted for registration or an additional specification of the project activity, e.g. PDD version number? (EB 55 Annex 1, §§ 45(d), 50)	Description: Yes the HCA refers the precise project title of the PDD. Justification of evidences: Same has been cross checked with the copy of HCA and PDD. Conclusion: Project activity satisfies the requirement § 45(d) and § 50 of the VVM.	/HCA/ /PDD1/	OK	OK
A.1.7. Are the written approvals unconditional with regard to A.1.3 to A.1.6? (EB 55 Annex 1, § 46)	Description: Yes the HCA has been assessed and found to be unconditional with regard to A.1.3 to A.1.6. Justification of evidences: Same has been cross checked with the	/HCA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	copy of HCA and verified with original HCA. Conclusion: Project activity satisfies the requirement of the para 46 of VVM.			
A.1.8. Is the information regarding the project participants listed in section A3 and in Annex 1 of the PDD internally consistent to each other? (EB 55 Annex 1, § 51)	Description: Yes the information written in the PDD is consistent in section A3 and in Annex 1. Justification of evidences: Same has been cross checked with the PDD and HCA. Conclusion: Project activity satisfy the requirements § 51 of the VVM	/HCA/ /PDD1/	OK	OK
A.1.9. Are all project participants listed in the PDD approved at least by one Party involved? (EB 55 Annex 1, § 51) *Indicate whether the participation of the project participant(s) has been approved by a Party to the Kyoto Protocol.* *Describe the means of validation employed to draw this conclusion.*	Description: Yes, project participant Gujarat Fluorochemicals Limited (GFL) has been approved by host party India. India is a party to the Kyoto Protocol as confirmed by host country approval. Moreover only one PP is involved in the proposed project activity. Justification of evidences: This has been evidenced from the PDD and the HCA dated 2010-09-23. Conclusion: The project participant listed in the PDD has been found to be approved by the National CDM authority MOEF, Government of India, one of the parties to the Kyoto protocol.	/HCA/ /PDD1/	OK	OK
A.1.10. Are any other project participants approved but	Description: There is only one project participant involved and same is approved by the host country.	/HCA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
not listed in the PDD? (EB 55 Annex 1, § 52)	Justification of evidences: The host country approval lists the name(s) of all the project participant(s) involved in a CDM project. Conclusion: There is only one PP involved in the proposed project activity and same is approved by the DNA and listed in the PDD.	/PDD1/		
A.1.11. Does the DoE have a direct contractual relationship with the PP? (EB 55 Annex 1, § 51; EB 50 Annex 48, §§ 7–9) *Check whether the PPs listed in the published PDD are still listed in the PDD going to be submitted to request for registration.*	Description: Yes the DOE has the direct contractual relationship with the PP. Justification of evidences: PP signed the contract with DOE on 2010-08-04. Conclusion: Project activity complies the requirement. of the VVM.and EB 50 annex 48.	/PDD1/ /CON/	OK	OK
A.2. Contribution to Sustainable Development *The project's contribution to sustainable development is assessed.*				
A.2.1. Has the host country confirmed that the project assists it in achieving sustainable development? (EB 55 Annex 1, §§ 125–127) *Contains a statement confirming whether the letter of approval by the DNA of the host party confirmed the contribution of the project to the sustainable development of the Host Party.*	Description: The host country approval confirms that proposed project activity contributes to the sustainable development of India. Justification of evidences: The original letter of HCA has been verified by the DOE, which mentions that project contributes to sustainable development in India. Conclusion: The proposed project activity contributes to the sustainable development of the host country. Project activity complies the requirement §§ 125–127 of the VVM/VVM/.	/HCA/	OK	OK
A.2.2. Will the project create other environmental or	Description: Yes, the project creates other environmental or social benefits than GHG emission reductions as described below:	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
social benefits than GHG emission reductions? (EB 55 Annex 1, §§ 125–127) *Describe the other positive aspects not related to GHG emission reduction on the environment.*	• The project activity is creating the employment opportunity in the region. • Project activity is developing local infrastructure. Justification of evidences: The above described benefits were checked during site visit by interviewing stakeholders/IM01//IM02//IM03/. Conclusion: The project activity contributes to the environmental or social benefits. Proposed Project activity complies the requirement of the VVM para 125-127./VVM/.	/IM03/		
A.3. PDD editorial aspects *The PDD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.*				
A.3.1. Has the latest version of the PDD form been applied? (EB 55 Annex 1, § 55)	Description: Yes the PDD has been filled in the latest PDD form. PDD form latest version has been cross checked with UNFCCC. Justification of evidences: The PDD form has been cross checked with UNFCCC website. Conclusion: Project activity complies the requirement. of the VVM para 55./VVM/.	/PDD1/ /unfccc/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A.3.2. Has the PDD been duly filled in accordance with the latest guidance(s)? (EB 55 Annex 1, §§ 56–57)	Description: Yes, the PDD has been filled in accordance with the latest PDD guidelines. Justification of Evidences: The webhosted PDD is cross checked with the latest PDD filling guideline version 05. Conclusion: PDD is found to be filled in accordance with the latest PDD guideline.	/PDD1/ /unfccc/	OK	OK
A.4. Technology to be employed *Validation of project technology focuses on the project engineering, choice of technology and competence/ maintenance needs. The DOE should ensure that environmentally safe and sound technology and know-how is used.*				
A.4.1. Does the PDD contain a clear, accurate and complete project description? (EB 55 Annex 1, §§ 58–59, 64) *The PDD shall contain a clear description of the project activity which provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation.* *Pl. consider esp.* chapters *A.2, A.4.2 and A.4.3 (in case of LSC PDD) for assessment.* *§64 (a) Describe the process undertaken to validate the accuracy and completeness of the project description.* *§64 (b) Contain the DOE's opinion on the accuracy and*	Description: Yes, the PDD contain a clear, accurate and complete project description. The project description provided in sections A.2, A.4.2 and A.4.3 were verified by the validation team during the site visit. As per PDD, the WTGs are manufactured locally in India. The WTG technology is sourced from Suzlon. Justification of Evidences: The submitted PDD is assessed against the CDM PDD Form ver.03, CDM PDD guidelines ver.07 and found to be accurate and complete. Further independent web research was carried out in order to confirm technical details of the WEGs. (http://www.suzlon.com/products/l2.aspx?l1=2&l2=8 accessed on 01/12/2010) Conclusion: Based on the on-site assessment and verification of	/PDD1/ /IM01/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
completeness of the project description.	documents and interviews the validation team confirms that the technical project description is clear, transparent, accurate and complete. The project complies with the EB 55 Annex1 §§ 58–59, 64/VVM/.			
A.4.2. Is this description in accordance with the real situation or (in case of greenfield projects) is it most likely that the project will be implemented acc to the project description?	Description: Yes the project is a green field project and description cited in the PDD is in accordance with the real situation. Justification of evidences: During the site visit it was found that the project description is in line as stated in PDD and the same has been confirmed while interviewing the personnel. Conclusion: As project was already implemented at the time of site visit, the project description in the PDD is confirmed as per the actual situation.	/PDD1/ /IM01/	OK	OK
A.4.3. In case the project involves alteration of the existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation? (EB 55 Annex 1, §§ 63–64) *Describe the steps taken to validate this issue.*	Description: There is no alteration of the existing installation as found during site visit as the project is a new project. Justification of evidences: Project activity is a new activity and involves no alteration; same has been confirmed during the site visit. Conclusion: The project complies with the EB 55 Annex1 §§ 63–64.	/PDD1/	OK	OK
A.4.4. Does the project design engineering reflect current good practices? *Consider the equipment specifications, literature (e.g. EU BREF papers) and professional experiences. Describe the process undertaken to assess the engineering.*	Description: The project activity entails the installation of 1.5 MW WTGs of reputed manufacturer Suzlon Energy Ltd. Equipment specifications were verified from suzlon website and the project design engineering found to be the good practices in the wind sector. Justification of evidences: The details provided in the PDD have been cross checked with the Suzlon website and VT has also	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	applied his professional experience. Conclusion: The project activity complies with requirement as project design engineering reflects current good practices.			
A.4.5. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country? *Describe the process undertaken to assess the state of the art technology.*	Description: PP is requested to justify how the technology used is 'state of the art' as mentioned in section A.2 of the webhosted PDD. Justification of evidences: Conclusion: CL A3 is raised.	/PDD1/	~~CL A3~~	OK
A.4.6. Does the project make provisions for meeting training and maintenance needs? *Describe the process undertaken to assess the maintenance and training needs.*	Description: As per the webhosted PDD GFL has undertaken an operation and maintenance agreement with the supplier of the wind turbines i.e. Suzlon Energy Limited. As per the webhosted PDD the training and maintenance needs would be fulfilled by Suzlon Energy Limited, but the submitted training certificates are from SAFEPRO. Pl. clarify. Justification of evidences: VT has checked the submitted training certificates which were issued by SAFEPRO. Conclusion: CL A4 is raised.	/PDD1/	~~CL A4~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
A.5. Small scale project activity *It is assessed whether the project qualifies as small-scale CDM project activity*				
A.5.1. Does the project qualify as a small scale CDM project activity as defined in decision 4 / CMP.1 annex II? (EB 55 Annex 1, §§ 135–136 (a))	Description: N.A. The project is large scale project activity. Justification of evidences: Conclusion:	/PDD1/	OK	OK
A.5.2. Does the project apply one of the approved small scale categories and any methodology and tool referred therein? (EB 55 Annex 1, § 136 (b)) *Check, if applicable the expiry dates of the applied methodology. Further, take into consideration the general guidance to the methodologies[15], which provide guidance on equipment capacity, equipment performance, sampling and other monitoring related issues.*	Description: Pl. refer to A.5.1. Justification of evidences: Conclusion:	/PDD1/	OK	OK
A.5.3. Is the small scale project activity not a debundled component of a larger project activity? (EB 55 Annex 1, § 136 (c))	Description: Pl. refer to A.5.1. Justification of evidences:	/PDD1/	OK	OK

[15] http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
Describe the steps taken to validate this issue. Pl refer to the Compendium of guidance on debundling (EB ~~36, Annex 27~~ 54, Annex 13).	Conclusion:			
A.5.4. Is an assessment of the environmental impacts of the proposed SSC CDM project activity required by the host Party? (EB 55 Annex 1, § 136 (d))	Description: Pl. refer to A.5.1. Justification of evidences: Conclusion:	/PDD1/	OK	OK
B. Project Baseline, Additionality and Monitoring Plan				
B.1. Application of the Methodology				
B.1.1. Does the project apply an approved and applicable CDM methodology and a valid version thereof? (EB 55 Annex 1, § 65) *Describe the steps taken to validate this issue.*	Description: The project activity applies the approved and valid ACM0002 Version 12 (EB 52) methodology. Justification of Evidences: The validation team searched the UNFCCC website and found the CDM methodology ACM0002 Version 12.0.0 (EB 52) is present there and the latest version of the methodology is 12 under sectoral scope 01. Conclusion: The project applies an approved and applicable CDM methodology and a valid version thereof. However, later on CAR A5 was raised.	/PDD1/ /ACM2/	~~CAR A5~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.1.2. Is the applied CDM methodology identical with the version available on the UNFCCC website? (EB 55 Annex 1, §§ 65, 70) *Describe the steps taken to validate this issue.*	Description: Yes the applied CDM methodology i.e. ACM0002 Version 12 (EB 52) is identical as available on the UNFCCC website. Justification of evidences: Same has been cross checked with UNFCCC website. Conclusion: Validation team confirms that the methodology used in the proposed project activity is exactly same as the methodology available on the UNFCCC website. However, later on CAR A5 was raised.	/PDD1/ /ACM2/ /unfccc/	~~CAR A5~~	OK
B.1.3. Are all applicability criteria in the methodology, the applied tools or any other methodology component referred to therein fulfilled? (EB 55 Annex 1, §§ 66(a)–(b), 68, 71, 76) *Describe for <u>each</u> applicability criterion listed in the selected approved methodology the steps taken to assess the information contained in the PDD.*	Description: Yes the project activity meets first applicability criteria of CDM methodology i.e. ACM0002 Version 12.0.0 (EB 52. Project activity has also applied the following methodological tools as prescribed in the methodology ACM0002 Version 12.0.0 : 1. Tool to calculate the emission factor for an electricity system (version 02), EB 50. 2. Tool for the demonstration and assessment of additionality version 5.2 **Applicability criteria - ACM0002 Version 12.0.0** / **Project activity measures** *The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an* / The project activity is a green field wind based renewable energy power plant. So, this applicability criterion is applicable and fulfilled.	/PDD1/ /unfccc/ /ACM2/	~~CAR A5~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)		Ref.	Draft Concl.	Final Concl.
	accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit				
	In the case of capacity additions, retrofits or replacements (except for wind, solar, wave or tidal power capacity addition projects which use Option 2: on page 10 to calculate the parameter $EG_{PJ,y}$): the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity	The project activity does not involve retrofits, replacements or capacity additions to an existing plant. Therefore, this criterion is not applicable.			
	In case of hydro power plants: ○ *The project activity is*	This criterion is not applicable, as the project activity is not a			

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)		Ref.	Draft Concl.	Final Concl.
	implemented in an existing reservoir, with no change in the volume of reservoir; or ○ *The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m^2; or* ○ *The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m^2.*	hydro power plant.			
	The methodology is not applicable to the following: • *Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil*	This is a wind based renewable generation project activity and does not involve switching from fossil fuels to renewable energy sources. Therefore these criteria are not applicable.			

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	fuels at the site; • *Biomass fired power plants;* • *Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m^2.*			
	In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	This criterion is not applicable, as the project activity does not involve retrofits, replacements or capacity additions to an existing plant.		
	Justification of evidences: Same has been cross checked with UNFCCC website. Conclusion: Project activity complies all the requirements of the applied methodology and tools referred therein.			

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	However, later on CAR A5 was raised.			
B.1.4. In case one or more applicability criteria have not been met, has the validation team requested clarification to, revision of or deviation from the methodology in accordance with the latest guidelines? (EB 55 Annex 1, §§ 72–75)	Description: All the applicability criteria are met by the proposed project activity. Pl. refer to B.1.3.	/PDD1/ /unfccc/ /ACM2/	OK	OK
B.1.5. Is the project in accordance with every other stipulation or requirement mentioned in all sections of the methodology and in guidances for approved methodologies provided by the CDM EB? (EB 55 Annex 1, § 69, 71) *Describe the steps taken to check whether the proposed project activity meets all the other possible stipulations and /or limitations mentioned in all sections of the approved methodology selected.*	Description: Yes, the project is in accordance to every other stipulation or requirement mentioned in all sections of the methodology. Justification of evidences: VT has assessed the project description in PDD against the methodological requirements and EB guidance. Same was also assessed during site visit. Conclusion: Project activity complies with the all the requirements of applied methodology.	/PDD1/ /IM01/ /ACM2/ /unfccc/	OK	OK
B.2. Project Boundaries *Project Boundaries are the limits and borders defining the GHG emission reduction project*				
B.2.1. Are the project's spatial boundaries (geographical) clearly defined? (EB 55 Annex 1, §§ 67(a), 78–80) *Provide information on how the validation of the*	Description: Yes, the project's spatial boundaries (geographical) are clearly defined. The project boundary includes WTGs connected to the substation of the regional grid. The project boundary also includes metering yard, feeder and substation.	/PDD1/ /ACM2/ /IM01/	~~CL B1~~	

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
geographical boundary has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.	Though Latitude and longitude of all the WTGs are clearly mentioned in the webhosted PDD, PP needs to substantiate the location of each and every WTG involved in the proposed project activity. Justification of evidences: Project boundary was checked during site visit and interviews/IM01//IM02/. Conclusion: CL B1 is raised.	/IM02/		
B.2.2. Are all sources and GHGs included in the project boundary as required in the applied methodology? (EB 55 Annex 1, §§ 67(a), 78–80) *Provide information on how the validation of the GHGs and sources has been performed either based on reviewed documented evidence or by describing what was observed/viewed during a site visit.*	Description: Yes all the sources of the GHGs included in the project boundary in accordance to the applied methodology. The only GHG considered in the project activity is CO_2. Justification of evidences: Same has been cross checked with the applied methodology and found meeting the requirements. Conclusion: All the sources and GHGs are included in the project boundary as required by the applied methodology and project meets the requirements of EB 55 annex1 §§ 67(a), 78–80/VVM/.	/PDD1/ /ACM2/	OK	OK
B.2.3. In case the methodology allows to choose whether a source and/or gas is to be included, is the choice sufficiently explained and justified? (EB 55 Annex 1, §§ 67(a), 78–80) *Confirm if the justification provided by the PPs is reasonable, based on assessment of supporting*	Description: Yes, section B.3 of PDD adequately explains and justifies the exclusion or inclusion of source or gas from/in the project boundary. The only GHG considered in the absence of the project activity is CO_2. Justification of evidence: Same has been cross checked with the applied methodology. Conclusion: Project activity complies the requirement of the applied methodology and requirements of EB 55 Annex 1, §§ 67(a), 78–	/PDD1/ /ACM2/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
documented evidence provided by the PPs or by onsite observations.	80/VVM/.			
B.3. Baseline Identification *The choice of the baseline scenario will be validated with focus on whether the baseline is a likely scenario, and whether the methodology to define the baseline scenario has been followed in a complete and transparent manner.*				
B.3.1. What possible baseline scenarios have been considered? (EB 55 Annex 1, §§ 67(b), 83) *Fill in all alternatives in table A-2.*	Description: The proposed project activity is the installations of a new grid connected renewable power plant i.e. wind electric generators. As per the methodology for this type of project activity the baseline scenario would be "electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid connected power plants and by the addition of new generation sources", as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system". PP has chosen the baseline scenario in accordance to the methodology and thus has not considered the possible baseline scenarios. Justification of evidences: Baseline scenario is chosen as per the prescription of the applied methodology. Conclusion: Baseline identified is appropriate and in accordance to the methodology.	/PDD1/ /ACM2/	OK	OK
B.3.2. Is the list of alternatives complete? (EB 55 Annex 1, §§ 67(b), 83) *Describe how it was validated that all alternatives are*	☒ All plausible alternative scenarios listed in the approved methodology have been considered. In the course of document review and site visit, it has been validated that no other alternatives which supply comparable outputs and / or	/PDD1/ /ACM2/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
plausible and no plausible alternative is excluded from the consideration	services are to be taken into consideration. Thus no plausible scenario has been omitted. ☐ The following alternative scenarios/options have been omitted. Corresponding CAR(s)/CL(s) has /have been issued Pl. also Refer to B.3.1			
B.3.3. What has been identified as the baseline scenario? (EB 55 Annex 1, §§ 81–82, 86) *Describe the chosen BL scenario, taking into consideration the technology that would be employed and / or the activities that would take place in the absence of the proposed CDM project activity.*	Description: The baseline scenario for the project activity is "Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system". Justification of evidences: This is in accordance to the applied methodology. Conclusion: The chosen baseline scenario is appropriate for the type of proposed project activity.	/PDD1/ /ACM2/	OK	OK
B.3.4. Has the baseline scenario been determined according to the methodology? (EB 55 Annex 1, §§ 82, 87(e)) *Describe how it is validated that the identification of the most plausible baseline scenario is carried out in accordance with the applied methodology and applied methodological tools. Please refer to table A-2.*	For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2. ☒ The determination has been carried out as per the procedure contained in the applied methodology. ☐ The following CARs / CLs have been identified with respect to the selection of the baseline scenario:	/PDD1/ /ACM2/	OK	OK
B.3.5. Has any plausible alternative scenario been excluded? (EB 55 Annex 1, § 83) *Describe how it is validated that no plausible alternative*	For details of the assessment regarding the evaluation of the baseline scenario pl. refer to table A-2. ☒ No plausible baseline scenario has been excluded. ☐ The following plausible baseline scenarios have been excluded though no adequate justification has been provided for elimination. The following CARs / CLs have been issued:	/PDD1/ /ACM2/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
scenario has been excluded.				
B.3.6. Is the identified baseline scenario reasonable and has the baseline scenario been determined using conservative assumptions where possible, including relevant references and sources? (EB 55 Annex 1, §§ 84–86(a)–(c)) *Describe whether the choice of the identified baseline scenario is reasonable by validating the key assumptions, calculations and rationales used in the PDD. Describe whether these are listed, relevant and conservatively interpreted in the PDD.*	☒ The baseline scenario is reasonable and has been determined using conservative assumptions where possible. Please refer to comments in table A-2 and sections B.3.2 to B.3.5 above. ☐ The following CARs / CLs have been issued because assumptions used in the baseline determination have been assessed to be not conservative	/PDD1/ /ACM2/	OK	OK
B.3.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations? (EB 55 Annex 1, §§ 85, 87(d)) *Describe whether the PP has shown that all relevant policies and circumstances have been identified and correctly considered in the PDD in accordance with the guidance by the Board. Pl. consider the guidance EB 22 annex 3 (regarding E+ and E- policies).*	Description: The VT has assessed all the relevant national and/or sectoral policies, macro-economic trends and political aspirations as prescribed by the annex 3 of EB 22 and thus concludes that the chosen baseline scenario is in accordance with all the relevant national and/or sectoral policies, macro-economic trends and political aspirations which are applicable as per the EB 22 annex 3. Moreover the chosen baseline scenario is in line with the applied methodology. Justification of evidences: VT has done the background research to take into account the relevant national and/or sectoral policies, macro-economic trends and political aspirations. Conclusion: The baseline scenario sufficiently takes into account relevant national and/or sectoral policies, macro-economic trends and political aspirations and thus project complies with the	/PDD1/ /ACM2/ /cea/ /moef/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	requirements.			
B.3.8. Is the baseline scenario determination compatible with the available data and are all literature and sources clearly referenced? (EB 55 Annex 1, § 87(a)–(c)) *Describe whether the documents and sources referred to in the PDD are correctly quoted and clearly referenced.*	Description: Baseline scenario determination is compatible with the available data and all literature and sources. Justification of evidences: Validation team checked the assumptions and data used in the PDD for identification of baseline scenario along with the references and sources and found appropriate. Conclusion: Project activity satisfies the requirement § 87(a)–(c) of the VVM[/VVM/]. The baseline scenario determination compatible with the available data and all literature and sources correctly referenced.	/PDD1/ /ACM2/	OK	OK
B.3.9. Does the PDD contain a *verifiable* description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity. (EB 55 Annex 1, § 86)	Description: Prior to the project activity the electricity was imported by the grid i.e. NEWNE grid. Thus it is clear that in the absence of proposed project activity electricity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources and since same scenario is taken as baseline for the proposed project activity, it is verified and appropriate for the type of project activity. A clear description of baseline scenario has been described in final PDD section B.4.Moreover Pl. refer to B.2.1.	/PDD1/ /ACM2/ /cea/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	Justification of evidences: The CEA data base and user guide are publically available documents and issued by government of India and thus considered authentic by the VT. Conclusion: PDD contains a verifiable description of the baseline scenario. PDD also refers to CEA data which clearly indicates that baseline chosen is appropriate.			
B.4. Additionality Determination *The assessment of additionality will be validated with focus on whether the project itself is not a likely baseline scenario.*				
B.4.1. Methodology				
B.4.1.1. Does the PDD describe how the project is additional and does the additionality justification follow the requirements of the applied methodology and/or methodological tools? (EB 55 Annex 1, §§ 67(d), 94–95) *Describe how it is validated that additionality justification is carried out in accordance with the applied methodology and/or applied methodological tools. Further focus your assessment on the reliability and credibility of data, rationales and assumptions, justifications and documentations provided by the PP.*	Description: PDD describes in section B.5 that proposed project would have not been implemented in the absence of CDM benefit. The description follows the guidance provided in tool for the demonstration and assessment of additionality referred by the applied methodology. Justification of evidences: PDD has been assessed against the requirements of methodology and tools referred therein. Conclusion: PDD describe how the project is additional and follow the requirements of the applied methodology and/or methodological tools.	/PDD1/ /ACM2/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.4.2. Consideration of CDM before project start				
B.4.2.1. Is the project starting date reported in accordance with the CDM glossary of terms? (EB 55 Annex 1, § 99, 104(a)) *Assess why the chosen starting date can be considered as the earliest date at which either the implementation or construction or real action of a project has begun or will begin.* *Check that no other activities related to the project that happened before the identified start date can be considered as start date. In this context please also take into consideration infrastructural expenses if they are relevant (in terms of costs and importance for the project implementation) in the specific context of the project activity. Appropriate evidence should be given.*	Description: The starting date for the proposed project activity is -04-01-2008 (the date of agreement with supplier has been taken as start date of the project activity). However PP is requested to substantiate the project start date. Justification of evidences: Same has been checked by VT during the site visit and interviews/IM01/. *Conclusion:* CAR B2 is raised.	/PDD1/ /SD/ /CDM/	~~CAR B2~~	OK
B.4.2.2. In case the project start date is on or after 2nd August 2008 has the PP informed the DNA and UNFCCC about the intension to seek CDM status? (EB 55 Annex 1, §§ 99–101) *Describe whether such a notification has been provided by the project participants within six months of the project activity start date; if NOT it shall be determined that the CDM was not seriously considered.*	Description: PDD describes that the project start date is 2008-01-04 which is earlier than 2nd August 2008. Also PI. refer to B.4.2.1 Justification of evidences: PI. refer to B.4.2.1 Conclusion: PI. refer to B.4.2.1.	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.4.2.3. In case the project start date is before commencing of validation and 2nd August 2008, was the incentive from the CDM seriously considered and are details given in the PDD? (EB 55 Annex 1, §§ 100, 102) *Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.*	Description: PDD describes that the project start date is 2008-01-04 which is which is before commencing of validation and 2nd August 2008, the details of serious CDM consideration are also given in the webhosted PDD. All the chronological events need to be substantiated as described in section B.5 of PDD. Documentary evidences for chronology are missing. Please clarify. Justification of evidences: CAR B3 is raised. Conclusion: CAR B3 is raised.	/PDD1/	~~CAR B3~~	OK
B.4.2.4. How and when was the decision to proceed with the project taken? *Describe the steps taken to validate the starting date.*	Description: Documentary evidence for the extracts of minutes of the meeting of board resolution passed by the board of directors, held on 2007-10-22 has not been provided. Please clarify. Justification of evidences: CL B4 is raised. Conclusion: CL B4 is raised.	/PDD1/ /MD/	~~CL B4~~	OK
B.4.2.5. Is the project start date consistent with the available evidences? (EB 55 Annex 1, § 102) *Describe the evidence assessed regarding the prior consideration of the CDM (if necessary). Describe whether the evidence to support such consideration is adequately and transparently described in the PDD.*	Description: The starting date for the proposed project activity is -04-01-2008 (the date of agreement with supplier has been taken as start date of the project activity). However PP has not substantiated the project start date. Please refer to B.4.2.1. Justification of evidences: CAR B2 is raised. Conclusion: CAR B2 is raised.	/PDD1/ /SD/ /CDM/	~~CAR B2~~	OK
B.4.2.6. Was the decision to proceed with the project taken by a person which has the	Description: Copy of extracts of minutes of the meeting of board resolution passed by the board of directors, dated 2007-10-22 not	/PDD1/ /MD/	~~CL B4~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
authority to do so? (EB 55 Annex 1, § 102(a) *Describe the steps taken to validate this issue.*	submitted. Please refer to B.4.2.4. CL B4 Justification of evidences: CL B4 is raised. Conclusion: CL B4 is raised.			
B.4.2.7. How was the CDM involved in the decision making process? (EB 55 Annex 1, § 102) *Describe why CDM was a decisive factor in the decision making process.*	Description: Board resolution of GFL for implementing the project dated 22nd of October 2007, checked during the site visit and VT has observed that the decision to set up wind power project considering CDM benefits was taken by Board of Directors. However CAR B3 is raised.	/PDD1/	~~CAR B3~~	OK
B.4.2.8. Do the evidences provided doubtlessly prove that continuous and real actions were taken in order to secure the CDM status? (EB 55 Annex 1, § 102; EB 62 Annex 13 § 7)	1. PDD reveals that DOE was appointed as early as April 2008 and HCA from DNA was also received in June 2008. However, the PDD was webhosted for GSC only on September 25, 2010. Clarify the reasons for the delay in web hosting the PDD for GSC. 2. In this context, it may be explained as to how the project participant committed funds to the project in advance of even web hosting the PDD for GSC, leave alone receiving a positive validation opinion, if the CDM benefits were considered imperative for the viability of the project. Please also refer to B.4.2.4	/PDD1/ /CD/	~~CL B5~~	OK
B.4.2.9. Is the gap of documented evidences to secure the CDM status less than 3 years and are the evidences relevant for	Chronological events were checked during the site visit and interviews/IM01//IM02/ as described in section B.5 of revised PDD, VT has noted from the chronology of events that the gap between any two CDM activities is less than 2 years.	/PDD1/ /CD/	~~CAR B3,~~ ~~CL B5~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
substantiating the action taken, credible, reliable and complete? (EB 62 Annex 13 § 8)	Please refer to B.4.2.4 and B.4.2.8. CAR B3 and CL B5 have been raised.			
B.4.2.10. Did implementation of the project ceased after its commencement and did implementation recommence after consideration of the CDM? (EB 62 Annex 5, § 7) *Describe the reasons for ceasing the project and explain why the incentive from CDM was necessary to recommence the implementation.*	Description: Implementation of the project did not cease after its commencement. Justification of evidences: Same is confirmed by the PP interview/IM01//IM02/ and chronology. Conclusion: It was observed that implementation did not recommence after consideration of CDM.	/PDD1/	OK	OK
B.4.2.11. Can the CDM involvement in the decision assessed as serious? (EB 55 Annex 1, § 104(b)–(c)) *Describe whether or not the project would have been undertaken without the incentive of the CDM.*	Clarify how the CDM revenues were considered essential to overcome the investment barrier to this project activity, in particular that the benchmark represents a rate below which the investment could not be made. Moreover PI. Refer to B.4.2.8. Justification of evidences: CL B6 is raised. Conclusion: CL B6 is raised. Moreover also pl. refers to B.4.2.8.	/PDD1/	~~CL B6~~	OK
B.4.3. Identification of alternatives Step 1 (in case of SSC projects pl. skip steps 1 and 2 if appropriate)				
B.4.3.1. Does the list of alternatives contain the status-quo situation, the project not undertaken as a CDM project as well as all other viable means of supplying the	Description: Since the applied methodology prescribes the baseline as power generation from grid for this type of proposed project activity, PP has not done the alternative analysis. Though it does not affect the additionality demonstration, PP has not mentioned	/PDD1/	~~CAR B7~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
outputs or sevices that are to be supplied by the proposed CDM project activity? (EB 55 Annex 1, §§ 105–107) *Describe the steps taken to validate this issue on the basis of your local and sectoral knowledge.*	and taken into consideration the status –quo situation in the list of alternatives. Justification of evidences: CAR B7 is raised. Conclusion: CAR B7 is raised.			
B.4.3.2. Have all realistic alternatives been identified to the project? (EB 55 Annex 1, §§ 105–107) *Describe whether the list of alternatives is credible and complete. Describe how it is validated that the alternatives are realistic.*	Description: The applied methodology ACM 0002 prescribes the baseline and therefore no discussion on the alternatives is necessary, however same is not reflected in the PDD. Pl. refer B.4.3.1 Justification of evidences: CAR B7 is raised. Conclusion: CAR B7 is raised.	/PDD1/	~~CAR B7~~	OK
B.4.3.3. Do all identified alternatives comply with enforced legislations? (EB 55 Annex 1, §§ 106(c)) *Describe the steps taken to validate this issue. Refer to the legislations.*	Description: The applied methodology ACM 0002 prescribes the baseline and therefore no discussion on the alternatives is necessary, however same is not reflected in the PDD. Pl. refer B.4.3.1 Justification of evidences: CAR B7 is raised. Conclusion: CAR B7 is raised.	/PDD1/	~~CAR B7~~	OK
B.4.4. Investment analysis Step 2 *In case the investment analysis as per step 2 is*				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
chosen to justify the additionality Annex 2 "Assessment of Financial Parameters" has to be used to provide additonal details of the the calculation parameters..				
B.4.4.1. Does the PDD provide evidence that the project would not be the most economically or financially attractive alternative or economically / financially feasable without the revenues from the sale of CERs? (EB 55 Annex 1, § 108)	*Description:* PDD demonstrates additionality of the project using project IRR *Justification of evidences:* PDD *Conclusion:* subject to closure of CAR B16, CAR B8 and CAR B18	/PDD1/ /IRR1/	~~CAR B16, B8 and B18~~	OK
B.4.4.2. Is an appropriate analysis method chosen for the project (simple cost analysis, investment comparison analysis or benchmark analysis)? (EB 55 Annex 1, § 108; EB 39 Annex 10) *Describe why the selected analysis method is appropriate under consideration of potential revenues and costs, potential project alternatives and potential available benchmark values.*	*Description:* Benchmark analysis has been chosen *Justification of evidences:* PDD *Conclusion:* Subject to closure of CAR B8, CAR B18.	/PDD1/ /IRR1/	~~CAR B8, and B18,~~	OK
B.4.4.3. Is a clear, viewable and unprotected Excel spreadsheet available for the investment calculation? (EB 55 Annex 1, § 110; EB 51, Annex 58, §8) *Describe the steps taken to validate this issue.*	☒ Yes, a clear, viewable and unprotected Excel spreadsheet is available. ☐ No, a respective Excel spreadsheet needs to be made available for investment calculation. In this context the following additional findings have been identified: N/A.	/IRR1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.4.4.4. Does the period chosen for the investment analysis reflect the technical lifetime of the project activity or in case a shorter period is chosen, is the fair value of the project activity's assets at the end of the investment analysis period (as a cash inflow) included? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 3 – 4) *Describe how the technical lifetime / period chosen for calculating financial parameter(s) is reviewed and which documents were utilised in the course of review. Describe furthermore the approach used to check the inclusion of a potential fair value.*	*Description:* The period chosen represents the technical life time of the project activity *Justification of evidences:* PDD, IRR *Conclusion:* Subject to closure of CAR B10	/PDD1/ /IRR1/	~~CAR B10~~	OK
B.4.4.5. Is the (remaining) technical lifetime of existing or project equipment defined in accordance with the guidance of the *Tool to determine the remaining lifetime of equipment*? (EB 50 Annex 15)	*Description:* Not applicable *Justification of evidences:* *Conclusion:* No CAR/CL is necessary	/PDD1/	OK	OK
B.4.4.6. Is the fair value calculated in accordance with local accounting regulations (where available) or international best practice? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 4) *State the accounting regulations applied for calculating the*	*Description:* Salvage value has not been provided *Justification of evidences:* IRR	/IRR1/	~~CAR B9~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
fair value and describe why these are applicable under the project specific circumstances. Describe potential mismatches between regulations and the approach applied for calculating the fair value.	*Conclusion:* Subject to closure of CAR B9			
B.4.4.7. Is the book value as well as the expectation of the potential profit or loss included in the fair value calculation? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 4)	*Description:* Salvage value has not been provided *Justification of evidences:* IRR *Conclusion:* Subject to closure of CAR B9	/IRR1/	~~CL B9~~	OK
B.4.4.8. Are depreciation and other non-cash related items only considered in the tax calculation and not as cash outflow? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 5)	*Description:* Depreciation and other non-cash related items have been considered only in tax calculation *Justification of evidences:* IRR *Conclusion:* Subject to closure of CAR B11	/IRR1/	~~CAR B11~~	OK
B.4.4.9. Were the input values used in the investment analysis valid and applicable at the time of the investment decision? (EB 55 Annex 1, § 109,112; EB 62 Annex 5, § 6) *In case the basis for input values is a Feasibility Study Report (FSR) describe how it has been ensured that the period in time between the finalisation of the FSR and the investment decision is sufficiently short so that it is unlikely that input values would have materially changed. Further confirm the consistency of values in FSR and PDD.*	*Description:* All input values used in the investment analysis were not valid at the time of investment decision *Justification of evidences:* IRR *Conclusion:* Subject to closure of CAR B12, CAR B13, CAR B15, CL B14, CL B17	/IRR1/	~~CAR B12, B13, B15 and CL B14, B17~~	OK
B.4.4.10. Is the plant load factor (PLF) chosen in a	*Description:* PLF is not in conformity with Annex 11, EB 48	/IRR1/	~~CL~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
conservative manner, taking into account that the PLF may be different in the framework of demonstrating additionality and calculating the ex-ante ER? (EB 48, Annex 11)	*Justification of evidences:* IRR *Conclusion:* Subject to closure of CAR B15		~~B15~~	
B.4.4.11. In case of project IRR: Are the costs of financing expenditures (loan repayments and interests) excluded from the calculation of project IRR? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 9)	☐ N/A ☒ Yes, the costs of financing expenditures have been included. ☐ No, this requirement is not met. In this context the following additional findings CL B17 have been identified: Interest on term loan has been computed as if the loan is repayable in half yearly instalments. Clarify whether the interest computation and repayment schedule, repayment holiday are in conformity with loan sanction letter.	/IRR1/	~~CL B17~~	OK
B.4.4.12. In cases where a post-tax benchmark is applied please ensure that actual interest payable is taken into account in the calculation of income tax. (EB 55 Annex 1, § 109; EB 62 Annex 5, § 11) *If this is not the case, ensure that taxation is excluded from the investment analysis.* *As per the guidance it is recommended to select a pre tax benchmark in order to describe the steps taken in assessing this requirment.*	☐ N/A ☒ Yes, the interest has been taken into account. ☐ No, this requirement is not met. In this context the following additional findings have been identified: PI. refers to CL B17.	/IRR1/	~~CL B17~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.4.4.13. In case of equity IRR: Is the part of the investment costs, which is financed by equity, considered as net cash outflow and is the part financed by debt excluded in net cash outflow? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 10)	☒ N/A ☐ Yes, in- and outflows have been considered correctly. ☐ No, this requirement is not met. In this context the following additional findings have been identified: N/A	/PDD1/ /IRR1/	OK	OK
B.4.4.14. Is the type of benchmark chosen appropriate for the type of IRR calculated (e.g. local commercial lending rates or weighted average costs of capital for project IRR; required/expected returns on equity for equity IRR)? (EB 55 Annex 1, § 111; EB 62 Annex 5, §§12 – 18) *In case risk premiums are applied precisely describe its suitability to reflect the risks associated with the project activity, considering the project type and market situation.*	*Description:* The benchmark chosen is appropriate for the type of IRR *Justification of evidences:* PDD, IRR *Conclusion:* Subject to the closure of CAR B8 , CAR B18	/IRR1/ /PDD1/	~~CAR B8 and B18~~	OK
B.4.4.15. Is the benchmark value suitable for the project activity and is it reasonable to assume that no investment would be made at a rate of a lower return than the benchmark? (EB 55 Annex 1, § 109; EB 62 Annex 5, §§13 – 18) *Describe whether it is reasonable to assume that a lower rate of return would consequently result in the baseline scenario.*	*Description:* Benchmark is suitable for the project activity. *Justification of evidences:* PDD, IRR *Conclusion:* Subject to the closure of CL B5, CL B6, CAR B18	/PDD1/ /IRR1/	~~CAR B18, CL B5, B6~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.4.4.16. Is it ensured that the project cannot be developed by other developers than the PP? (EB 55 Annex 1 § 109; EB 62 Annex 5, §§ 13 – 14) *Describe why the benchmark does not include the subjective profitability expectations or risk profile of the project developer. If applicable assess the past financial behavior of the entity during at least the last 3 years in relation to similar projects.*	*Description:* The project can be developed by other developers *Justification of evidences:* PDD *Conclusion:* Internal benchmark has not been used	/PDD1/	OK	OK
B.4.4.17. Was the benchmark consistently used in the past for similar projects with similar risks? (EB 55 Annex 1, § 112(c))	*Description:* Not applicable as internal benchmark is not used *Justification of evidences:* PDD *Conclusion:* Not applicable	/PDD1/	OK	OK
B.4.4.18. Does the PDD and related spreadsheets contain a sensitivity analyis and does the same contain variation of parameters which may vary throughout the project lifetime, (EB 55 Annex 1, §§ 109–110(e); EB 62 Annex 5, § 20-21) *Describe relevance of parameters used in the sensitivity analysis as well as their likeliness to vary during the project's lifetime. Parameters which are fixed on the basis of contracts, PPAs etc. may not be subject to variation and not adequate.*	*Description:* PDD and spreadsheet contain sensitivity analysis *Justification of evidences:* IRR, PDD *Conclusion:* No CAR/CL is necessary	/PDD1/ /IRR1/	OK	OK
B.4.4.19. Were only variables that constitute more	*Description:* Variables that constitute more than 20% of project cost	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
than 20% of either total project costs or total project revenues subjected to reasonable variation? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 20)	or revenue have been subjected to sensitivity analysis *Justification of evidences:* IRR, PDD *Conclusion:* No CAR/CL is necessary	/IRR1/		
B.4.4.20. Have parameters, constituting less than 20% of total project costs or revenues, been identified with potential material impact on the financial parameter? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 20) *Describe whether those parameters are considered in the sensitivity analysis?*	*Description:* There are no parameters which constitute even 10%of project cost or revenue *Justification of evidences:* IRR, PDD *Conclusion:* No CAR/CL is necessary	/PDD1/ /IRR1/	OK	OK
B.4.4.21. Is the range of variation reasonable in the specific context of the project activity, taking into consideration historic trends in the business sector? (EB 55 Annex 1, § 109; EB 62 Annex 5, § 21) *Describe whether the range of variation is appropriate with focus on historic developments, e.g. price of oil / labour etc., energy potential in the region in question.*	*Description:* The variables have been subjected to 10% variation *Justification of evidences:* IRR, PDD *Conclusion:* No CAR / CL is necessary	/IRR1/ /PDD1/	OK	OK
B.4.5. **Barrier analysis Step 3 or SSC additionality assessment**				
B.4.5.1. Are there any barriers given which have a clear and direct impact on the financial	*Description:* Not applicable	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
returns of the project? (EB 55 Annex 1, §§ 115, 134, 137) *In case of LSC projects those issues cannot be considered as barriers and shall be assessed in the investment analysis. In case of SSC projects the same fundamentals as for LSC projects shall apply, i.e. the assessment of the investment barrier according to EB 62 Annex 5.*	*Justification of evidences:* Not applicable *Conclusion:* Not applicable			
B.4.5.2. Are the barriers described risk related (e.g technology failure, other performance related risks)? (EB 55 Annex 1, §§ 116, 134, 137) *Are there other barriers or barriers due to prevailing practice existent which would have led to higher emissions?*	*Description:* Not applicable *Justification of evidences:* Not applicable *Conclusion:* Not applicable	/PDD1/	OK	OK
B.4.5.3. Has the unavailabilty of means of finance for the proejct been described and adequately substantiated? Do evidences doubtlessly prove that the financing of the project was assured only due to the benefit of the CDM? (EB 55 Annex 1, §§ 116, 137, EB 50 Annex 13, § 9)	*Description:* Not applicable *Justification of evidences:* Not applicable *Conclusion:* Not applicable	/PDD1/	OK	OK
B.4.5.4. How is it justified and evidenced that the barriers given in the PDD are real? (EB 55 Annex 1, § 116(a))	*Description:* Not applicable *Justification of evidences:*	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	Conclusion:			
B.4.5.5. How is it justified that one or a set of real barriers prevent(s) the implementation of the project activity and do not prevent the implementation of at least one of the alternatives? (EB 55 Annex 1, § 116(b))	*Description:* Not applicable *Justification of evidences:* *Conclusion:*	/PDD1/	OK	OK
B.4.5.6. Does the review of relevant background information on the nature of the company(ies) and entitiy(ies) involved in the financing and implementation of the project sufficiently justify that the barriers related to the lack of access to capital, technologies and skilled labour are real? (EB 50 Annex 13, § 4)	*Description:* Not applicable *Justification of evidences:* *Conclusion:*	/PDD1/	OK	OK
B.4.5.7. Has it been demonstrated in an objective way how the CDM alleviates each of the identified barriers to a level that the project is not prevented anymore from occurring by any of the barriers? (EB 50 Annex 13, § 5)	*Description:* Not applicable *Justification of evidences:* *Conclusion:*	/PDD1/	OK	OK
B.4.5.8. Would provision of additional financial means lead to the mitigation of the	*Description:* Not applicable	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
barrier(s) demonstrated? (EB 50 Annex 13, § 7) *Describe why provision of additional financial means would not lead to mitigation of the barrier(s) demonstrated and hence analysing the project's additionality within the framework of an investment analysis is inappropriate. .*	*Justification of evidences:* *Conclusion:*			
B.4.6. Common practice analysis Step 4 (in case of SSC projects skip this step)				
B.4.6.1. Is the defined region for the common practice analysis appropriate for the technology/industry type? (EB 55 Annex 1, § 120(a)) *Describe why the project activity is not common practice in a transparent and unambiguous manner. If a region other than the entire host country is chosen, describe why this region is more appropriate.*	*Description:* Defined region is not appropriate *Justification of evidences:* PDD *Conclusion:* Subject to closure of CAR B19	/PDD1/	~~CAR B19~~	OK
B.4.6.2. To what extent similar projects have been undertaken in the relevant region? (EB 55 Annex 1, § 120(b))	*Description:* Not explained in conformity with step 4 *Justification of evidences:* PDD *Conclusion:* Subject to closure of CAR B19	/PDD1/	~~CAR B19~~	OK
B.4.6.3. In case similar projects are identified, are there any key differences between the proposed project and existing or ongoing projects and what kind of differences are observed?	*Description:* The explanation does not conform to step 4 of Additionality Tool *Justification of evidences:* PDD	/PDD1/	~~CAR B19~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
(EB 55 Annex 1, § 120(c))	*Conclusion:* Subject to closure of CAR B19			
B.5. Ex-Ante Calculation of GHG Emission Reductions *It is assessed whether the ex-ante calculations of project emissions, baseline emissions, leakage emissions are stated according to the methodology and whether the argumentation for the choice of default factors and values – where applicable – is justified. Furthermore calculation of emission reductions shall be assessed.*				
B.5.1. Are the equations applied correctly according to the applied approved methodology? (EB 55 Annex 1, §§ 67(c), 89–90, 92) *Describe clearly the steps taken to assess whether the methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions. Further take into consideration that all estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.*	☒ The equations applied for calculation are correctly applied according to the approved methodology. ☐ The following mistakes have been identified in this context: Description: Applied, approved CDM methodology is ACM 0002 and all equations applied are properly justified in the PDD. Moreover the emission factor has been used as per the latest version of tool to calculate emission factor for an electricity system. Justification of evidences: The section B.6.1 has been assesssed against the requirments of applied methodology and tool and found correct. Conclusion: The equations applied are correct and appropriate.	/PDD1/	OK	OK
B.5.2. In case the methodology allows for different	Description: Applied approved CDM methodology is ACM 0002 and	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices (i.e. baseline identification)? (EB 55 Annex 1, §§ 90–91) *Assess the correct selection and application of methodological choices. Describe whether proper justification has been provided (based on the choice of the baseline scenario, context of the project activity and other evidence provided) and whether the correct equations have been used reflecting the relevant methodological choices.*	all equations applied are properly justified in the PDD. Moreover the emission factor has been used as per the latest version of tool to calculate emission factor for an electricity system. Justification of evidences: It is checked by VT during the desk review that equations are applied as per the CDM methodology ACM 0002 and referred tools thereof. The section B.6.1 has been assesssed against the requirments of applied methodology and found correct. Conclusion: Selection of applied methodology is correct and the correct equations have been used.	/ACM2/		
B.5.3. Have conservative assumptions been used when calculating the project emissions? (EB 55 Annex 1, §§ 90–91) *Describe clearly the steps taken to assess whether all the assumptions and data used by the PP are listed in the PDD including references and sources and are conservatively interpreted in the PDD.*	Description: There is no project emission involved in the proposed project activity. Justification of evidences: As per the applied methodology ACM 0002. Project emission is prescribed as zero. Conclusion: Project emission calculation is complying to the applied methodology.	/PDD1/ /XLS1/ /ACM2/	OK	OK
B.5.4. Does the implementation of the project activity lead to GHG emissions within the project boundary which are expected to contribute more than 1% of the overall expected average annual emission reductions, which are not addressed by the methodology? (EB 55 Annex 1, § 77)	Description: No. The DOE has assesed all the aspect of project implementation during site visit and desk review and thus found that the proposed project activity implementation does not lead to GHG emission within the project boundary which are expected to contribute more than 1% of the overall expected average annual emission reductions, which are not addressed by the methodology. Justification of evidences: The site visit observation has been assesed against the methodological requirments and tools referred therein.	/PDD1/ /ACM2./ /IM01/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
	Conclusion: All the possible sources of GHG emissions are assesed and accounted in the project description and project complies with the requirement of EB 55 Annex 1, § 77.			
B.5.4.1. Has a plant load factor (PLF) been defined ex-ante and considered for determination of baseline emissions? (EB 48 Annex 11, §§ 1, 3–4) *Describe why the PLF is conservative in the framework of calculating emissions reductions and whether the PLF is the same in the framework of demonstrating additionality by applying the investment analysis. Note, in order to be conservative in both cases the PLF may be different.*	Pl. refer to B.4.4.11. PLF is not in conformity with Annex 11, EB 48. CAR B15 has been raised.	/PDD1/	~~CAR B15~~	OK
B.5.5. Are all data sources and assumptions appropriate and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions? (EB 55 Annex 1, § 91) *Describe clearly the steps taken to assess whether the values used for the fixed parameters are considered reasonable, correct and applicable in the context of the project activity. Check esp. chapter 6.2 of the PDD.*	Description: All the parameters, equations particularly ex-ante fixed parameter i.e. Operating Margin emission factor for NEWNE grid, Build Margin emission factor for NEWNE grid and Combined Margin CO_2 emission factor for NEWNE grid are thoroughly checked and found derived based on conservetive assumptions. The emission factor is calculated based on the data from CEA version 05 Justification of evidences: The section B.6 of the PDD has been assessed against the applied methodology and tools referred therein. CEA data base is publically available data which is issued by government and thus considered authentic. Conclusion: All the assumptions used are correct and conservative in nature.	/PDD1/ /XLS1/ /cea/	OK	OK
B.5.6. Are all ex-ante calculation values for monitoring parameters (as defined as per	☒ All "Values of data to be applied for the purpose of calculating expected emissions reductions" are considered to be reasonable, applicable and conservative.	/PDD1/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
chapter B.7.1) reasonable? (EB 55 Annex 1, § 91) *Describe clearly the steps taken to assess whether the values used for the monitoring parameters are considered reasonable, applicable and conservative in the context of the project activity*	☐ The following mistakes have been identified in this context:			
B.5.7. Are the emission reductions real, measurable and give long-term benefits related to the mitigation of climate change. *Describe the steps taken to validate this issue.*	Description: The VT has covered all the aspect of project, assessed each source and sink relevant to the project activity. VT has also carried out the site visit. Based on above assessment and site visit observations VT made the opinion that emission reductions resulting from proposed project activity would be real, measurable and give long-term benefits related to the mitigation of climate change. Justification of evidences: Whole the project description and ER calculations are assesed against the requirment of appplied methodology and tools. Conclusion: Emission reductions from proposed project will be real, measurable and give long-term benefits related to the mitigation of climate change.	/PDD1/ /XLS1/	OK	OK
B.6. Monitoring of Emission Reductions *It is assessed whether the monitoring plan is appropriate for the project activity and in line with the applied methodology.*				
B.6.1. Are all monitoring parameters required by the applied methodology contained in the	Description: By the desk review and site visit observations it is found that net export to the connected grid is being monitored in each state. The same is mentioned in the revised PDD in	/PDD1/ /ACM2/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
monitoring plan? (EB 55 Annex 1, §§ 67(e), 121, 123(a), 124) *Assess whether all applicable parameters listed in the methodology are included in the monitoring plan.* *Pl. check further whether the selection of parameters not to be monitored (section B.6.2) is appropriate and in line with the applied methodology.* *In case of different approaches can be chosen acc. to the methodology assess whether the selection of parameters is justified and correct.*	section B.7.1, which is in accordance to the applied methodology. Justification of evidence: The PDD section B.7 is checked against the methodological requirments. Conclusion: All monitoring parameters are covered as per the applied methodology.	/IM01/ /IM02/		
B.6.2. Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology? (EB 55 Annex 1, § 123(a)–(b), 124) *Assess whether the provided information for all parameters w.r.t.* *a) Label (name of the data / parameter)* *b) data unit* c) *description* d) *source of data* e) *measurement equipment / method / procedure* f) *monitoring frequency*	Description: The means of monitoring of the parameters are clearly and transparently described. The parameter $EG_{y,}$ i.e. the net electricity supplied to the grid which will be determined by using electricity exported and imported to/from the grid. The unit used, to calculate EG_y is MWh/year. However The accuracy class of the meters and monitoring frequency are not mentioned in the section B.7.1 of the webhosted PDD. PP is requested to mention the same. Justification of Evidences: DOE has assessed all the parameters against CDM methodology ACM2 and found them described adequately in the PDD as per the requirement of methodology and PDD guidelines. Conclusion: CAR B20 is raised.	/PDD1/ /ACM2/	~~CAR B20~~	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
g) *QA/QC procedures* *are appropriately described and in compliance with the requirements of the methodology..*				
B.6.3. Are all parameters presented as per international standards? *a) Format: Standard format (e.g. 1,000 representing one thousand and 1.0 representing one).* *b) Units: Values shall be directly given in SI units – or additionally to original units transferred to SI.* *c) Short scale naming system: (Only) million = 10^6 and billion 10^9 shall be used.* *Please refer to the International System of Units (SI) as published within Guidance 11/08.*	☒ Standard formats have been used ☒ SI units were used – or added ☒ The short scale naming is correct In this context the following additional findings have been identified: N/A	/PDD1/	OK	OK
B.6.4. Have all means of implementing the monitoring plan, e.g. equations necessary for ex-post emission reduction calculation, been described clearly and in line with the methodology? (EB 55 Annex 1, §§ 123(b), 124) *Check whether all necessary equations have been provided in the PDD. Pl. consider that ex-post and ex-ante calculations might be different.* *Please consider that additional equations might be necessary to calculate auxiliary parameters.*	Description: The equations described in section B.6.1 for expost emission reductions are complete and in line with the methodological requirements. Moreover equations are framed in accordance with the monitoring plan implemented at the site locations. Justification of evidences: The VT has verified the monitoring plan during site visit and also assessed the suitability of equations against the monitoring plan and methodological requirments. Conclusion: The equation used are appropriate and in line with implemented monitoring plan and methodology used.	/PDD1/ /ACM2/ /IM01/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
B.6.5. Is it likely that the monitoring arrangements described in the PDD can properly be implemented in the context of the project activity? (EB 55 Annex 1, § 124(c)) *Assess whether the described monitoring arrangements are sufficient and realistic to enable a thorough monitoring. Pl. consider also special monitoring conditions, e.g. downtimes of monitoring equipment etc.*	Description: As evidenced during site visit, monitoring plan as described in the section B.7. of PDD is not in line with the actual monitoring practice. PP is requested to change the monitoring plan accordingly. Moreover as per the site visit it was found that the power generated from the WTGs is being fed to grid using a step up transformer (690/33 KV), which is not identical with the webhosted PDD, hence PP is requested to correct the same. Justification of evidence: CARB21 is raised. Conclusion: CAR B21 is raised.	/PDD1/ /IM01/	~~CAR B21~~	OK
B.6.6. Are the QA/QC procedures appropriate sufficient to ensure the emission reductions achieved from the project activit can be reported ex-post and verified? (EB 55 Annex 1, § 124(b)) *Please consider the description given in section B.7.2. Describe which QA/QC provisions are considered. Address Quality Management System provisions, calibration and maintenance of equipment. Address further any review procedures.*	Description: The QA/QC procedures are identified at the site visit by the DOE and same is described in the PDD in section B.7. The QA/QC procedures described are in accordance to common industry practice and the power purchase agreements between GFL and respective state authority. Moreover annual calibration of all the meters would be carried out. However, pl. Refers to CAR B20. Justification of evidence: The QA/QC procedures are verified during site visit by the DOE and assessed against the methodology and PPA requirements. Conclusion: Pl. refer to B.6.2. CAR B20 is raised.	/PDD1/ /ACM2/	~~CAR B20~~	OK
B.6.7. Are procedures identified for data management? (EB 55 Annex 1, § 124(b)) *Check whether appropriate provisions are considered for*	Description: The project O&M responsible company i.e. Suzlon Energy limited and PP (GFL) are ISO 9001 certified and as mentioned in the PDD all the data and reports for maintaining accuracy will be done as per ISO 9001 procedures. Data will be achieved for two years beyond each crediting period.	/PDD1/ /IM01/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
data management including responsibilities, what records to keep, storage area of records and how to process performance documentation *Check further the data archiving provisions for the project activity and ensure that provisions are made to archive data for the whole crediting period + 2 years.*	Justification of evidences: The same has been verified during site visit. Conclusion: The procedures for data management are found sufficient and appropriate.			
C. Duration of the Project/ Crediting Period *It is assessed whether the temporary boundaries of the project are clearly defined.*				

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
C.1. Is the project's operational lifetime clearly defined and evidenced? *Check whether the project lifetime is correctly defined. Consider the guidance on the assessment of investment analysis (annex to the additionality tool).* *Check in case of phased implementation this has been reflected throughout the whole PDD incl. the financial assessment, if applicable.*	Description: The technical life time of WTG has not been substantiated. Justification of evidences: Evidence regarding project's operation lifetime is awaited. Conclusion: CAR B10 is raised.	/PDD1/	~~CAR B10~~	OK
C.2. Is the start of the crediting period clearly defined and reasonable? *Check whether the envisaged starting date of the crediting period is realistic, taking into consideration the times needed for validation and registration.*	Description: The crediting period start date taken by PP in PDD is not a realistic date. Justification of evidences: crediting period start date given in PDD is not reasonable. Conclusion: CAR C1 is raised.	/PDD1/	~~CAR C1~~	OK
D. Environmental Impacts *Documentation on the analysis of the environmental impacts will be assessed, and if deemed significant, an EIA should be provided to the DOE.*				
D.1.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA)? (EB 55 Annex 1, §§ 131–133)	Description: No. there is no host party requirements for EIA for wind energy projects in India. Justification of evidences: Same has been cross checked with	/PDD1/ /EIA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
Check the host party regulations, regarding EIA.	notification S.O. 1533, 14th September 2006. Conclusion: Project activity complies to the requirement.			
D.1.2. In case an Environmental Impact Assessment (EIA) is requested by the host party, has it been carried out and if applcable duly approved? (EB 55 Annex 1, §§ 131–133) *Check the EIA and its approval, if applicable.*	Description: No. there is no host party requirements for EIA for wind energy projects in India. Justification of evidences: Same has been cross checked with EIA notification S.O. 1533, 14th September 2006. Conclusion: Project activity complies to the requirement.	/PDD1/ /EIA/	OK	OK
D.1.3. Has an analysis of the environmental impacts of the project activity been sufficiently described and in line with the host party environmental legislation? (EB 55 Annex 1, §§ 130–132) *Check the PDD (section D). Check whether the project will create any adverse environmental effects.* *Check the relevant national environmental legislation.*	Description: No. there is no host party requirements for EIA for wind energy projects in India. Justification of evidences: Same has been cross checked with EIA notification S.O. 1533, 14th September 2006. Conclusion: Project activity complies to the requirement.	/PDD1/ /EIA/	OK	OK
D.1.4. Are transboundary environmental impacts considered in the analysis? (EB 55 Annex 1, §§ 131–133) *Check the documents and local official sources / expertise regarding transboundary environmental impacts.*	Description: There are no transboundary environmental impacts as asseesed by the DOE. Moreover Pl. refer to D.1.1 Justification of evidences: Based on site visit observations and desk review conclusions. Conclusion: Project complies to the requirments.	/PDD1/ /EIA/	OK	OK

Checklist Item (incl. guidance for the validation team)	Validation Team Comments (justification and substantiation of information, data and evidences)	Ref.	Draft Concl.	Final Concl.
E. Stakeholder Comments *The DOE should ensure that stakeholder comments have been invited with appropriate media and that due account has been taken of any comments received.*				
E.1. Have relevant local stakeholders been invited to consultation prior to the publication of the PDD? (EB 55 Annex 1, § 128) *Check by means of document review and interviews with local stakeholders if and when a local stakeholder consultation process has been carried out.*	Description: Yes, relevant stakeholder groups (local villagers, Local Government authorities) have been consulted/LSC/ prior to publication of PDD for GSP. However, MoM and attendance sheet of the stakeholder meeting held on 9th March 2008 has not been submitted. Justification of evidences: Same has been cross checked during the site visit by interacting some of the Local stake holders. Conclusion: CAR E1 is raised.	/PDD1/	~~CAR E1~~	OK
E.2. Can the local stakeholder consultation process be assessed as adequate? (EB 55 Annex 1, § 129(a)–(c)) *Describe what assessment steps have been undertaken to assess the adequacy of the stakeholder consultation process. Give a final opinion on the adequacy.* *Please consider the following requirements in this context:* *(a) Comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited;*	Description: Yes, stakeholder consultation process is assessed during validation procedure. PP has provided all relevant documents/LSC/ for assessment. Moreover during site visit DOE personnel have also taken interview of involved stakeholders. No adverse comment has been received. As assessed stakeholder consultation meeting was found to be adequate. Justification of evidences: The adequacy of the stakeholder consultation process is crosschecked with the interview of stakeholders and by the submitted proofs/LSC/. Conclusion: Project activity complies with the requirement of the VVM/VVM/ para 129 (a) – 128 (c). Also, PI. refers to E.1, CAR E1 has been raised.	/PDD1/	~~CAR E1~~	OK

Checklist Item (incl. guidance for the validation team)	**Validation Team Comments** (justification and substantiation of information, data and evidences)	**Ref.**	**Draft Concl.**	**Final Concl.**
(b) The summary of the comments received as provided in the PDD is complete; *(c) The project participants have taken due account of any comments received and have described this process in the PDD.*				

ANNEX 2: ASSESSMENT OF BASELINE IDENTIFICATION

Table A-2: Assessment of Baseline Identification (EB 55 Annex 1 §§83 – 86)

☐	Baseline is not identified
☒	Assessment of baseline see below

Baseline Alternatives identified	In line with the Methodology?	Eliminated	Reasons for elimination / non-elimination from list of alternatives	Evidence used	DOE Assessment	
					Appropriateness of elimination	Assessment of validation team (results and means of assessment)
Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system	☒	☐	Baseline is defined by the applied methodology	/cea/ /PDD1/ /PDD2/ /CON/ /PPA/ /SD/ /ACM2/	☐	If the project activity is the installation of a new grid-connected renewable power plant/unit, then the Applied methodology section II defines the baseline scenario as "Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the "Tool to calculate the emission factor for an electricity system". As per onsite visit and document check the project is confirmed to be a grid-connected renewable energy generation project activity and as baseline is predefined in related methodology the baseline is considered and confirmed to be established correct.

ANNEX 3: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-3: Assessment of Financial Parameters (EB 55 Annex 1, §§ 111, 112, 114/ in case financial parameters stem from FSR §113,)

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
Plant Capacity	19.5	MW	Equipment Supply Agreement dated 2008/01/04, Offer letter dated 2007-09-20.	/ADD1/	☒	The Plant capacity value is based on the WTG offer letter from the supplier dated 2007-09-20. The offer letter dated 2007-09-20 was checked for the capacity of each wind turbine to conclude that total capacity is correct. Validation team also verified the capacity from Equipment Supply Agreement dated 2008-01-04..Agreement has been verified and the plant capacity value is found to be correct. PP has placed the order for 13 wind mills of 1.5 MW each resulting in the capacity of 19.5 MW. The offer letter dated 2007-09-20 was also checked for the capacity of each wind turbine to conclude that total capacity is correct. Hence, the plant capacity of 19.5 MW is correct and appropriate for the project.
Project life	20	Years	Letter from Suzlon Energy Ltd. - undated	/ADD2/	☒	Operating life of equipment is based on the letter issued by manufacturer of windmill, viz., Suzlon Energy Ltd. This is in conformity with Annex 15, EB 50. Accordingly, financial indicator has been calculated for 20 years, which is in conformity with guidance 3 of Annex 5, EB 62. Incidentally, this is also in

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
						conformity with the operating life given by RERC, under whose jurisdiction the windmills fall. DOE also noted that the PP was aware of the life of WTGs as they already had a CDM project (UN Ref no 1615) for which they had purchase order in place at the time of investment decision indicating plant life of 20 years. Hence, the value considered by PP is correct and appropriate for the project.
Project cost	1267.5	INR In million	Offer letter from Suzlon Energy Ltd. dt. 2007/09/20	/ADD1/	☒	Project cost includes land, WTGs, tower, transformer, electrical, civil works, erection and commissioning cost for 13 X 1.5 MW WTGs. Project developer has submitted the offer letter and the document has been verified and found consistent. Since the offer letter was available with the PP at the time of decision making, consideration of this cost is in conformity with Guidance 6 of Annex 5, EB 62. The cost works out to Rs.65 mn./MW. The actual cost of the project based on the purchase order and interest paid during construction works out to Rs.60.5 mn./MW. Validation team observed that the financial indicator goes up to 8.71% in case the actual project cost and O&M cost (as per purchase order), PLF as estimated by third party engineering company and insurance premium paid at actual are taken into consideration (as against the benchmark of 12.92%). Worksheets based on Purchase Orders are also enclosed. The project remains

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
						additional. Moreover, the cost as per purchase order is only about 7% less than the project cost considered for additionality demonstration. Since the project remains additional even when the project cost is subjected to 7% reduction, validation team considers the cost as correct and appropriate for the project activity. The project loses its additionality only when the cost drops down by ~22%, i.e., Rs.50.6 mn. /MW. None of the registered/under validation projects have assumed such a low cost. A comparison of the cost assumed by other registered projects reveals that the cost has been ranging between Rs.60 mn. /MW to Rs.66 mn./MW. For example, Allgrow Ventures (Reg. No. 4992) – Rs. 60.01 mn./MW; Gupta Coal Fields (Reg. No. 3494) – Rs. 60.67 mn./MW; Vikram Traders (Reg. No. 3575) – Rs. 62.67 mn./MW; KPR Fertilizers (Reg. No. 3445) – Rs.60.37 mn./MW; Asian Fabricks (Reg. No. 5076) – Rs. 66.10 mn./MW; Terapanth Foods (Reg. No. 4050) – Rs.65.00 mn./WTG. The cost of the project is within the range of already registered CDM project activity. Therefore, the project cost is correct, conservative and appropriate

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
Loan	928.57	INR in million	Loan Sanction letter dated 2008/04/04	/ADD2/	☒	The project has been financed by a term loan of Rs. 928.57 mn. and equity capital of Rs.338.93 mn. The project financing pattern yields a gearing of 73:27. In India, infrastructure projects are generally entitled to a debt equity ratio of 70:30, though depending on the case, the ratio can be marginally higher or lower depending on the client's relationship with the bank, client's credit rating and collateral. Since the loan amount is evidenced by the sanction letter, the validation team is convinced that the financing pattern assumed is appropriate and correct and is also valid. Since the loan amount is in conformity with actual loan sanction letter, the loan amount also conforms to guidance 11 of Annex 5, EB 62.
Interest on Term Loan	10.00	Percent	Proposal submitted for Board meeting dated 2007/10/18 Loan Sanction letter dated 2008/04/04	/ADD1/	☒	Interest rate is based on the bank sanction letter which is also the same as that of the proposal submitted for Board meeting. Since guidance 11 of Annex 5, EB 62 states, "where a post-tax benchmark is applied the DOE shall ensure that actual interest payable is taken into account in the calculation of income tax", the actual interest payable by the project activity has been taken into consideration, which is in conformity with guidance 11 of Annex 5, EB 62. Hence, the validation team considers the input value is correct, appropriate and conservative.
Moratorium (Repayment	12	Months	Proposal submitted for Board meeting dated 2007/10/18		☒	Initial grace period is based on the bank sanction letter which is also the same as that of the proposal submitted for Board meeting. Sanction letter also provides for the repayment of term

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
Holiday)			Loan Sanction letter dated 2008/04/04	/ADD1/ /ADD2/		loan from April 2009 in 36 equal quarterly installments. This yields an initial moratorium period of 1 year. The grace period is therefore, correct, valid and appropriate.
Repayment period	36	Months .	Loan Sanction letter of dated 04/04/2008	/ADD1/ /ADD2/	☒	Repayment is based on the sanction letter, which has been verified by the validation team. As per the sanction letter, entire loan has to be repaid in 36 monthly installments commencing from April 2009. Interest calculation in worksheet is in conformity with the sanction letter. The repayment period is correct, valid and appropriate.
Plant Load Factor	21.23	Percent	Wind Resource Assessment Study Report by Power & Energy Consultants dated 2007/10/10 Actual Generation from Sept 2009 to June 2011, RERC tariff order dated 2007/03/09	/PLF/	☒	PLF is based on the estimates made by a third party engineering consultant appointed by the project developer to estimate the PLF (conformity Annex 11, EB48) and the report was submitted on 2007/10/10, i.e., before decision making date. . Validation team also requisitioned the actual generation achieved, as checked from the JMR submitted to DOE and observed that the WTGs achieved average PLF of only ~17% since COD till June 2011. Validation team also checked RERC tariff order available at the time of investment decision and found that the PLF is 21% in the order dated 2007/03/09. In the above background validation team accepted the PLF as correct, conservative and appropriate for the project activity.

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
Tariff per kWh	3.48	In INR	RERC Tariff Order dated 2007/03/09 (p.40)	/rerc/	☒	Tariff is based on the RERC tariff orders dated 2007/03/09. RERC tariff order provides for a tariff of Rs.3.48/kWh. Validation team checked the tariff order as also the power purchase agreement and found the tariff considered as correct. The tariff is fixed for the duration of the project activity i.e. 20 years. However, it was observed that since the wind mills commenced operation in September 2009, they are entitled to a tariff of 4.28/kWh. Validation team observed that even if the applicable tariff is taken into consideration together with actual project cost and O&M cost and PLF at 21.13% (though the actual generation is much less), the project remains additional. Validation team also checked other recently registered projects located in Rajasthan and found the tariff considered was INR 3.48 per kWh (e.g. 5531), therefore the tariff considered in this project activity is appropriate and acceptable.
O &M cost per WTG per annum	1.7	INR in million	Offer letter from Suzlon Energy Ltd. dt. 2007/09/20 O&M Agreement dt. 2008/01/04	/ADD1/	☒	O&M cost is based on the offer letter received from Suzlon Energy, copy of which has been submitted to DOE. The value has been verified and found to be correct. Validation team checked the O&M cost assumed by other registered projects (set up with 1.5 MW Suzlon windmills) and observed that Suzlon has been charging O&M cost ranging from Rs.1.5 mn. to Rs.1.7 mn/WEG of 1.5 MW capacity. For example, Allgrow Ventures (4992) has reckoned the cost at Rs. 1.46

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
						mn./WTG; Gupta Coal Fields (3494) at Rs. 1.50 mn./WTG; Vikram Traders (3575) at Rs. 1.50 mn./WTG; KPR Fertilizers (3445) at Rs.1.65 mn./WTG; Asian Fabricks (5076) at Rs. 1.70 mn./WTG and Terapanth Foods (4050) at Rs. 1.70 mn./WTG. Candiate project has considered the O&M cost at Rs.1.7 mn./ WTG, which is within the range. As per the O&M agreement entered, the O&M cost is only Rs.1.4 mn/WTG. Validation team observed that the financial indicator goes up from 6.91% to 8.71% if the actual O&M cost (and project cost), PLF as estimated by third party engineering company and insurance premium paid at actual are taken into consideration. Therefore, the value considered is correct and appropriate.
Free O&M period	1	Years	Offer letter from Suzlon Energy Ltd. dt. 2007/09/20 O&M Agreement dt. 2008/01/04	/ADD1/	☒	Offer letter provides for 1 year free O&M period. Validation team observed that in all other cases, Suzlon has been offering 1 to 2 years free O&M period. It was also observed that the free O&M period has been stated as 1 year even in the O&M Agreement signed subsequent to decision making date. Based on local sectoral expertise, VT has checked the free O&M cost assumed by other registered projects set up with 1.5 MW Suzlon windmills (UN Ref – 4992, 3494, 3575, 3445, 5076, 4050) and observed that free O & M period offered to the project activity is appropriate and in line with the actual scenario, Hence, the free O&M period of 1 year is correct and appropriate

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
O&M escalation	5	Percent	Offer letter from Suzlon Energy Ltd. dt. 2007/09/20 O&M Agreement dt. 2008/01/04	/ADD1/	☒	Offer letter issued by Suzlon provides for 5% escalation in the O&M cost. Offer letter has been checked and the value has been found to be correct. This is in conformity with guidance 6 of Annex 5, EB 62. Validation team checked other registered projects and majority of them have assumed 5% escalation only (for example Projects 3238, 3445, 3494, 4050, 4992 and 5076 have all assumed 5% escalation). Moreover, even as per the O&M agreement signed, the escalation in O&M cost is only 5%. Therefore, the escalation assumed by the candidate project is correct and appropriate.
Administrative expenses	0.6	INR in million per year	Proposal submitted for Board meeting dated 2007/10/18	/ADD1/	☒	The PP already had experience of wind power project involving sale of electricity to grid (UN Ref no. 1615), commissioned in February 2007 for which information was available as on investment decision date. Salaries of Employees have been submitted which are more than the values are assumed. The administrative and employee expenses have been conservatively assumed. The actual pay out rates/salaries of GFL employees specifically working on/employed for wind farm operations are much more than the assumed rates. Hence the same has been accepted as being a conservative assumption.

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
Escalation in adminstrative expenses	5	%	Proposal submitted for Board meeting dated 2007/10/18	/ADD1/	☒	Proposal submitted for Board meeting provides for 5% escalation in the administrative expenses. Escalation in administrative expenses is acceptable in light of the escalation in O&M expenses. Therefore, the escalation assumed by the candidate project is correct and appropriate.
Insurance /WTG	0.036	INR in million	Proposal submitted for Board meeting dated 2007/10/18	/ADD1/ /INS/	☒	The insurance premium is based on the Proposal submitted for Board meeting dated 2007/10/18, which in turn is based on company'e experience in the past. The actual insurance premium paid works out to Rs.0.032 mn./MW. The insurance premium works out to ~ 0.06%. Validation team observed that the registred projects have considered insurance premium ranging from 0.05% to 0.75% of the project cost. For example, Terapanth Foods (4050) and Asian Fabricks (5076) have considered insurance at 0.75%, while Vikram Traders (3575) and KPR Fertilizers (3445) have considered insurance premium at 0.05%. Insurance premium considered by other projects fall within this range. The insurance premium considered by the project activity is within the range. The actual insurance premium paid by the project developer was Rs.0.32 mn, which works out to 4 bps. Validation team observed that the financial indicator goes upto 8.71% in case the actual project cost and O&M cost (as per purchase order), PLF as estimated by third party

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
						engineering company and insurance premium paid at actual are taken into consideration (as against the benchmark of 12.44%). It was also observed by the validation team that insurance is not a critical factor in that even if the entire insurance premium is completely removed, the project will remain additional. Hence, the value is considered correct and appropriate
Salvage Value (of project cost)	10	percent	International best practice[16]	..	☒	Salvage value has been estimated at 10% of the value of investment. As the project cost fully depreciated, the residual value is nil and hence the salvage value represents only the potential profit expected on sale and hence conforms to guidance 4 of Annex 5, EB 62. Salvage value is in conformity with internationally accepted principles. Hence, the value is correct and appropriate. This was also verified with other UNFCCC registered projects (3494, 4050) and the value of 10 % was found to be appropriate and correct.
Book Depreciation	5.28	Percent	Sch.XIV, Companies Act, 1956	/act/	☒	Book depreciation rate is based on Schedule XIV of Companies Act, 1956. The company adopts the same rate in its books lso. The rate has been verified and found to be correct
Depreciation (IT) - WTG	80	Percent	Income Tax Rules	/act/	☒	Depreciation provided for computation of IT liability is based on the rates prescribed in Appendix I of Income Tax Rules. The

[16] http://www.marshall-stevens.com/pdf/pub_ValueCurves.pdf

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
- Other machinery - Civil works	15 10					rates have been verified and found to be correct.
Income Tax (Regular) 2007-08	33.99	Percent	Finance Act 2007	/act/	☒	The rate is based on the Income tax rate applicable to the financial year 2007-08, i.e., the year in which investment decision was taken. The tax rate is correct and appropriate.
Service tax on operations & Maintenance	12.36	Percent	http://taxclubindia.com/CHARTS/21%20USEFUL%20CHARTS%2012-13.pdf	/ADD/	☒	The rate is based on the prevailing service tax rate applicable to the financial year 2008-09. The tax rate considered is correct and appropriate.
Tax holiday	10	Years	Income Tax Act	/act/	☒	As per Sec. 80IA of the Income Tax Act, infrastructure companies (under which the project activity falls) are entitled to claim tax holiday for any 10 consecutive years in the first 15 years of operation. Hence, the assumption and computation of tax liability are correct and appropriate.
Cost of debt	13	%	Average PLR for week ending on 19 October 2007	/plr/	☒	This value is average PLR for week ending on 19 October 2007 published by RBI on its website. PLR is published by RBI time to time and represent the bare minimum rate on which banks can lend money to a project. Thus validation team assessed that the value of 13% is appropriate for the cost of debt to calculate benchmark for the project activity.
Cost of equity	21.45	%	Calculated	/IRR2/	☒	Cost of equity is calculated as inflation adjusted nominal Rate of Return on Equity considering conservative value of Inflation

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
						CAGR (Compound Annual Growth Rate) on real rate of return on equity, as applicable at the time of investment decision. Rate of return on equity is found sourced from default values for the expected return on equity for host country (India) as listed in appendix of EB62/Annex 5. Inflation rate on average consumer prices for five years period from the project start is found considered, The values of forecast of inflation rate published by RBI were not available hence host country specific data from International Monetary Fund World of Economic Outlook website is taken which was accepted by the DOE in light of paragraph 7 of the Appendix to EB62/Annex 5.
Percentage of debt	70	%	CERC Tariff Regulations 2004, Clause 20	/cerc/	☒	The debt percentage is found sourced from CERC tariff order which was available at the time of investment decision. This is also as per actual financing pattern of the project activity. RERC tariff order dated 2009/01/23 (page 16) gives a D/E ratio of 70:30. Almost all state tariff orders have same D/E ratio applied as 70:30. Further, review of registered CDM projects in wind energy sector from host country reveals that a debt: equity ratio is normally 70:30. As this share is general financing principle DOE accepted the same ratio for computation of benchmark.
Percentage of equity	30	%	CERC Tariff Regulations 2004, Clause 20	/cerc/	☒	The equity parentage is found sourced from CERC tariff order which was available at the time of investment decision. This is also as per actual financing pattern of the project activity. RERC tariff order dated 2009/01/23 (page 16) gives a D/E ratio of

☐	No financial parameters are used for additionality justification
☒	Assessment of all financial parameters see below

Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE comments	
					Correctness of value applied	Comment
						70:30. Almost all state tariff orders have same D/E ratio applied as 70:30. Further, review of registered CDM projects in wind energy sector from host country reveals that a debt: equity ratio is normally 70:30. As this share is general financing principle DOE accepted the same ratio for computation of benchmark.

ANNEX 4: ASSESSMENT OF BARRIER ANALYSIS

Table A-4: Assessment of Barrier Analysis (EB 55 Annex 1, §118)

☒	No barrier parameters are used for additionality justification
☐	Assessment of barriers see below

Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
			☒	
			☒	

ANNEX 5: OUTCOME OF THE GSCP

Table A-5: Outcome of the Global Stakeholder Consultation Process
(§§ 40-42, VVM Version 1.2)

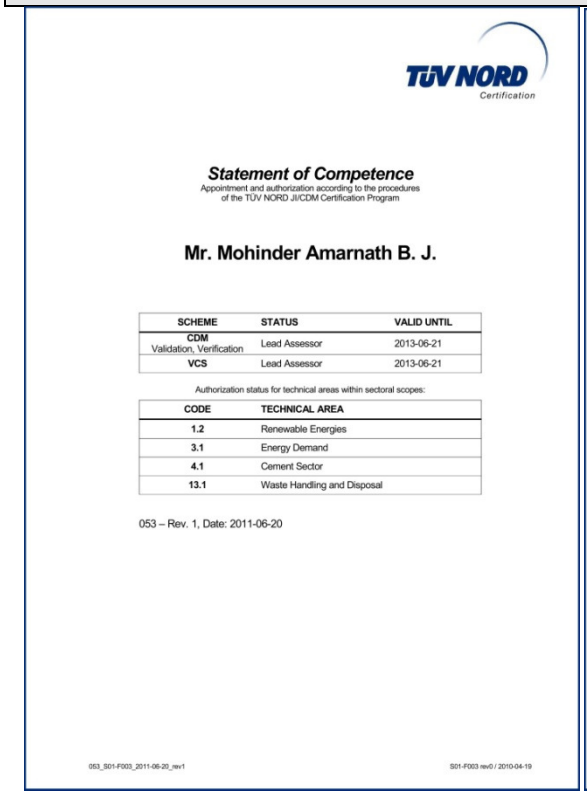
☐	No comments were received during the global stakeholder consultation period
☒	Comments were received during the global stakeholder consultation period. The comments (in unedited form) and the consideration/response of the validation team are presented below:

Comment No.:	Comment by:	Inserted on:	Subject	Comment *)	Action taken by the validation team to take due account on the comment *)	Conclusion (incl. CARs CLs or FARs)
1	Babloo Singh	2010-09-29	/ADD/	Please consider below comments in validation: It is a well known fact that the wind projects are mainly installed considering CDM revenues and offsetting of tax liability of the company as a result of accelerated depreciation of 80%. 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	CAR B22 is raised.	CAR B22 is successfully closed.

				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.		

*) In case clarifications have been requested by the validation team corresponding rows shall be added

ANNEX 6: STATEMENTS OF COMPETENCE OF ALL INVOLVED PERSONNEL



TÜV NORD Certification

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Mohinder Amarnath B. J.

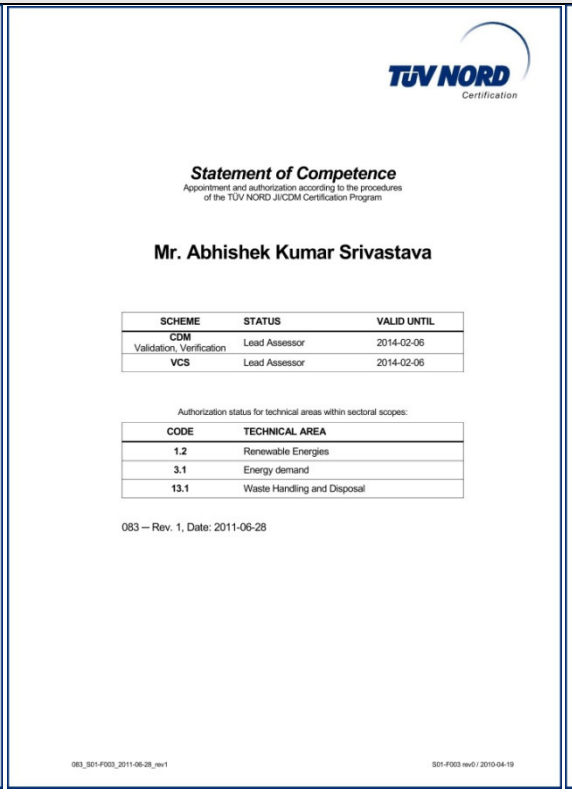
SCHEME	STATUS	VALID UNTIL
CDM Validation, Verification	Lead Assessor	2013-06-21
VCS	Lead Assessor	2013-06-21

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
4.1	Cement Sector
13.1	Waste Handling and Disposal

053 – Rev. 1, Date: 2011-06-20

053_S01-F003_2011-06-20_rev1 S01-F003 rev0 / 2010-04-19



TÜV NORD Certification

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Abhishek Kumar Srivastava

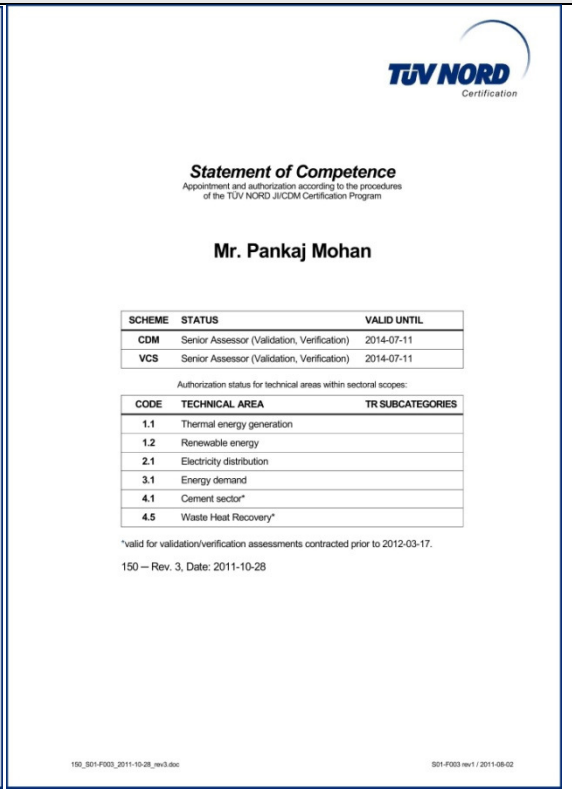
SCHEME	STATUS	VALID UNTIL
CDM Validation, Verification	Lead Assessor	2014-02-06
VCS	Lead Assessor	2014-02-06

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy demand
13.1	Waste Handling and Disposal

083 – Rev. 1, Date: 2011-06-28

083_S01-F003_2011-06-28_rev1 S01-F003 rev0 / 2010-04-19



TÜV NORD Certification

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Pankaj Mohan

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification)	2014-07-11
VCS	Senior Assessor (Validation, Verification)	2014-07-11

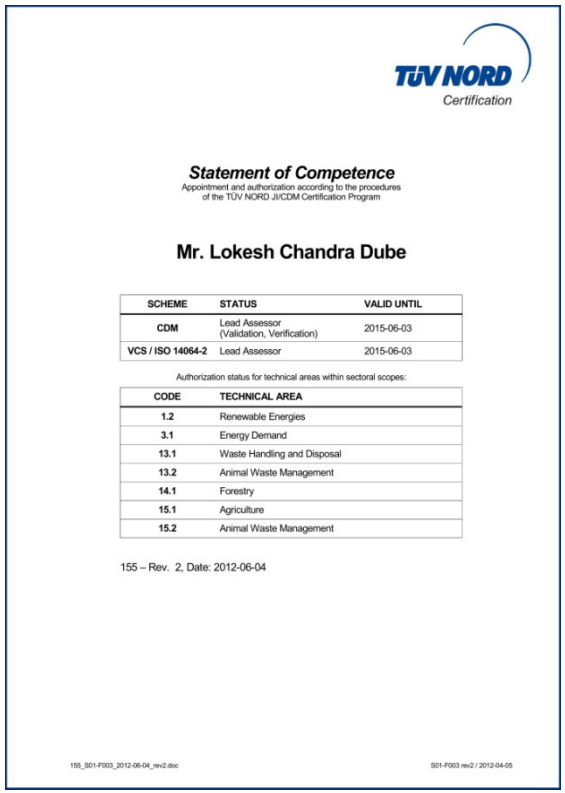
Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal energy generation	
1.2	Renewable energy	
2.1	Electricity distribution	
3.1	Energy demand	
4.1	Cement sector*	
4.5	Waste Heat Recovery*	

*valid for validation/verification assessments contracted prior to 2012-03-17.

150 – Rev. 3, Date: 2011-10-28

150_S01-F003_2011-10-28_rev3.doc S01-F003 rev1 / 2011-08-02



TÜV NORD Certification

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Lokesh Chandra Dube

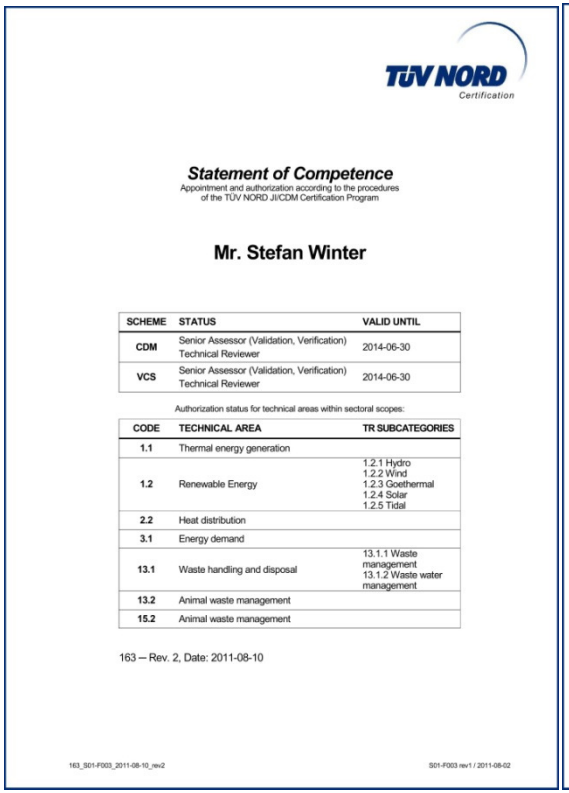
SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2015-06-03
VCS / ISO 14064-2	Lead Assessor	2015-06-03

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
13.1	Waste Handling and Disposal
13.2	Animal Waste Management
14.1	Forestry
15.1	Agriculture
15.2	Animal Waste Management

155 – Rev. 2, Date: 2012-06-04

155_S01-F003_2012-06-04_rev2.doc S01-F003 rev2 / 2012-04-05



TÜV NORD Certification

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Stefan Winter

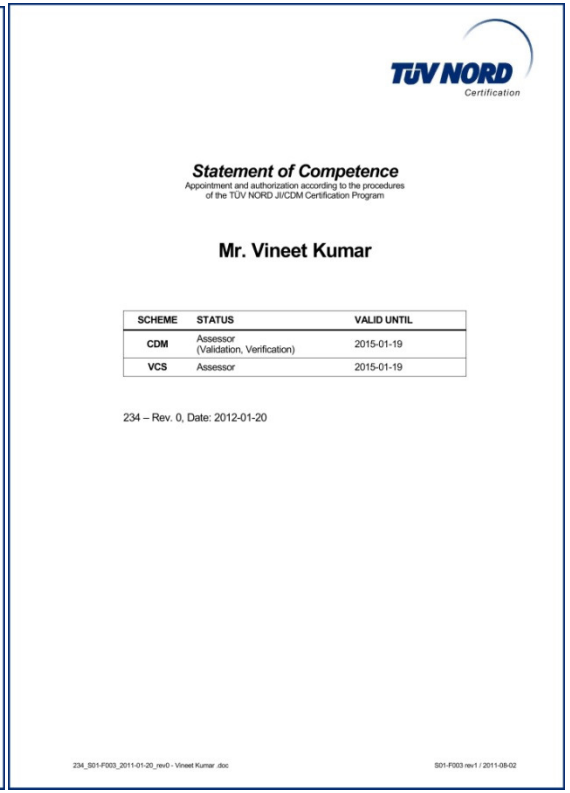
SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2014-06-30
VCS	Senior Assessor (Validation, Verification) Technical Reviewer	2014-06-30

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.1	Thermal energy generation	
1.2	Renewable Energy	1.2.1 Hydro 1.2.2 Wind 1.2.3 Goethermal 1.2.4 Solar 1.2.5 Tidal
2.2	Heat distribution	
3.1	Energy demand	
13.1	Waste handling and disposal	13.1.1 Waste management 13.1.2 Waste water management
13.2	Animal waste management	
15.2	Animal waste management	

163 – Rev. 2, Date: 2011-08-10

163_S01-F003_2011-08-10_rev2 S01-F003 rev1 / 2011-08-02



TÜV NORD Certification

Statement of Competence

Appointment and authorization according to the procedures of the TÜV NORD JI/CDM Certification Program

Mr. Vineet Kumar

SCHEME	STATUS	VALID UNTIL
CDM	Assessor (Validation, Verification)	2015-01-19
VCS	Assessor	2015-01-19

234 – Rev. 0, Date: 2012-01-20

234_S01-F003_2011-01-20_rev0 - Vineet Kumar .doc S01-F003 rev1 / 2011-08-02