

PERRY JOHNSON REGISTRARS



Carbon Emissions Services, Inc.

CDM-PROGRAMME OF ACTIVITY VALIDATION REPORT

CME: GENERAL CARBON ADVISORY SERVICES PVT. LTD.

PROMOTION OF RENEWABLE ENERGY GENERATION
IN INDIA-PROGRAMME OF ACTIVITIES

REPORT No. C-1-I-01-L-0248_VA

REVISION No: 1.0



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PoA VALIDATION REPORT

Date of first issue:	Project No:
06 August 2012	C-1-I-01-L-0248
Approved by and date:	Organisational unit:
Bilal Anwar (29 December 2012)	PJRCDM (India) Pvt. Ltd.
Client:	Client ref.:
CME: General Carbon Advisory Services Pvt. Ltd.	Mr.P Ram Babu

PoA Name : Promotion of renewable energy generation in India-
Programme of Activities
Country : India
Methodology : ACM 0002
Version : version13
Sectoral Scope : 01 - Energy industries (renewable - / non-renewable
sources
Project Type and Technology : Type: I, Power generation using renewable sources
such as Wind and Solar

Size

- ☒ Large Scale
☐ Small Scale

Validation Status

- ☒ Corrective Actions Requested
☒ Clarifications Requested
☒ Full Approval and submission for registration
☐ Rejected

In summary, it is DOE's opinion that the PoA titled "Promotion of renewable energy generation in India - Programme of Activities" described in the PoA-DD, dated 06 December 2012 version 06, meets all relevant UNFCCC requirements for the CDM and the relevant host country criteria. The PoA is in line with all the relevant UNFCCC requirements for CDM-PoA. The conclusions of this report show, that the CDM-PoA-DD, dated 06 December 2012 version 03, and generic CPA-DDs, dated 06 December 2012 version 03, and real case CPA-DD dated 06 December 2012 version 03, is in line with all criteria applicable for the validation.

PJRCS thus requests the registration of the proposed project as a CDM PoA activity and inclusion of 1st real case CPA 001 in the proposed PoA.

Report No.:	Date of this revision:	Rev. No.	Key words:
C-1-I-01-L-0248_VA	27 DECEMBER 2012	1.0	CDM Validation, CDM Executive Board, Renewable Energy
Report title:			☒ No distribution without permission from the Client or responsible
Validation Report for “Promotion of renewable energy generation in India-Programme of Activities”			



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ABBREVIATIONS

BM	Building Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification request
CM	Combined Margin
CME	Coordinating /Managing Entity
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CPA	Component Project Activity
DD	Design Document
DNA	Designated National Authority
GHG	Greenhouse gas(es)
EB	Executive Board
EIA	Environmental Impact Assessment
EIL	Enercon (India) Limited
LoA	Letter of Approval
MoU	Memorandum of Understanding
MP	Monitoring Plan
NEWNE	Northern, Eastern, Western, North-Eastern regional grid
NGO	Non-governmental Organisation
ODA	Official Development Assistance
O and M	Operation and Maintenance
OM	Operational Margin
PJRCES	Perry Johnson Registrars Carbon Emissions Services
PLF	Plant Load Factor
PoA	Programme of Activity
PP	Project Participant
PV	Photovoltaic
ROE	Return on Equity
RERC	Rajasthan Electricity Regulatory Commission
RRECL	Rajasthan Renewable Energy Corporation Limited
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Clean Development Mechanism Validation and Verification Standard
WTG	Wind Turbine Generator



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1 INTRODUCTION

The “General Carbon Advisory Services Pvt. Ltd.” (hereinafter referred to as Client, Project Participant (PP), CME or the acronym GC) has commissioned Perry Johnson Registrars Carbon Emission Services, Inc. to perform a validation of the large-scale CDM Programme of Activities (PoA) with the title “Promotion of renewable energy generation in India-Programme of Activities” project in India (hereafter called “the PoA”). This report summarises the findings of the validation of the PoA and the PoA CDM programme activities Design Document (F-CDM-PoA-DD) with generic information relevant to all CDM programme activities (CPAs) to be included in this PoA. The validation was performed on the basis of UNFCCC criteria for PoAs under the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, the procedures for registration of a programme of activities and the subsequent decisions by the CDM Executive Board.

1.1 OBJECTIVE

The purpose of a validation is to have an independent third party assess the PoA design document (CDM-PoA-DD) and the PoA specific CDMCPA-DD with generic information relevant to all CPAs to be included in this PoA. In particular, the eligibility criteria for inclusion and demonstration of additionality of CPAs, the programme’s baseline determination, monitoring plan, and the programme’s compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the programme design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM PoAs and is seen as necessary to provide assurance to stakeholders of the quality of the programme and its intended generation of certified emission reductions (CERs).

1.2 SCOPE

The validation scope is defined as an independent and objective review of the CDM-PoA-DD and the PoA specific real case CDM-CPA-DD, Generic CPA-DD template for each type of technology under the specific PoA with generic information relevant to all CPAs to be included in this PoA.

The scope of the validation are defined as below:

- The Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)



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- Decisions and specific guidance by the EB published under <http://cdm.unfccc.int>
- Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, version 01, EB 65
- Guidelines for completing the programme design document form for CDM programmes of activities (F-CDM-PoA-DD), Guidelines for completing the component project activity design document form (F-CDM-CPA-DD)
- Baselines and monitoring methodologies (including GHG inventories)
- Management systems and auditing methods
- Environmental issues relevant to the sectoral scope applied for
- Applicable environmental and social impacts and aspects of CDM project activity
- Sector specific technologies and their applications
- Current technical and operational knowledge of the specific sectoral scope and information on best practice

The information included in the F-CDM-PoA-DD and the PoA specific real case F-CDM-CPA-DD, Generic CPA-DD templates for each type of technology to be eligible under the current PoA and the supporting documents have been reviewed against the requirements and criteria mentioned above and the QMS of PJRCES. The validation team has, based on the recommendations in the Clean development mechanism validation and verification standard employed a risk-based approach, focusing on the identification of significant risks for programme implementation and the generation of CERs.

The validation is not meant to provide any consultation to the organization(s). However, stated requests for clarifications and / or corrective actions may provide input for improvements of the project design.

2 VALIDATION TEAM AND QUALITY CONTROL

The validation of the project activity has been carried out by qualified personnel in line with the procedures defined in PJRCES's quality manual for validation and team definition. The validation report has undergone a technical review before requesting registration of the project activity. The technical review was performed by an independent technical reviewer.



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Validation team:

Name	Qualification	Competency			Task Performed			
		Meth Expert ¹	Technical Area	Host Country Exp.	DR	SV	RP	Approval
Rohit Badaya	Lead Validator and Team Leader	☒	☒	☒	☒	☒	☒	☐
Tushar Chaudhari	Lead Validator and Team Member	☒	☒	☒	☒	☒ *	☒	☐
Anjana Sharma	Technical Expert	☒	☒	☒		☒		☐
Anuradha S	Financial Expert		☒	☒	☒			☐
Bilal Anwar	Technical Reviewer							☒
Bilal Anwar	Final Approver							☒

Note:

- 1) VT – Validator trainee, LV – Lead Validator, TL – Team Leader, FE – Financial Expert, TE – Technical Expert, ITR – Independent Technical Reviewer
- 2) DR – Desk review of PoA-DD, generic CPA-DD templates, real case CPA-DD and documents, SV – Site Visit, RP – Final Report Preparation.
- 3) Technical Expert involved has the required Host country knowledge
- 4) * The team member was involved in organising and planning the site visit.

3 METHODOLOGY OF VALIDATION

The validation consisted of the following three phases:

- Desk review of the F-CDM-PoA-DD and the PoA specific real case CDM-CPA-DD, generic CPA-DD templates with generic information relevant to all CPAs to be included in this PoA.
- Follow up interviews (site visits) with the relevant stakeholders
- Resolution of the identified corrective action requests (CARs), clarification requests (CL) and forward action requests (FARs) if any, followed by the issuance of the final validation opinion and final validation report.

¹ This is based on experience of minimum five projects including CDM consulting



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3.1 DESK REVIEW

The desktop review includes:

- A review of the CDM-PoA-DD, generic CDM-CPA-DDs for each type of technology under the proposed PoA and the PoA specific real case CDM-CPA-DD (including annexes) and the relevant supporting documents/1/. The detailed list of documents reviewed throughout the validation process, are included in the section 6, under references.
- Preparation of project specific validation protocol in line with the requirements of the Clean development mechanism validation and verification standard/4/.
- Background investigation and follow-up interviews with personnel of the project proponent, the consultant, legal authorities and other stakeholders.
- Reporting of validation findings taking into account the public comments received on UNFCCC website

In order to ensure consideration of all relevant assessment criteria, a validation protocol was 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 serves the following purposes:

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

The validation protocol consists of three tables: Table 1 (Mandatory Requirements);

Table 2 (Requirement checklist); and table 3 (Resolution of corrective Action and clarification request) as described below.

The completed validation protocol is enclosed in Appendix A to this report identifying Corrective Action Requests and clarification Requests.

Validation Protocol Table 1: Mandatory Requirements for CDM Programme of Activities		
Requirement	Reference	Conclusion
<i>The requirements the project must meet.</i>	<i>Gives reference to the legislation or agreement where the requirement is found.</i>	<i>This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR) of risk or non-compliance with stated requirements or a request for Clarification (CL) where further clarifications are needed.</i>



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Validation Protocol Table 2: Requirement checklist				
CDM PoA Validation requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
The various requirements as per para 37 of the CDM modalities and procedures, in line with the Clean development mechanism validation and verification standard	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	Means and sources of validation through which the CDM requirement has been validated is indicated here. Examples of means of validation are document review (DR) or interview (I). N/A means not applicable	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable	OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements. A corrective action request (CAR) is raised when project participants have made mistakes, the CDM requirements have not been met or there is a risk that emission reductions cannot be monitored or calculated. A Clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met. A forward action request (FAR) during validation is raised to highlight issues related to project implementation that require review during the first verification of the project activity.

Table 3: Resolution of issues identified in Table 2 of the Validation Protocol			
Draft report clarification requests, corrective action requests and forward action requests	Ref. to the section of the table 2 above	Summary of project owner response	Validation team conclusion
If the conclusions from the draft Validation are either a CAR, FAR or a CL, these should be listed in this section.	Reference to the checklist question number in Table 2 where the CAR, FAR or CL is explained.	The responses given by the project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".



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Validation Protocol Table 4: Forward Action Requests			
Forward action request	Ref. to checklist question in table 2	Summary of project owner response	Validation conclusion
The FARs raised in Table 2 are repeated here.	Reference to the checklist question number in Table 2 where the CAR, FAR or CL is explained.	The responses given by the project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".

3.2 FOLLOW-UP INTERVIEWS

On 24 December 2012 at Rama and Bakharani villages site, PJRCES performed interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. The below listed persons have been interviewed and provided additional information to the presented documentation. The representatives of PP/CME, CPA implementer and the technology supplier for the first real case CPA i.e. CPA001 were present across locations and during the interactions with various stakeholders/9/.

The main topics of the interviews are summarised in the table below.

	Date	Name	Organization	Topic
/1/	24/12/2012	Jeetendra Kumar, Supervisor	Enercon (India) Limited	1. Resources, training needs and procedures for operation and Maintenance 2. Monitoring Plan / Records (backups) 3. Maintenance program (calibration)
/2/	24/12/2012	Aman Bansal, Prahlad Yadav, (Engineer),	Enercon (India) Limited	1. Resources, training needs and procedures for operation and Maintenance 2. Monitoring Plan / Records (backups) 3. Maintenance program (calibration)
/3/	24/12/2012	Kishor Rathod, Manager	Renew Wind Power	1. Sustainable development, Financials of the project



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				activity. 2. Environmental, statutory compliance 3. Eligibility criteria compliance 4. Stakeholder consultation process 5. Monitoring and reporting procedures. 6. Calibration and corrective action procedures.
/3/	24/12/2012	Kishan Singh, Sawai Singh, Bhura Ram, Bhika Ram, Bhage Ram	Local villagers	Stakeholder consultation process, awareness of CDM, Sustainable development
/4/	24/12/2012	Mr.Pravin Jadhav Ms. Manali Mane	General Carbon Advisory Services Pvt. Ltd.	PoA Framework, Eligibility criteria, Estimated emission reductions, Project additionality, Monitoring and reporting procedures, Operation and management plan, Sustainable development, monitoring plan

3.3 RESOLUTION OF CLARIFICATION AND CORRECTIVE ACTION REQUESTS

The objective of this phase of the validation was to resolve any outstanding issues which needed to be clarified prior to PJRCES's positive conclusion on the project design. In order to ensure transparency, a validation protocol is customised for the project. The protocol shows in transparent manner criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:

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



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The validation protocol consists of three tables. The different columns in these tables are described in the figure below. The completed validation protocol for the PoA titled “Promotion of renewable energy generation in India-Programme of Activities” is enclosed in Appendix A to this report.

Findings established during the validation can either be seen as a non-fulfilment of CDM criteria or where a risk to the fulfilment of project objectives is identified.

Corrective action requests (**CAR**) are issued, where:

- i) mistakes have been made with a direct influence on project results;
- ii) CDM and/or methodology specific requirements have not been met; or
- iii) there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be certified.

A request for clarification (**CL**) may be used where additional information is needed to fully clarify an issue.

Additionally, a forward action request (**FAR**) may be raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. The FARs so identified however, shall not relate to the CDM requirements for registration.

The PoA-DD and real case CPA-DD for wind power project version 01.1 /1/ both were published for first global stakeholder consultation between 23 May 2012 to 21 June 2012. However, now in line with para 143 of latest “Clean development mechanism project standard” version 02, EB 70 annex 02 two separate generic CPA-DD templates specific for the wind and solar technology has been submitted for the validation/5/.

The main changes between the webhosted PoA-DD, and final respective PoA-DD, version 03, ready for submission to UNFCCC are as follows:

1. The name of CME is not consistent throughout the webhosted PoA-DD and same has been now corrected in the revised PoA-DD inline with letter of approval by host country DNA.
2. The applicability criteria of the applied methodology ACM 0002, version 13 mentioned in the webhosted PoA-DD is incorrect and same has been now corrected inline with applied methodology in the revised PoA-DD.



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3. The eligibility criteria for the each CPAs mentioned in the webhosted PoA-DD is inadequate and same has been now updated in the revised PoA-DD.
4. The baseline identification mentioned in the webhosted PoA-DD is consist of all types of projects however, the same has been now revised inline with specific CPAs eligible under the PoA in the revised PoA-DD.
5. The information mentioned in the webhosted PoA-DD on approach for the demonstration of additionality for CPAs to be included under the PoA is inadequate and the same has been now updated in the revised PoA-DD.
6. The information on Operation and management plan of the CME was inadequate in webhosted PoA-DD and now the detailed description of the same has been incorporated in the revised PoA-DD.
7. The formula and notations for emission factor calculation mentioned in the webhosted PoA-DD were incorrect and same has been now corrected in the revised PoA-DD.
8. Furthermore, start date of the PoA has been revised from 15/06/2012 to 23/05/2012 i.e. the date of publication of PoA-DD for global stakeholder consultation.
9. The project boundary diagram has been revised and now the revised common project boundary flow diagram has been incorporated.

Main differences between the webhosted real case CPA-DD and final CPA-DD templates, version 03 for all type of technology eligible under current PoA ready for submission to UNFCCC are as follows:

1. The specific CPA –DD templates for all type of technology eligible under current PoA (i.e. wind and solar power projects) considering all respective monitoring requirements and site scenarios has been reframed inline with latest requirements under latest “Clean development mechanism project standard” version 02, EB 70 annex 02 .
2. The information on common practice analysis for demonstration of additionality for real case CPA has been incorporated.

4 VALIDATION FINDINGS

The details of the assessment and the main results have been described below in accordance with the VVS reporting requirements. The validation criteria (requirements),



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the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocol in Appendix A.

4.1 PARTICIPATION REQUIREMENTS

4.1.1 LETTER OF APPROVALS:

The PoA participant is “General Carbon Advisory Services Pvt. Ltd.”, which is designated as coordinating/managing entity authorized to participate in the PoA by the DNA of the India. The letter of approval (LoA)/10/ was received by the Programme participant directly from the DNA of India and has been verified in original by PJRCES. PJRCES does not doubt the authenticity of the LoA.

Host Party involved, i.e., India, meet the requirements to participate in the CDM, and has provided written approval of voluntary participation in the programme. The host Party India fulfils the participation requirements, having ratified the Kyoto Protocol on the 26 August 2002 and having established the National Clean Development Mechanism Authority, Ministry of Environment and Forests (MoEF), as its DNA. The PP which is the Managing entity is required to inform the National Clean Development Mechanism Authority of any additional programme that is added to the PoA.

The letter of approval and confirmation by the host Party for the programme’s contribution to the country’s sustainable development has been obtained through letter dated 12 December 2012 and has been verified by PJRCES in original /10/. Further, CME has also submitted the LoA and confirmation by the host Party for the real case CPA’s contribution to the country’s sustainable development has been obtained through letter, dated 21 December 2012, and has been verified by PJRCES in original /10/. The letters of approval were received from the project participants. PJRCES does not doubt the authenticity of the letters of approval. PJRCES considers the letters are in accordance with paragraphs 39-42 of the VVS. PJRCES considers the letter to be in accordance with paragraphs 39 to 42 of VVS/4/.

No public funding is involved either in PoA or in real case CPA, and the validation did not reveal any information that indicates that the programme can be seen as a diversion of ODA funding towards India.

4.1.2 PROJECT PARTICIPANTS AND CME

For the PoA, CME (Coordinating and Managing Entity) is “General Carbon Advisory Services Pvt. Ltd.”, which is authorized as India’s Project Participant and authorized by the host party India DNA as the Coordinating and Managing Entity/10/.



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For the real case CPA, M/s. ReNew Wind Energy (Jadeswar) Private Limited is an CPA implementer.

Information regarding project participants is confirmed as consistent in the PoA-DD, for real case CPA-DD and with respective LoA.

4.2 PROGRAMME DESIGN

For PoA:

The PoA titled “Promotion of renewable energy generation in India-Programme of Activities” is a voluntary action by CME, i.e. General Carbon Advisory Services Pvt. Ltd. who is authorised by the host country DNA.

The PoA consists of implementation of large scale grid connected, Greenfield renewable energy projects (i.e. Wind and Solar power projects) for cleaner electricity generation which would otherwise has been generated by the operation of existing grid connected power plants and by addition of new generation sources in the existing grid mix.

The solar power projects under the PoA consist of electricity generation using either Solar PV technology or Solar thermal technology.

The geographic boundary of the PoA is restricted to geographic boundary of host country, India.

In accordance with para 159 of “Clean Development Mechanism Project Standard”, version 02 (EB 70, Annex 2), the start date of PoA has been defined as 23 May 2012 i.e. the date of publication of PoA-DD for global stakeholder consultation. Further, in line with para 160 of “Clean Development Mechanism Project Standard”, version 02 (EB 70, Annex 2), the duration of the proposed CDM PoA is defined as 28 years /5/.

The CME has established the operation and management plan for the PoA and same has been confirmed through desk review and interview of CME’s representative during the site visit /24/ /9/.

The PP has used version 02 of the F-CDM-PoA-DD template, EB 66, Annex 12, “Programme Design Document Form For CDM Programmes of Activities (F-CDM-PoA-DD)”, to describe the programme of activity /16/. The PoA-DD version 03 dated 06 December 2012 has been prepared in line with the latest VVS track /4/. Guidelines for completing the programme design document form for CDM programmes of activities, version 03.1/17/.



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PJRCES considers the description of proposed POA to be complete and accurate.

For real case CPA (CPA001):

The proposed CPA001 titled “Wind Power Project at Bakhrani, Rajasthan”, is a large scale grid connected wind power project of 25.6 MW capacity. The proposed CPA consist of electricity generation by operation of Enercon Make Thirty two (32) Nos. of Wind Turbine Generators (WTGs) each having 0.8 MW capacity. The proposed real case CPA is located at Rama and Bakhrani Villages of Jaisalmer District, Rajasthan State, India.

The CPA will supply the generated electricity to the NEWNE regional grid of India. M/s. ReNew Wind Energy (Jadeswar) Private Limited is CPA implementer for the proposed CPA and same has been authorised by host country DNA/10/. Thus, the geographic boundary of the real case CPA is in accordance with the PoA boundary.

In accordance with para 161 of Clean development mechanism project standard, EB 70, Annex 02 and latest Glossary: CDM terms, version 07 the start of the real case CPA is defined as 30 August 2012, which is date of real action towards the implementation of the CPA i.e. placement of supply order by CPA implementer to WTG supplier i.e. Enercon (India) Limited/5//6/. Further, inline with para 193 of Clean development mechanism validation and verification standard, EB 70, Annex 03 the start date of real case CPA is well after the start date of PoA which is 23 May 2012.

In accordance with para 163 of Clean development mechanism project standard, EB 70, Annex 02, the CPA implementer has opted for fixed crediting period of 10 years 00 months. The start date of crediting period for real case CPA has been defined as 01 March 2013 or the actual date of registration of the PoA with UNFCCC which ever is later. Thus, the duration of the crediting period for the real case CPA is not exceeding the actual crediting period of the PoA.

PJRCES has cross-verified and confirmed the geo-coordinates for each WTG location for real case CPA001 with supporting third party PLF report and records during site visit/12//9/. The geocoordinates for the WTG's locations under the real case CPA are as follows:



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Sr. No.	Location No.	Village	Geographical Coordinates	
			Latitude	Longitude
1	2011	Megha	26° 32' 54.4320" N	77° 01' 33.0207" E
2	2033	Megha, Rama	26° 32' 16.7144" N	77° 01' 46.2658" E
3	2034	Rama	26° 32' 5.4306" N	77° 05' 55.8944" E
4	2053	Rama	26° 31' 58.0415" N	77° 05' 41.3473" E
5	2139	Koda	26° 31' 16.8831" N	77° 04' 54.1514" E
6	2140	Koda	26° 31' 18.1867" N	77° 04' 40.5220" E
7	2141	Koda	26° 31' 31.1433" N	77° 04' 43.2838" E
8	2142	Koda	26° 32' 2.2231" N	77° 03' 5.6622" E
9	2143	Koda	26° 32' 11.7078" N	77° 03' 19.4135" E
10	2154	Rama & Khyala	26° 32' 22.7801" N	77° 03' 13.1807" E
11	2155	Rama & Khyala	26° 32' 33.4682" N	77° 03' 17.8146" E
12	2159	Rama, Sumliyai	26° 32' 29.7821" N	77° 03' 27.8278" E
13	2160	Rama, Sumliyai	26° 32' 22.7233" N	77° 03' 30.6279" E
14	2165	Koda	26° 32' 16.9383" N	77° 03' 35.2208" E
15	2167	Koda	26° 32' 14.6007" N	77° 03' 57.5397" E
16	2168	Koda	26° 32' 29.0706" N	77° 04' 5.7465" E
17	2169	Koda	26° 32' 38.3861" N	77° 04' 6.4195" E
18	2172	Sumliyai, Koda	26° 32' 40.6440" N	77° 04' 18.7428" E
19	2173	Sumliyai	26° 32' 46.1658" N	77° 04' 43.4081" E
20	2189	Sanger	26° 32' 50.6150" N	77° 04' 36.8771" E



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21	2190	Sanger	26° 32' 53.3976" N	77° 04' 28.7626" E
22	2194	Sanger	26° 32' 49.5007" N	77° 04' 15.2171" E
23	2201	Sanger	26° 33' 1.7667" N	77° 04' 20.7845" E
24	2202	Bhelani	26° 33' 2.4828" N	77° 04' 9.5254" E
25	2203	Bhelani	26° 33' 18.3614" N	77° 04' 25.8520" E
26	2204	Bhelani	26° 31' 23.2220" N	77° 08' 37.5879" E
27	2206	Bhelani	26° 33' 39.4761" N	77° 10' 44.8428" E
28	2207	Sanger	26° 34' 3.7771" N	77° 10' 34.3547" E
29	2208	Sanger	26° 33' 1.4197" N	77° 11' 15.1554" E
30	2209	Sanger	26° 32' 54.6739" N	77° 11' 20.6990" E
31	2211	Sanger	26° 32' 47.4026" N	77° 11' 24.4985" E
32	2212	Sanger	26° 31' 50.0180" N	77° 11' 48.1145" E

The real case CPA is expected to generate annual average of 51,377 MWh electricity and by doing so, avoid 48,585 tonnes of CO₂ equivalent annual average over the crediting period. The expected generation is based on the PLF estimation (22.91%) by the third party i.e. M/s. Garrad Hassan India Private Limited for the real case CPA's proposed wind farm site /12/.

The CME has used version 02 of the F-CDM-CPA-DD template, "Component project activity design document form (F-CDM-CPA-DD)", to describe the programme of activity/19/. The CPA-DD version 03 dated 06 December 2012 has been prepared in line with the latest VVS track /4/. Guidelines for completing the component project activity design document form, version 01, EB 66, annex 16/20/.

PJRCES considers the description of proposed CDM real case component project activity to be complete and accurate.

For Generic CPA-DD templates:

CME has defined generic CPA-DD templates specific for each type of technology to be implemented by CPAs under the proposed PoA i.e. generic CPA-DD template for



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greenfield wind power project and generic CPA-DD template for greenfield Solar PV, Solar thermal power project. CME has used version 02 of the F-CDM-CPA-DD template, “Component project activity design document form (F-CDM-CPA-DD)”, to describe the programme of activity. The generic CPA-DD templates version 03 dated 06 December 2012 has been prepared in line with the latest VVS track /4/. Guidelines for completing the component project activity design document form, version 01/20/.

PJRCES considers the description of generic CPA-DD templates to be complete and accurate.

4.3 BASELINE AND MONITORING METHODOLOGY

4.3.1 APPLICABILITY OF THE SELECTED METHODOLOGY(S)

For PoA:

The proposed PoA is large scale project. Thus, PP has applied version 13 of approved large scale methodology ACM0002 for the current PoA. The PoA falls under type I – Renewable Energy Projects and the **sectoral scope 01**: Energy industries (renewable - / non-renewable sources).

The PP has applied version 13 of the approved large scale methodology ACM 0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, under type I – Renewable Energy Projects. The project activity falls under the **sectoral scope 01**: Energy industries (renewable - / non-renewable sources)/3/.

PJRCES confirms that the identified technologies to be implemented under the proposed POA complies with the applied methodology and fulfils all the applicability criteria of the above methodology. Validation of applicability conditions with the PoA is as presented below:

- The CPAs under the proposed PoA will be grid connected renewable power generation project activity at a site where no renewable power plant was operated prior to the implementation of the project activity (greenfield plant);
- The CPAs under the proposed PoA is the installation of either wind or solar power plant;



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- The CPAs under the proposed PoA is the installation of only greenfield power plants and does not involve capacity additions, retrofits and replacements;
- The CPAs under the proposed PoA is the installation of only greenfield either wind or solar power plant and does not involve any hydro, switching from fossil fuel to renewable energy source, biomass fired power plants;

Based on the review of documents, PJRCES confirms the applied methodology, ACM 0002, version 13, is applicable to the proposed PoA as described in the PoA-DD, version 03 dated 06 December 2012 /1/ and does not result in emissions other than those allowed in the methodology.

For CPA:

The real case CPA is large scale, greenfield, grid connected wind power project with 25.6 MW total capacity. The real case CPA involves installation of Enercon make 32 Nos. of WTGs each of 0.8 MW capacity. The real case CPA meets the applicability criteria of the applied approved methodology ACM0002, version 13/3/.

Based on the review of documents, PJRCES confirms the applied methodology, ACM 0002, version 13, is applicable to the proposed PoA as described in the CPA-DD, version 03 dated 06 December 2012 /01/ and does not result in emissions other than those allowed in the methodology.

4.3.2 BASELINE IDENTIFICATION

For PoA:

The PoA applies version 13 of the approved large-scale CDM methodology ACM 0002 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”. The CPAs eligible under the proposed PoA are only greenfield, grid connected power projects which involve either wind power or solar power project technologies for electricity generation to be fed into the grid. Further, the PoA boundary is restricted to host country i.e. India.

For greenfield, grid connected renewable power plant, applied methodology ACM0002, version 13 pre-defines the baseline scenario as follows.

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”.



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Thus, PP has identified the existing grid mix of India as a baseline scenario for the PoA inline with applied approved methodology ACM0002, version 13. Since, the applied methodology ACM0002, version 13 clearly pre-defines the baseline scenario for the greenfield renewable power project, thus, the identification and analysis of alternative scenarios for the PoA has not been carried out.

The Central Electricity Authority (CEA), has divided/delineated Indian electricity system into two regional grids, viz. Northern, Eastern, Western, North-Eastern (NEWNE) and Southern Grid for grid emission calculation. The PoA is being implemented in entire India, hence PP has ex-ante calculated grid emission factor for both the regional grid of India i.e. NEWNE regional grid and Southern regional grid as per the “Tool to calculate the Emission Factor for an electricity system” version 03 for baseline emission calculation. PP has used the latest publically available CEA’s CO₂ emission database, version 07 for calculation of baseline grid emission factor at the time submission of PoA-DD to PJRCES for validation (22 May 2012). PJRCES has validated the input values from CEA’s CO₂ emission database, version 07 and found them correct/21/. Details estimation of both regional grid emission factor has been discussed in the report section 4.8.2.

For CPA:

The real case CPA is a Greenfield project and it has been verified from the supply order/purchase order placed to M/s. Enercon (India) Limited/13/. Since the proposed project involves installation of new grid connected wind power generation with rated capacity of 25.6 MW, the baseline scenario is pre-defined in the PoA-DD and in the approved methodology ACM0002, version 13/3/ 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”. Since, the baseline scenario has already been defined in the PoA-DD, thus, the identification of alternative scenario for the CPA has not been carried out.

The real case CPA is being implemented in Rama and Bhakarani village of Jaisalmer district, Rajasthan State, India. The real case CPA will submit the generated electricity to the state grid of Rajasthan state which comes under the intergrated NEWNE regional grid of India. Hence, PP has identified existing power plants in NEWNE grid mix as baseline scenario. The baseline grid emission factor for NEWNE regional grid has been determined under section B.6.1 of PoA-DD and same has been considered as NEWNE grid emission factor for real case CPA.



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The application of the baseline methodology is transparent and conservative. Thus, PJRCES confirms that the application of the baseline methodology is transparent and conservative.

4.3.3 ELIGIBILITY CRITERIA FOR CPA INCLUSION

The PoA-DD established clear eligibility criteria for inclusion of each CPA under the PoA under “*Standard: Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities*” version 02 , EB 70 Annex 05 /22/, requiring for each CPA that:



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Reference Paragraph	Inclusion Criteria	Description and conditions to be met under the PoA	Justification by PP	Validation team conclusion
16 (a)	The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	Located within the geographical boundary of India evident from any of the following documents ☒ supply order/ purchase order/ MOU with supplier ☐ commissioning certificate/ land ownership/ lease OR regulatory clearance	This CPA as discussed above is located within host country India. The condition is met.	PP has submitted the MoU/14/ between CPA implementer and WTG supplier, supply order placed by CPA implementer to WTG supplier/13/. Based on the assessment of the above documents, PJRCES concludes that the real case CPA located within the geographical boundary of India and thus real case compiles with this eligibility criteria.
16(b)	Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	Unique identification number based on locations will be allocated to each CPA to avoid double counting of emission reductions. ☒ wind energy project e.g. CPA00X	This CPA is identified under the PoA as CPA001. Thus the condition is met.	PP has allocated unique identification number for the real case CPA as CPA001. Further, PP has also provided declaration by the



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		☐ solar PV project e.g. CPA-SPV-00Y ☐ solar thermal project e.g. CPA-STH-00Z		CPA implementer to avoid double counting of emission reductions. Based on the assessment of the above documents, PJRCES concludes that the real case CPA compiles with this eligibility criteria.
16(c)	The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications;	Deploy technology/measures using wind power or solar energy generation systems approved by Government/ Industry standards. ☒ wind turbines approval documents by Centre for Wind Energy Technology (CWET) OR equivalent government approved agency ☐ solar power plants approved by government/ industry approved agency	This CPA deploys wind energy generation systems. Thus, the condition is met.	The real case CPA is electricity generation through operation of Enercon make 32 Nos. of wind turbine generators each with 0.8 MW capacity. Based on the assessment of supply order placed by CPA implementer to WTG supplier PJRCES concludes that the real case CPA compiles with this eligibility criteria.



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16 (d)	Conditions to check the start date of the CPA through documentary evidence;	CPA has a project start date on or after start date of the PoA with documentary evidence. ☒ supply order/ purchase order/ with supplier ☐ start of construction of project plant ☐ any other commitment to implement project	The start date of CPA is 30 August 2012 which is after the start of PoA which is 23 May 2012. Thus, the condition is met.	The defined start date for real case CPA has been verified from supply order, dated 30 August 2012 placed by CPA implementer to WTG supplier. The start date of PoA is defined as 23 May 2012 i.e. date of webhosting of PoA for global stakeholder consultation on UNFCCC website. Since, the start date of real case CPA is much after the start date of PoA, PJRCES concludes that the real case CPA compiles with this eligibility criteria.
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16(e)	Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	Use methodology ACM0002 and meet all the applicability criteria	☒ This CPA is using methodology ACM002 as seen and validated in section above. Thus the condition is met.	The real case CPA under the PoA meets the applicability criteria of the approved methodology ACM0002, version 13. Since, the PoA has applied the same methodology i.e. ACM 0002, version 13, PJRCES concludes that the real case CPA compiles with this eligibility criteria.
16(f)	The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A above;	Demonstrate the additionality as per the “Tool for the demonstration and assessment of additionality” (Ver. 07.0.0, EB 70, Annex 8) at the time of inclusion of each CPA.	☒ The CPA has established additonality using available and applicable guidance . Thus the condition is met.	The real case CPA is large scale wind power project and has applied version 07 of “Tool for the demonstration and assessment of additionality” for demonstration of additionality. The provided justification for additionality has



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				been assessed and found ok. Thus, PJRCES concludes that the real case CPA compiles with this eligibility criteria.
16(g)	The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	Undertake a local stakeholder consultation which comprises: i. Identification of local stakeholders ii. Explain about the CPA project activity iii. Inviting comments from stakeholders iv. Recording the comments ☒ all of these documents will be made available to the CME – (1) invitation notice in local language (2) minutes of meeting with attendance sheet (3) photo/ video evidence of meeting	☒ The CPA has identified local stakeholders, explained about CPA also invited and recorded comment. Thus the condition is met.	CPA implementer has conducted local stakeholder consultation on 04 May 2012 at project site. PJRCES assessed the supportive documents for local stakeholder consultation meeting and cross verified the same through stakeholders interview during site visit on 24 December 2012. Thus, PJRCES concludes that the real case CPA compiles with this eligibility criteria.



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		Conduct EIA/Initial Environment Assessment if falling in same scope as per the applicable 'Environmental Impact Assessment Notification' ² , and would address the identified environmental impacts.	☒ The CPA has analysed in line with the Environmental Impact Assessment Notification that EIA is not required to be conducted.	PJRCES cross verified the referred Environmental Impact Assessment notification by Govt. of India and confirms that no such environmental impact assessment or analysis is required for the real case CPA technology. Thus, PJRCES concludes that the real case CPA compiles with this eligibility criteria.
16(h)	Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	Demonstrate that no Official Development Assistance (ODA) is being used. CME has checked source of funding from ☐ annual report of CPA	☒ This CPA does not include diversion of ODA. Thus, the condition is met.	The PP has provided declaration by CPA implementer that CPA does not involve any public funding from Annex I parties. Based on the assessment of the above documents,

² <http://envfor.nic.in/legis/eia/eia-2006.htm>



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		implementer ☒ Chartered Accountant certificate ☐ loan approval of CPA project		PJRCES concludes that the real case CPA compiles with this eligibility criteria.
16(i)	Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid connected/ off-grid) and distribution mechanisms (e.g. direct installation);	Supply electricity to grid (NEWNE or southern grid) or supplies electricity to an identified consumer facility via grid through a contractual arrangement such as wheeling ☒ NEWNE ☐ Southern grid	The CPA supplies electricity to NEWNE grid. The condition is met.	The real case CPA is supplying generated electricity to state grid of Rajasthan which comes under the intergrated NEWNE grid. PJRCES concludes that the real case CPA compiles with this eligibility criteria.
16 (j)	Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;	The PoA requires all CPAs to independently monitor all electricity generation sources and no sampling method is applicable.	☒ The CPA will monitor all the renewable power plants in it and no sampling method is used. Thus the condition is met.	The proposed PoA mandate monitoring of all electricity generation sources for all CPAs under the PoA and does not allow any sampling for



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				monitoring. Thus, PJRCES concludes that the real case CPA compiles with this eligibility criteria.
		Consist of one or more renewable energy power projects using wind/solar power energy generation systems.	The CPA consists of 32 number of ☒ wind turbine generators ☐ solar power plant	The real case CPA consist of 32 nos. of WTGs each with 0.8 MW capacity. The same has been verified from supply order dated 30 August 2012 placed by CPA implmter to WTG supplier. Thus, PJRCES concludes that the real case CPA compiles with this eligibility criteria.
		Have a contract of services and cessation of rights with the CME that governs the CPA's participation in the REG-PoA, and comply with the code of conduct of the CME.	☒ CME confirms that this CPA has contractual agreement and has signed to comply with the code of conduct of CME.	The contractual agreement between CME and CPA implementer dated 17 April 2012 has been reviewed and confirms the compliance code of



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				conduct of CME. Thus, PJRCES concludes that the real case CPA compiles with this eligibility criteria.
		Be in line with laws and regulations available at the time of inclusion of the CPA into the PoA.	☒ CPA implementer and ☒ CME confirm that CPA will avail all laws and regulations applicable to it. Condition is met.	The declaration by CPA implementer and CME has been reviewed and PJRCES concludes that the real case CPA compiles with this eligibility criteria.



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4.4 OPERATIONAL, MANAGEMENT AND VERIFICATION PLAN

The CME has established the operation, management and verification plan for the potential CPA inclusion in the proposed PoA in the section C of PoA-DD and section B.7.2 of the CPA-DD. CME has developed questionnaire sheet inline with pre-defined eligibility criteria and assess the potential CPA before proposing the same for inclusion in the PoA/25/. PJRCES confirms the operational, management and monitoring plan mentioned under the section C of PoA-DD and section B.7.2 of the CPA-DD through provided supportive document and observation during site visit, interview with CME's representative and CPA implementer. Thus, PJRCES confirms that the defined operation, management and verification plan for the potential CPA inclusion in the proposed PoA by the CME is inline with requirements under version 02 of "Standard: Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" EB 70, Annex 5/22/.

4.5 PROJECT BOUNDARY

4.5.1 PoA BOUNDARY

As per applied methodology ACM0002, version 13, *"The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to"*; the boundary of the PoA consist geographical area of host country i.e. India and power plants connected to national grid of India. The boundaries (geographically and related to GHG sources / sinks) are correctly given in section A.5 of the PoA-DD.

The description of the emission sources and GHGs that are included in the PoA boundary are as follows:

Emission Sources	GHGs Involved	Description
<u>Baseline Emissions:</u> CO ₂ emissions from electricity generation due to operation of power plants in the existing grid mix that are displaced due to the project activity	CO ₂	The GHG emissions due operation of existing power plants in the grid mix in the absence of PoA.



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<u>Project Emissions:</u> On-site fossil fuel consumption	CO ₂	The GHG emissions due On site fossil combustion (emergency conditions) in the CPA under the PoA.
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According to applied methodology ACM0002, version 13, no leakage emissions are to be considered.

The description of the emission sources and GHGs that are included in the PoA boundary are appropriate for the purpose of calculating project and baseline emissions for each CPA included under the PoA.

The methodology indicates CO₂ as the main GHG sources to be included in the boundary; PJRCES confirms that the justification by the PP is reasonable and evidenced. Besides, there are no other sources which are impacted by the CPAs with eligible technology under the PoA and not addressed by the applied methodology.

4.5.2 CPA BOUNDARY

As per applied methodology ACM0002, version 13, the boundary of the real case CPA under this PoA consist of power plants in the real case CPA and all other power plants physically connected to NEWNE regional grid. Thus, the real case CPA boundary is inline with pre-defined PoA boundary i.e. India The information has been also correctly given in section D.3 of the real case CPA-DD.

The description of the emission sources and GHGs that are included in the CPA boundary are as follows:

Emission Sources	GHGs Involved	Description
<u>Baseline Emissions:</u> CO ₂ emissions from electricity generation due to operation of power plants in the existing grid mix that are displaced due to the project activity	CO ₂	The GHG emissions due operation of existing power plants in the grid mix in the absence of real case CPA.
<u>Project emissions:</u>		The real case CPA being a wind power project does not involve any onsite fossil fuel combustion and does not emits any



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		GHGs during its operation. Thus, no GHG has been considered under project emissions.
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The real case CPA is wind power project and it does not involve any on site fossil fuel combustion. Thus, inline with applied methodology ACM0002, version 13, no project and leakage emissions are to be considered.

The description of the emission sources and GHGs that are included in the real case CPA boundary are appropriate for the purpose of calculating project and baseline emissions for real case CPA to be included under the PoA.

4.6 CREDITING PERIOD AND PoA DURATION

For PoA:

For the proposed PoA, under section D.1 of PoA-DD CME has defined 23 May 2012 as the start date of PoA i.e. the date of publication of the PoA-DD for global stakeholder consultation. PJRCES verified the defined start date from the UNFCCC website and found inline with para 159 of “clean development mechanism project standard” version 02 /5/. The start date of the PoA is the starting date of the whole PoA crediting period. Further, the PoA length/duration is stated in the PoA-DD section D.2 as 28 years, which is found to be inline with para 160 of “clean development mechanism project standard” version 02. Thus, PJRCES concludes that the PoA’s crediting period start date and duration of PoA is deemed appropriate. Further, as CME has defined the eligibility criteria number d) under section B.2 of PoA-DD, which clearly mentioned the requirement that *CPA has a project start date after validation start date of the PoA with documentary evidence*. The same has been found inline with para 160 of “clean development mechanism project standard” version 02/5/.

For CPA:

For the proposed real case CPA, under section A.9.1 of CPA-DD CME has defined 01 March 2013 as the start date of crediting period i.e. the date of registration of PoA. Further, the CME has opted for fixed crediting period of 10 years length/duration for the real case CPA. PJRCES confirm that the defined crediting period start date and duration of crediting period is inline with para 163 of “clean development mechanism project standard” version 02 and is deemed appropriate/5/.



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4.7 ADDITIONALITY ASSESSMENT

4.7.1 ADDITIONALITY OF PROGRAMME OF ACTIVITY

CME has defined that the under the proposed PoA additionality will be assessed at each CPA level. However, CME has demonstrated in the PoA-DD the following:

- PoA is voluntary action by the CME.
- PoA is not implemented in the absence of CDM
- PoA is not implemented under any mandatory policy or regulations of the host country.

The above demonstration for the PoA has been assessed with provided supportive declaration by CME and are found ok.

Additionality of any CPA under the PoA is defined as mandated by the methodology ACM0002, version 13, by using version 7.0 of the “Tool for demonstration and assessment of additionality”/7/

The PoA and its 1st real case CPA additionality carrying out the steps established in the tool and performed “Investment Analysis” detailed below for the 1st real CPA. Each future CPA will follow the same route and “Tool for demonstration and assessment of additionality” will be applied to establish the additionality/7/.

Regarding the application of the additionality tool, the following four steps were followed transparently.

Step 1: Identification of alternative to the project activity consistent with current laws and regulations

Step 2: Investment Analysis

Step 3: Barrier Analysis

Step 4: Common practice analysis

Step 1: Identification of alternative to the project activity consistent with current laws and regulations:

According to sub step 1a) Since, the real case CPA is a greenfield, grid connected electricity generation using renewable energy source (i.e.wind). The applied methodology ACM0002, version 13 specifies the baseline scenario for the project activity 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*



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generation sources, as reflected in the combined margin (CM) calculations described in the *Tool to calculate the emission factor for an electricity system*. Thus, there are only two alternative scenario for the real case CPA which are:

- a) Implementation of the project without CDM incentives
- b) Continuation of current practice, i.e. generation of electricity by the operation of grid connected power plants and by the addition of new generation sources in the existing grid mix.

According to sub step 1 b), the identified alternatives needs to be checked for consistency with mandatory laws and regulations of the host country. The above both scenarios are in compliance with regulatory requirement. PJRCES, based on its local and sectoral expertise, is able to confirm that in the host country, India, the electricity generation through renewable source is not mandatory for any Individual Power Producer (IPP). Further, the grid connected power plants were commissioned only after securing all compliances under Electricity Act, 2003. Thus, PJRCES confirms that the identified alternative scenario are realistic and in compliance with mandatory laws and regulations of host country.

PJRCES, concludes that the PoA and the real case CPA is voluntary action and would lead to reduction in anthropogenic emissions of GHGs by sources below those that would have been occurred in the absence of the propped real case CPA being implemented under the proposed POA.

4.7.2 APPROACH FOR DEMONSTRATING ADDITIONALITY OF CPAs

CME has defined an eligibility criteria number f) to ensure that each CPA meets the requirements pertaining to the demonstration of additionality as specified in the applied methodology ACM 0002, version13. CME has applied latest “Tool for the demonstration and assessment of additionality”version 07 for demonstration of additionality of the CPAs and real case CPA.

In continuation to above section, the Step wise approach for demonstraton of addtionality for the real case CPA is as follows:

Step2: Investment Analysis:

Choice of financial indicator:

CME has selected Equity IRR as suitable financial indicator and Return on Equity as a corresponding benchmark. Both the selected financial indicator and corresponding benchmark are found inline with para 12 of “Guidelines on the assessment of investment



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analysis”, EB 62, annex 5 and suitable for real case CPA/8/. Therefore, the sub-step 2a has been conducted appropriately.

Sub-step 2b resulted in correctly choosing “Option III. Apply benchmark analysis” and applying sub-step 2c (calculation and comparison of financial indicators)

As investment in wind energy could have been done by any entity other than the CPA implementer, the PP has determined the benchmark using publicly available data. PP has chosen post-tax return on equity (ROE) as suitable benchmark for the selected financial indicator (i.e. Equity IRR). Thus, in line with para 13 of EB 62, annex 5/8/.

Benchmark Calculation approach:

Further, for calculation of ROE benchmark, CME has used option a) i.e. selecting the values provided in Appendix A, under para 15 of EB 62, annex 5/8/.

Accordingly, CME has chosen default ROE of 11.75% i.e. for Group 1 projects of India and further converted it into real term value by adding target inflation rate for ten (10) years provided by Reserve Bank of India (RBI) i.e. central bank of host country, India. Thus, CME has considered lowest value of WPI inflation rate for 18th Round (Q3:2011-2012) dated 23 January 2012 (i.e. latest available database at the time of investment decision date 23 March 2012 /15/) which is 4.5% for ten (10) years of period, covering the opted fixed crediting period (i.e. 10 years). Thus, the resultant post tax ROE comes to 16.78%.

Benchmark nominal = $[(1 + \text{Benchmark real}) * (1 + \text{inflation rate})] - 1$

RBI inflation rate	4.5%	http://www.rbi.org.in/scripts/PublicationsView.aspx?id=14022
Real benchmark for Group I projects, India	11.75%	Guidelines on the assessment of investment analysis, EB 62, Annex 5.
Benchmark Nominal	16.78%	Calculated

PJRCES considers the benchmark chosen as appropriate for the project activity as it is derived from values which are standard in the market and do reflect the investment climate in terms of expected revenues and risks associated with the investment in the project activity.

Financial indicator : Input parameters



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The input values for determining the financial indicator of the project activity were validated by PJRCES as follows.

Project Cost: The PP has sourced the project cost for the real case CPA from the MoU dated 13 December 2011 signed between technology provider i.e. Enercon (India) Ltd. (EIL) /14/. The total project cost as per the proposal has been verified. Further, the investment cost considered were further cross checked against the actual supply order dated 30 August 2012 placed by real case CPA implementer to EIL. The comparison and difference between the project cost as per proposal and actual supply order for CPA implementer is as follows:

Based on Proposal (INR Million)	Based on PO (INR Million)	Difference
1424.00	1417.6	0.45%

The difference has been taken care in the sensitivity analysis. Since, the MoU is available at the time of investment decision/15/, hence, the same is accepted as per para 6 of EB 62, annex 5.

Plant Load Factor (PLF): The PP has sourced the PLF value for investment analysis from PLF estimation report, dated 16 March 2012, provided by their contracted third party i.e. M/s Garrad Hassan India Private Limited /18/. The third party ex-ante PLF estimation has been found in line with the requirements of paragraph 03 of the “Guidelines for reporting and validation of Plant Load Factor” EB 48, annex 11/23/. The third party report provided the estimated ex-ante PLF for real case CPA wind farm site as 22.91% /18/.

The analysis by M/s Garrad Hassan India Private Limited was based on analysis of data collected by wind mast on project site and reference wind mast. The PP has used these values to determine the expected generation per annum for the investment analysis.

Tariff Rate: The PP has sourced the tariff rate for the real case CPA from the RERC tariff order dated 14 December 2011. CME has defined the tariff rate of INR 4.46/kWh assumed was fixed for the period of 25 years for project life time. This was cross verified with the referred tariff order. Since, the WTGs under real case CPA is yet to be commissioned, PPA is yet to be signed and actual tariff rate is not available.

O&M Cost: For the financial analysis of the project activity, the PP has sourced the operation and maintenance (O&M) cost from the MoU dated 13 December 2011 signed between technology provider i.e. Enercon (India) Ltd. (EIL) /14/. Since, the WTGs under real case CPA is yet to be commissioned, O&M agreement is yet to be signed and actual O&M cost is not available.



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Assessment period: The assessment period for evaluating the financials is twenty years, in line with lifetime of the project activity, which is in line with the para 3 of EB 62, annex 5. This assumption was based on the RERC tariff order dated 14 December 2011 in which the apex body has assumed 20 years as expected lifetime of WTG, and hence PJRCES considers this assumption to be appropriate.

Salvage value: The PP has used a 5 % of total plant machinery cost plus actual land cost as salvage value to be added back to the revenues at the end of the operating life of WTG. This is as per the Companies Act, 1956 and this follows the EB guidance given in EB 62, Annex 5 /8/.

Minimum Alternative Tax (MAT): MAT rate of 20.01% was used for the real case CPA verified by publicly available data (<http://www.simplerataindia.net/2011/11/income-tax-rate-chart-slab-fy-11-12-ay.html>).

Other parameters: The PP has applied all requisite taxation rules applicable at the time of investment decision/15/. Further the PP has also accounted for incentives such as accelerated depreciation and provisions under 80IA as per Indian Income Tax Act, 1961 .

Financial indicator : Calculations and conclusion

The IRR calculation for real case CPA was provided in spreadsheet /2/. The calculations were verified and found to be correct by PJRCES. The assumptions used in the calculations were deemed to be correct by PJRCES. The Equity IRR without CDM revenue comes to 10.06% against the corresponding ROE benchmark is 16.78%.

The above results clearly demonstrates that the project in the absence of CDM benefits, compared to the respective benchmark is not financially attractive on standalone basis.

Based on above analysis it is PJRCES's opinion that the project activity is not the business as usual scenario and the emission reductions resulting from the successful implementation of the project activity would be additional.

Investment analysis: Sensitivity analysis

The PP has carried out the sensitivity analysis for all costs that amount to more than 20% of it's project cost or the project revenues and provided the same in spreadsheet/2/. The PP has chosen to vary the following parameters to a reasonable variation on both positive and negative side to evaluate the impact they may have on the profitability of their investment.

In-line with para 21 of Annex 5, EB 62, PP justified $\pm 10\%$ as the range of reasonable variation to the project context. The result of sensitivity analysis is summarized below:

Project Cost:



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It was further noted that the Equity IRR with -10% variation in project cost comes to 13.03% which is still below than benchmark. The investment costs were taken by the PP from the techno-economical offer submitted by the technology provider.

The Equity IRR will cross the benchmark only with -19 % variation in the project cost. However, the actual variation in the MoU and actual project costs as per the confirmed supply order/purchase orders placed by the PP /20/ is in the range of 0.45%.

Hence, it is PJRCES's observation that probability of any further variation in project cost is not possible. Thus, project will continue to be additional.

PLF:

PP has sourced the PLF value of 22.91% from the PLF estimation report by their contracted third party (i.e. M/s Garrad Hassan India Private Limited) to carry out investment analysis for the project activity. The Equity IRR with +10% variation in the considered PLF comes to 12.89%. The Equity IRR will cross the benchmark only with +23% variation in the PLF. The considered PLF of 22.91% is much higher than the recommended PLF of 21% in the RERC tariff order dated 14 December 2011. Thus, the considered PLF is conservative. Hence, PJRCES considers the probability of + 24.39% and more increase in PLF, consistently each year throughout the life time of project activity is highly unlikely scenario.

Tariff rate:

PP has considered tariff rate of INR 4.46/kWh fixed for 25 years of project life time sourced from RREC tariff order dated 14 December 2011. Since, tariff rate is major parameter for project revenue and actual PPA is yet to be executed, CME has conducted sensitivity analysis for the same. The Equity IRR with +10% variation in the considered tariff rate comes to 12.89%. The Equity IRR will cross the benchmark only with +23 % variation in the tariff rate. Since, as per RERC tariff order tariff rate has already fixed for 25 years. Hence, PJRCES considers the probability of + 23% and more increase in tariff rate, consistently each year throughout the life time of project activity is highly unlikely scenario.

O & M Cost:

PP has considered O and M cost of INR 20.32 million/annum for investment analysis. The Equity IRR with -10% variation in the considered O and M cost comes to 10.44%. The Equity IRR will cross the benchmark only with -217 % variation in the O and M cost. Hence, PJRCES considers the probability of – 217% and more decrease in O and M cost consistently each year throughout the life time of project activity is highly unlikely scenario.

Barrier Analysis:



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In case the investment analysis including the sensitivity analysis, the 2nd step of the tool, does not provide a valid result establishing additionality, the CPA-DD shall provide a "Barrier Analysis" in line with the tool. As the investment analysis of the 1st real case CPA was conclusive – the CPA is additional as its IRR is below the benchmark – no barrier analysis has been conducted.

The PoA-DD description of the Barrier Analysis is accurate and correctly refers to the use of "Guidelines for objective demonstration and assessment of barriers" in case the barrier analysis is applied.

Common practice analysis:

Step 4 of latest "Tool for the demonstration and assessment of additionality" version 07 has been applied as credibility check for each CPA under the PoA. CME has referred "Guidelines on common practice", version 02, EB 69, annex 08 for demonstration of common practice analysis for real case CPA.

The real case CPA is renewable energy project of 25.6 MW located in the Rajasthan state of India. CME has provided the spreadsheet for the database referred to demonstrate common practice analysis. Thus, CME has defined the following for real case CPA to demonstrate common practice analysis:

Geographical area: Rajasthan state

Applicable capacity: Renewable power plant implemented to generate electricity with output capacity in the range of 12.8 MW to 38.4 MW before 23 May 2012 i.e. date of publication of real case CPA-DD for global stakeholders consultation. CME has sourced the above required database from the Rajasthan Renewable Energy Corporation Limited (RRECL) website which is state nodal agency of Rajasthan state. Thus, the referred database is authentic and reliable. As per the available database on RRECL website, there were, PJRCES assessed the provided database and confirms that there are a total of 22 projects observed (5 hydro, 3 solar&biomass and 14 wind). Taking into consideration that 12 out of 14 wind projects are CDM project activities, hence remaining $N_{all} = 8$ (Hydro: 5, wind: 02, Solar: 0, Biomass:1). Further, out of the above identified renewable project, plant with different technologies than the real case CPA were determined as $N_{diff} = 6$. Thus, the factor has been calculated as follows:

$$F = 1 - (6 / 8) = 0.25$$

As $F = 0.25$ which is higher than 0.2 and $N_{all} - N_{diff}$ less than 3 as specified by the tool, thus not satisfying both the conditions of paragraph 10 of "Guidelines on common practice" version 02. Hence, it is assessed that the project activity is not a common practice in the host country India.

The DOE's validation opinion is that any proposed CPA can be identified as "common practice" or "not common practice" by applying step 4 of the "Tool for the demonstration



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and assessment of additionality”, version 07.0. This common practice step will be conducted in the future for each CPA at the time of CPA inclusions.

Based on the above presented analysis, it is PJRCES’s opinion that the project activity is not financially viable without carbon revenue and is additional. Thus all emission reductions achieved from the project activity are above the business as usual scenario.

4.8 MONITORING PLAN

For PoA:

The typical CPAs to be included in the proposed PoA consist of greenfield, large scale renewable power generation plants using wind or solar technology thus, monitoring plan for the applicable parameter has been defined. The monitoring of the parameters involved in the emission reductions has been established in a transparent and clear way. The monitoring plan will give opportunity for real measurements of achieved emission reductions. Thus, PJRCES confirms that the applicable monitoring parameters are clearly described and the means of monitoring described in the plan complies with the applied methodology ACM0002, version 13 requirements.

For CPA:

Wind

The project activity applies the monitoring methodology ACM 0002 version 13 for the monitoring of emission reductions. The emission reductions are calculated by multiplying the net energy exported by the project activity with the calculated respective connected regional combined margin grid emission factor. Therefore the monitoring plan includes monitoring of electricity exported to the NEWNE grid and electricity imported from the NEWNE grid. Details of the data collection and frequency of data recording and associated formats are described in the CPA-DD and observed to be adequate.

PJRCES has carried out site visit for real case CPA001 titled ”Wind Power Project at Bakhraani, Rajasthan” of 25.6 MW capacity. The proposed CPA consists of 32 Wind Turbine Generator (WTGs) each having capacity if 0.8 MW. The net electricity that shall be exported to the NEWNE grid of India by the real case CPA-1 annual average is 50,933 MWh. The emission reductions have been calculated to be annual average 48,585 tCO₂.

Solar

The project activity applies the monitoring methodology ACM0002 version 13 for the monitoring of emission reductions. The emission reductions are calculated by multiplying the net energy exported by the project activity with the calculated respective connected regional combined margin grid emission factor. Therefore the monitoring plan includes monitoring of electricity exported and imported from the NEWNE or Southern grid of India. Further, the monitoring plan for calculating project emissions due to fossil fuel



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combustion has also been defined. Details of the data collection and frequency of data recording and associated formats are described in the generic CPA-DD solar template version 03 and observed to be adequate.

4.8.1 METHODOLOGICAL CHOICES AND EQUATIONS TO BE USED FOR CALCULATION OF EMISSION REDUCTIONS OF A CPA

For both type of CPAs (Wind and Solar):

As per the applied methodology ACM0002 version 13, emission reductions shall be calculated as follows:

$$ER_y = BE_y - PE_y$$

Where

ER_y = Emission reductions in year y (tCO₂/year)

BE_y = Baseline emissions in year y (tCO₂/year)

PE_y = Project emissions in year y (tCO₂/year)

Baseline Emissions:

As per the applied methodology ACM 0002 version 13, baseline emissions include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

where

BE_y = Baseline emissions in year y (tCO₂)

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh)

$EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO₂/MWh)



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The project falls under *Greenfield renewable energy power plants* as per the applied methodology and hence the calculation of emission reduction has been defined as following:

If the project activity is the installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity, then:

$$EG_{PJ,y} = EG_{facility,y}$$

where

$EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)

$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh)

Project emissions

For most renewable power generation project activities, $PE_y = 0$. However, some project activities may involve project emissions that can be significant. These emissions shall be accounted for, by using the following equation:

$$PE_y = PE_{FF,y}$$

Where

PE_y = Project emissions in year y (tCO₂e/ yr)

$PE_{FF,y}$ = Project emissions from fossil fuel consumption in year y (tCO₂/ yr)

If any fossil fuel is used for the projects e.g. solar thermal power plant, CO₂ emissions from the combustion of fossil fuels shall be accounted for as project emissions ($PE_{FF,y}$).

$PE_{FF,y}$ will be calculated as per the latest version of the “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion”.

Leakage

No leakage emissions are considered. The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g.



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extraction, processing, transport). These emissions sources are neglected which is in line with the applied methodology ACM0002 version 13.

In summary, the GHG calculations are complete and transparent, and their accuracy has been verified. No other project emission or leakage sources contributing more than 1% and not mentioned by the methodology have been found.

For real case CPA (wind):

The net electricity supplied ($EG_{PJ,y}$) to the NEWNE grid of India has been calculated based on the net electricity supplied to NEWNE grid, Plant Load Factor, Annual operating hours and applying derating factor 1.25% in 6th, 10th, 14th, 18th years of operation. The emission reductions have been calculated based on the electricity supplied to the grid and emission factor of the NEWNE grid. The annual average emission reductions have been calculated as 48,585 tCO₂.

4.8.2 PARAMETERS DETERMINED EX-ANTE

For both type of CPAs (Wind and Solar) and real case CPA (wind):

The combined margin emission factor is determined ex-ante based on the most recent information available at the time of PoA-DD submission. The combined margin emission factor for the NEWNE and Southern grid of India has been calculated (based on 75:25 weighted) to be 0.9528 tCO₂e/MWh and 0.8970 tCO₂e/MWh respectively, sourced from the Central Electricity Authority CO₂ Baseline database version 07. The Central Electricity Authority, Ministry of Power, Government of India has published database of carbon dioxide emission factors from the power sector in India based on detailed authenticated information obtained from all operating power stations in the country.

PJRCES has verified the value used against the sources, calculation and concluded that the data used are appropriate and conservative.

4.8.3 PARAMETERS DETERMINED EX-POST

As per the applied methodology, the data required to be monitored is the *Quantity of net electricity generation supplied by the project plant/unit to the grid in year y*. The power imported and exported to the grid is measured at the substation by meters. The data shall be sourced from the “joint meter reading” or break up sheet provided by the power purchaser. The net electricity supplied data shall be cross checked with the help of records for sold electricity. The meters shall have accuracy class of either 0.5 or 0.2 based



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on the location of meters in India. The calibration of the meters shall be done on annual basis.

4.8.4 MANAGEMENT SYSTEM AND QUALITY ASSURANCE FOR MONITORING AND REPORTING

For both type of CPAs (Wind and Solar):

Details of the data to be collected, the frequency of data recording and its format, responsibilities and authorities for project management, procedures for monitoring and reporting, QA/QC procedures, procedures for calibration of metering equipment and procedures for training and maintenance shall be defined at the time of CPA inclusion.

The monitoring is considered to meet the current good practice in the industry and it is judged that the use of monitoring methodology is appropriate. The operational and management structure that will be implemented in order to monitor ER has also been suitably addressed.

All data will be archived electronically and with paper backup, and be kept at least for 2 years after the end of the last crediting period. All these shall also be further verified during verification. The operator will collect the data for the monitoring plan and the plant manager will verify the correct application of the operating procedures as given in the monitoring plan.

The application of the monitoring methodology is transparent and PJRCES considers that the project participants are able to implement the monitoring plan.

For real case CPA (wind):

The RVPN/Discom will carry out calibration, periodical testing, sealing and maintenance of meters in the presence of authorized representative(s) of the seller and the representative(s) of the seller shall sign on the results thereof. The meters at substation shall be calibrated once in a year. Records of calibration will be maintained for verification.

Details of the data to be collected, the frequency of data recording and its format, responsibilities and authorities for project management, procedures for monitoring and reporting, QA/QC procedures, procedures for calibration of metering equipment and procedures for training and maintenance have been elaborated in the monitoring plan defined in the final CPA-DD. All indicators of importance for controlling and reporting of project performance are incorporated in the monitoring plan.

The O&M team at the site will be responsible for the operation and maintenance of the WTGs in accordance with the quality instructions and operation and maintenance manuals of the technology supplier. On a daily basis, a production report will be



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generated, giving the details of the daily and accumulated production for each WTG at the controller, daily WTG and grid availability and details of stoppages. The process/monitoring system was confirmed during the site visit through interview with WTGs supplier's (EIL) representative (since real case CPA is yet to be implemented).

EIL have quality management systems in place that account for the identification and conduct of training to bridge the gaps with respect to competence.

The monitoring is considered to meet the current good practice in the industry and it is judged that the use of monitoring methodology is appropriate. The operational and management structure that will be implemented in order to monitor emission reductions has also been suitably addressed.

All data will be archived electronically and with paper backup, and be kept at least for 2 years after the end of the last crediting period. All these shall also be further verified during verification. The operator will collect the data for the monitoring plan and the plant manager will verify the correct application of the operating procedures as given in the monitoring plan.

The validation team evaluated the relevant monitoring procedures provided in real case CPA-DD with the requirements of the monitoring methodology. The monitoring arrangements described are feasible within the project design and PJRCES confirms the ability of the PP to implement the monitoring plan. The institutional arrangement with respect to data collection and archiving was confirmed during the site visit. Furthermore, the case CPA-DD states that all the monitored data will be archived electronically for a period of 2 years after the crediting period or issuance, whichever is later.

The application of the monitoring methodology is transparent and PJRCES considers that the project participants are able to implement the monitoring plan.

4.9 ENVIRONMENTAL IMPACTS

For PoA:

In the section E.1 of PoA-DD, CME has mentioned that environmental impact analysis and environmental impact assessment will be done at CPA level. The proposed PoA involves only wind and solar power project for which environmental impact analysis or assessment is not required by host country. Further, as per Government of India (host country) notification, dated September 14, 2006 the Environmental Impact Assessment (EIA) for the project category is not required/11/. However, in the PoA-DD it is clearly defined that CME will conduct the environmental impact assessment/analysis for any specific CPA if the current EIA notification revised and required for the same. Further, CME has defined the eligibility criteria number g) for the environmental impact analysis/assessment check for each CPA inclusion under the proposed PoA.



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For CPA:

The real case CPA under the PoA is large scale wind power project and as per Government of India (host country) notification, dated September 14, 2006 the Environmental Impact Assessment (EIA) for the project category is not required /11/. Thus, PP has not carried out EIA to assess environmental impacts including transboundary impacts any for real case CPA.

Since, the real case CPA involves greenfield, renewable electricity generation through wind power project PJRCES confirms that, CPA operation will not have any negative environmental impact.

4.10 COMMENTS BY LOCAL STAKEHOLDERS

For PoA:

CME has clearly defined under section F of the PoA-DD that the local stakeholder consultation meeting will be conducted at CPA level. Further, since the local stakeholders and location, capacity of each CPA under the PoA is varies on case to case basis. Thus, the choice of conducting local stakeholder consultation at CPA level under section F.1 of PoA-DD is justified.

For CPA:

Since, CME has defined that the local stakeholder consultation meeting will be conducted at CPA level. CPA implementer has carried out local stakeholder consultation meeting on 04 May 2012 at Enercon BHU GSS Pooling station. CPA implementer has published public invitation notice in local news paper “Nafa-Nuksan” on 25 April 2012 in national language (i.e.Hindi). CPA implementer welcomes to all stakeholder during meeting and informed them about project activity, CDM revenue and request stakeholders to submit their views. PP has incorporated the summary of comments received during the stakeholder consultation meeting and also informaton on how the *due account was taken of the comments received* under section C.2 of CPA-DD.

PJRCES has assessed the supportive documents for stakeholder consultation meeting (invitation letters, Minutes of meeting, attendance sheet, photographs) and further verified the same through stakeholders interview during site visit /12/.

Thus, PJRCES considers the local stakeholder consultation carried out adequate.



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4.11 COMMENTS BY PARTIES, GLOBAL STAKEHOLDERS AND NGOS

The F- CDM-PoA-DD dated 22 May 2012, the specific F-CDM-CPA-DD wind power project with generic information relevant to all CPAs to be included in this PoA and the F-CDM-CPA-DD for the real case CPA with the title “Promotion of renewable energy generation in India- Programme of Activities” were made publicly available on UNFCCC’s website (<http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/DRT35R0N987GB2AKUK886QYJCCY7QY/view.html>) and Parties, stakeholders and NGOs were invited to provide comments during a 30 days period from 23 May 2012 to 21 June 2012.

No comment was received and during the above mentioned consultation period. Thus, no further action required to take due account of the same.



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5 VALIDATION OPINION

“Perry Johnson Registrar Carbon Emissions Services, Inc (PJRCES) has performed a validation of the PoA titled “Promotion of renewable energy generation in India - Programme of Activities” and real case CPA titled “Wind Power Project at Bakhrani, Rajasthan” CPA001. The validation was performed on the basis of UNFCCC criteria for the Clean Development Mechanism and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The review of the PoA-DD, generic CPA-DD wind, generic CPA-DD solar, real case CPA-DD and the subsequent follow-up interviews have provided PJRCES with sufficient evidence to determine the fulfillment of stated criteria.

The host country is India and no Annex I country has been identified. The Host country fulfills the participation criteria and has approved the project and authorized the project participants. The DNA from India confirmed that the PoA and real case CPA assists in achieving sustainable development of host country.

The PoA and real case CPA had correctly applies “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, ACM0002, version 13.

The goal of PoA is the promotion of development of renewable energy generation plants in India which supply the generated electricity to connected regional grid of India. By utilizing a renewable form of energy source the CPAs under the PoA would avoid carbon dioxide emissions associated with generation of equivalent amount of electricity from current mix of non-renewable energy sources and supposed capacity expansions. The PoA will help reduce the CDM project development cost and reduce timeline to monetize CDM revenue compared to a standalone CDM project activity. The PoA has selected crediting period of 28 years.

Adequate training for O and M personals and monitoring procedures, operational and management procedure, roles and responsibility for monitoring as monitoring plan have been established by the CME.

In summary, it is PJR CES’s opinion that the PoA titled “Promotion of renewable energy generation in India - Programme of Activities” described in the version 03 of the PoA-DD, generic CPA-DD wind template and generic CPA-DD Solar template dated 06 December 2012, meets all relevant UNFCCC requirements for the CDM programme of activities, all



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relevant host country criteria and correctly applies the baseline and monitoring methodology ACM0002, Version 13. PJRCES thus requests the registration of the PoA.

For real case CPA:

The real case CPA is installation 25.6 MW wind power project consist of thirty two (32) Wind Turbine Generator (WTG) each with 0.8 MW capacity in Rama and Bhakhrani village of Jaisalmer District, Rajasthan, India. The generated electricity is being sold to the grid of Rajasthan State, which is part of NEWNE Regional Grid of India. By utilizing a renewable form of energy source the project activity would avoid carbon dioxide emissions associated with generation of equivalent amount of electricity from current mix of non-renewable energy sources and supposed capacity expansions. The real case CPA results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the real case CPA are additional and would not occur in the absence of real case CPA.

The total emission reductions from the real case CPA are estimated to be on the average 48,585 tCO₂e per year over the selected 10 years of fixed crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

Adequate training for O and M personals and monitoring procedures, operational and management procedure, roles and responsibility for monitoring as monitoring plan have been implemented by the CME.

Further, it is PJR CES's opinion that the real case CPA-DD is complete, in line with PoA-DD, generic CPA-DD wind template and meets all relevant UNFCCC requirements for for the CDM programme of activities, all relevant host country criteria criteria and correctly applies the baseline and monitoring methodology ACM0002, Version 13.

Further, the real case CPA titled "Wind Power Project at Bakhrani, Rajasthan" CPA001 as described in the version 03 of the real case CPA-DD consistent with eligibility criteria defined in the PoA-DD and generic CPA-DD wind. PJRCES thus requests the registration of inclusion of the first real case CPA 001 under the PoA titled "Promotion of renewable energy generation in India - Programme of Activities".



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6 REFERENCES

/1/	PoA-DD, generic CPA-DD wind template, generic CPA-DD solar template, real case CPA-DD version 03 dated 06 December 2012 and all previous versions.
/2/	for real case CPA 001 Spreadsheets of IRR calculation analysis, Sensitivity analysis, common practice analysis sheet
/3/	“Consolidated baseline methodology for grid-connected electricity generation from renewable sources” ACM 0002, version 13
/4/	“Clean development mechanism validation and verification standard” version 03, EB 70, Annex 03
/5/	“Clean development mechanism project standard” version 02, EB 70, annex 02
/6/	Glossary of CDM terms, version 07, EB 70 annex 07
/7/	“Tool for demonstration and assessment of additionality”, version 07, EB 70 annex 08
/8/	“Guidelines on the Assessment of Investment Analysis”, version 05, EB 62, Annex 5
/9/	Site visit documents (Opening & Closing meeting, Attendance sheet, Photographs)
/10/	Letter of Approval from Indian Designated National Authority (DNA) For PoA dated 12 December 2012, Ref. No: 4/16/2012-CCC and For real case CPA 001 dated 21 December 2012, Ref. No: 4/15/2012-CCC
/11/	Environmental Impact Assessment Notification, S.O. 1533, dated 14 September 2006, Ministry of Environment and Forests, Govt. of India, http://envfor.nic.in/legis/eia/so1533.pdf
/12/	Proof of local stakeholder consultation process dated 04/05/2012 - Public notice published in local news paper as invitation to local stakeholders dated 25 April 2012 for local stakeholder consultation meeting. - Minutes of Meeting. - Attendance sheet and Photographs
/13/	Supply /Purchase Orders for WTGs placed by Renew Wind Power Private Limited (i.e.real case CPA implementer) to EIL dated 30 August 2012
/14/	MoU signed between the Renew Wind Power Private Limited and EIL dated 13 December 2011
/15/	Minutes of Meeting by the Board of Directors of Renew Wind Power Private Limited dated 09 December 2011 and 23 March 2012.
/16/	“Programme Design Document Form For CDM Programmes of Activities (F-CDM-PoA-DD)”version 02, EB 66 annex 02
/17/	Guidelines for completing the programme design document form for CDM programmes of activities, version 03.1



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/18/	Third party PLF report dated 16 March 2012: Ex-ante estimation of PLF by contracted third party i.e. M/s. Garrad Hassan India Private Limited for real case CPA's proposed wind farm site
/19/	"Component project activity design document form (F-CDM-CPA-DD)", version 02
/20/	Guidelines for completing the component project activity design document form, version 01, EB 66, Annex 16
/21/	Central Electricity Authority (CEA), CO ₂ emission database ,version 07
/22/	<i>"Standard: Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities"</i> version 02 , EB 70 Annex 05
/23/	Guidelines for reporting and validation of Plant Load Factor" EB 48, annex 11
/24/	CME's Operation and management plan for PoA
/25/	CME's questionnaire sheet inline with pre-defined eligibility criteria for each CPA



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APPENDIX A

PoA VALIDATION PROTOCOL



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Table 1 Mandatory Requirements for Clean Development Mechanism (CDM) Programme of Activities

Requirement	Reference	Conclusion
About Parties		
1. The programme shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3.	Kyoto Protocol Art.12.2	OK
2. The programme shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC.	Kyoto Protocol Art.12.2.	OK
3. The programme shall have the written approval of voluntary participation from the designated national authority of each Party involved.	Kyoto Protocol Art. 12.5a, CDM Modalities and Procedures §40a	CL#01
4. The programme shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof.	Kyoto Protocol Art. 12.2, CDM Modalities and Procedures §40a	CL#01
5. In case public funding from Parties included in Annex I is used for the programme, these Parties shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties.	Decision 17/CP.7, CDM Modalities and Procedures Appendix B, §2	CL#02
6. Parties participating in the CDM shall designate a national authority for the CDM.	CDM Modalities and Procedures §29	OK
7. The host Party and the participating Annex I Party shall be a Party to the Kyoto Protocol.	CDM Modalities §30/31a	OK
8. The participating Annex I Party's assigned amount shall have been calculated and recorded.	CDM Modalities and Procedures §31b	No Annex I Party Identified.



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Requirement	Reference	Conclusion
9. The participating Annex I Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7.	CDM Modalities and Procedures §31b	No Annex I Party Identified.
About Design of programme		
10. The CDM-POA-DD sets a framework for the implementation of the PoA and defines unambiguously a CPA under the PoA.	PoA Standard EB 65 Report Annex 3, Paragraph 14	OK
11. The coordinating/managing entity shall be identified.	PoA Standard EB 65 Report Annex 3, Paragraph 13	OK
12. The boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all CPAs included in the PoA will be implemented is defined.	PoA Standard EB 65 Report Annex 3, Paragraph 14(a)	OK
13. Eligibility criteria are defined for inclusion of a project activity as a CPA under the PoA, which shall include criteria for demonstration of additionality, and the type and/or extent of information (e.g. criteria, indicators, variables, parameters or measurements) that shall be provided by each CPA in order to ensure its eligibility.	PoA Standard EB 65 Report Annex 3, Paragraph 14(d),(e),(f)	OK
14. The length of the PoA is not exceeding 28 years.	To be filled	OK
15. The operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA is described, including a description of a record keeping system for each CPA under the PoA, a system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another PoA, the provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA.	PoA Standard EB 65 Report Annex 3, Paragraph 14(g)	OK
16. The proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of emission reductions achieved by CPAs under the PoA is	PoA Standard EB 65 Report Annex 3,	OK



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Requirement	Reference	Conclusion
described. In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA there is a transparent system defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA.	Paragraph 14(J) & Paragraph 27	
For large-scale projects only		
17. Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with procedures as required by the Host Party shall be carried out.	CDM Modalities and Procedures §37c	OK
About small-scale project activities (if applicable)		
18. The PoA shall define meet the eligibility criteria for small scale CDM project activities set out in § 6 (c) of the Marrakech Accords and shall not be a debundled component of a larger project activity.	Simplified Modalities and Procedures for Small Scale CDM Project Activities §12a,c	NA
About Additionality		
19. Additionality of the programme as a whole is demonstrated because in the absence of the CDM i) The proposed voluntary measure would not be implemented, or ii) The mandatory policy/regulation would be systematically not enforced and that noncompliance with those requirements is widespread in the country/region, or iii) The PoA will lead to a greater level of enforcement of the existing mandatory policy regulation.	Kyoto Protocol Art. 12.5c, CDM Modalities and Procedures §43 PoA Procedures EB 55 , Annex 38, Paragraph 2 (e)	OK
20. Additionality of a typical CPA is demonstrated by using the procedure provided in the baseline and monitoring methodology applied.	PoA Procedures EB 55 , Annex 38, Paragraph 2 (f)	OK
About stakeholder involvement		



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Requirement	Reference	Conclusion
21. Comments by local stakeholders shall be invited, a summary of these provided and how due account was taken of any comments received.	CDM Modalities and Procedures §37b	☐ Analysis at PoA level ☒ Analysis at CPA level
22. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available.	CDM Modalities and Procedures §40	OK
About application of baseline and monitoring methodology		
23. The baseline and monitoring methodology shall be previously approved by the CDM Executive Board.	CDM Modalities and Procedures §37e	OK
24. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies & circumstances.	CDM Modalities and Procedures §45c,d	OK
25. The baseline methodology shall exclude to earn CERs for decreases in activity levels outside the project activity or due to force majeure.	CDM Modalities and Procedures §47	OK
26. The project design document shall be in conformance with the UNFCCC CDM-PoA-DD format.	CDM Modalities and Procedures Appendix B, EB Decision	OK
27. Provisions for monitoring, verification and reporting shall be in accordance with the modalities described in the Marrakech Accords and relevant decisions of the COP/MOP.	CDM Modalities and Procedures §37f	OK
About forecast of emission reductions		
28. The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change.	Kyoto Protocol Art. 12.5b	OK
About environmental impacts		
Documentation on the analysis of the environmental impacts of the project activity, including transboundary impacts, shall be submitted, and, if those impacts are considered significant by the project participants or the Host Party, an environmental impact assessment in accordance with	CDM Modalities and Procedures §37c	OK



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PoA VALIDATION REPORT

Requirement	Reference	Conclusion
procedures as required by the Host Party shall be carried out.		



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PoA VALIDATION REPORT

Table 2: Requirements Checklist

CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
A. General description of small-scale programme of activities (PoA)				
A.1 Title of the small-scale programme of activities (PoA):				
A1.1. Are title, current version number and the date of document completion given in section A.1 of the PoA-DD?	Yes, section A.1 of PoA-DD clearly provides title as “Promotion of renewable energy generation in India-Programme of Activities”, version 01.1 dated 22/05/2012	CDM-PoA-DD, Version 01.1	OK	OK
A.2 Description of the small-scale programme of activities (PoA):				
A.2.1 Does the PoA-DD sufficiently cover all the relevant elements of the following: i) General operating and implementing framework of PoA. ii) Policy/measure or stated goal of the PoA	Based on the review of CDM-PoA-DD, dated 22/05/2012, PJRCES has following observations: i) PP has clearly mentioned the detailed information on General operating and implementing framework of PoA under section A.2 of CDM-PoA-DD. PP has defined General Carbon Advisory Services Pvt. Ltd. Mumbai as CME for the PoA. ii) PP has incorporated information on Policy/measure or stated goal of the PoA under section A.2 of PoA-DD. • However, the provided description is	CDM-PoA-DD, Version 01.1	OK	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
iii) Confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity.	inadequate with respect to what are the existing policies/measures for the technologies that would be covered under the PoA and how it affects the goal of the PoA. Further, the reference for applicable Government policies is incorrect. Moreover, PP has ambiguously defined the policy/measures or stated goal of the PoA. iii) PP is requested to justify the statement that “There are no mandatory requirements in India enforcing the renewable power generation” Furthermore, PP is requested to clarify on the CDM Consideration at the time of announcement of PoA.			
A.2.2 Does the PoA-DD include following information? i) Coordinating or managing entity of the PoA as the entity which communicates with the Executive Board. ii) Project participants being registered in relation to the PoA. Project participants may or may not be involved in one of the CPAs	Based on the review of CDM-PoA-DD dated 22/05/2012, PJRCES has following observations: i) It is clearly defined that PP has defined General Carbon Advisory Services Pvt. Ltd. Mumbai as CME for the PoA and also the entity which communicates with the Executive Board. ii) PoA-DD identifies GC as the project participants. However, the information on	CDM-PoA-DD, Version 01.1	~~CL#01~~	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
related to the PoA.	identified Project participants may or may not be involved in one of the CPAs related to the PoA is inadequate. Further, the name of CME as mentioned in section A.3 of PoA-DD is internally inconsistent with the name provided in Annex 1 of the CDM-PoA-DD. PP is requested to clarify the same and maintain consistency throughout the CDM-PoA-DD.			
A.2.3 What category does the project activity fall under: i) Large scale CDM PoA ii) Small Scale CDM PoA	PP is requested to clarify the scale of the proposed CDM PoA in the PoA-DD.	CDM- PoA-DD, version 01.1 CDM -CPA-DD, version 01.1	CL#01	OK
A.3 Coordinating/managing entity and participants of CDM-POA:				
A.3.1 Does the following information shall be included in PoA-DD: i) Which Parties and project participants are participating in the programme? ii) Has the coordinating/managing entity of the programme been identified? iii) Is it evident that the coordinating	i) The section A.4 of CDM-PoA-DD, version 01.1 identifies India as party and General Carbon Advisory Services Pvt. Ltd. Mumbai as project participants for the programme. ii) Yes, GC has been identified as CME for CDM-PoA. iii) Yes, it is clearly defined in the CDM-	CDM- PoA-DD, version 01.1	CAR #1	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
or managing entity of the PoA is the entity which communicates with the Executive Board (EB)? iv) Have all involved Parties provided a valid and complete letter of approval (LoA) and have all private/public programme participants been authorized by an involved Party? v) Does the LoA confirm the following: - Ratification of the Kyoto Protocol - Voluntary participation - The CDM project activity contributes to Host country's sustainable development - Title of the programme of activity is same as the PoA-DD sent for registration. vi) Is the LoA conditional to a specific version of PoA-DD or the	PoA-DD that CME i.e. GC will communicate with EB. iv) PJRCES has requested written approval from respective DNA's of Parties to confirm participation of programme participants (PP) involved in the PoA.- CAR # 1. v) LoA from Parties involved in programme is yet to be obtained. • PJRCES visited UNFCCC website and confirmed that India has ratified Kyoto Protocol on 26 August 2002. • To be confirmed from LoA • To be confirmed from LoA of host Party i.e. India • To be confirmed from LoA vi) To be confirmed from LoA			



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
validation report? vii) Has it been checked that if there is public funding for the programme from Parties in Annex I, this funding shall not be a diversion of official development assistance? viii) Has the host Party confirmed that the programme assists it in achieving sustainable development?	vii) PP is requested to justify the claim under the Annex 2 of the CDM-PoA-DD that "The PoA does not involve diversion of ODA or public funding from Annex 1 countries". viii) LoA is yet to be obtained.			
A.4 Technical description of the small-scale programme of activities:				
A.4.1 Location of the programme of activities:				
i) Does the information provided on the location of the programme allow for a clear definition identification of the boundary for the PoA in terms of a geographical area? ii) Is the consideration of all applicable national and/or sectoral policies and regulations of each host country within the boundary evident and substantiated?	i) Section A.5 of CDM-PoA-DD, defines the geographical boundary of the CDM-PoA as geographical boundary of host country India covering all the states ad union territories. The CPAs that will be included under the CDM-PoA will be within the defined geographical location as defined in CDM-PoA-DD. ii) Yes, in the section A.5 of the CDM-PoA-DD , PP has clearly mentioned that all the CPAs will be implemented considering the all applicable national/sectoral policies and regulations	CDM- PoA-DD, version 01.1	OK	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
iii) Is/are the Host Party(ies) stated?	within the respective states and union territories of India. iii) Yes, India has been defined as the host Party.			
A.4.2 Description of a typical small-scale CDM programme activity (CPA):				
A.4.2.1 Technology or measures to be employed by the CPA:				
i) Does the PoA-DD, transparently discuss the technology to be used by a typical CPA? ii) Is it unambiguously stated which technology or measures are to be employed by the CPA? iii) Does the implementation of the project activity require any technology transfer from Annex-I-countries to the host country (ies)? iv) Is the technology implemented by the project activity environmentally safe?	i) Yes, the section A.6 of PoA-DD, clearly defined the technology for the CPAs (i.e. Wind power and electricity generation from Solar using Solar PV technology and Solar Thermal technology) which would be included under the PoA. ii) Yes, the section A.5 of the CPA-DD clearly mentioned that the CPA is using Wind Power technology for electricity generation. The same is found inline with section A.6 of PoA-DD. iii) The PoA-DD and the CPA-DD has not mentioned any information on technology transfer from Annex-I-countries to the host country.- CL 2 iv) The section A.6 of PoA-DD and section	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1	CL #2	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
v) Does the programme make provisions for meeting training and maintenance needs?	A.5 of the CPA-DD has clearly mentioned that the technology under the PoA is not discharging any harmful effluents and emissions in the environment during its operation throughout its life time. v) Yes, CME has established operational, management plan to review and identify training and maintenance needs for any CPA under the PoA			
A.4.2.2 Eligibility criteria for inclusion of a any typical CPA in the PoA, Para 14(a)-(l) of EB65, Annex3.:				
1. The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA	The eligibility criteria number a) mentioned under section B.5 of the PoA-DD clearly defined that each CPA to be included must be located within the boundary of PoA (i.e. India)	CDM- PoA-DD, version 01.1,	OK	OK
2. Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	The eligibility criteria number b) mentioned under section B.5 of the PoA-DD clearly defined that each CPA to be included in the PoA will be given unique identification number by CME to avoid double counting. However, unique identification number for the CPA-DD titled Wind Power Project at Bakhrani, Rajasthan has not been mentioned.- CAR # 2	CDM- PoA-DD, version 01.1,	CAR #2	OK
3. The specifications of technology/measure	The eligibility criteria number c) mentioned	CDM- PoA-	OK	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
including the level and type of service, performance specifications including compliance with testing/certifications;	under section B.5 of the PoA-DD clearly defined that each CPA will deploy only wind power or solar power technology for electricity generation and supply the same to connected electricity system.	<i>DD, version 01.1,</i>		
4. Conditions to check the start date of the CPA through documentary evidence;	The eligibility criteria number d) mentioned under section B.5 of the PoA-DD clearly defined that each CPA should demonstrate with documentary evidence that the start date of the CPA is after the start date of validation of the PoA.	<i>CDM- PoA-DD, version 01.1,</i>	OK	OK
5. Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	The eligibility criteria number e) mentioned under section B.5 of the PoA-DD clearly defined that each CPA should use methodology ACM0002 and meet all the applicability criteria. However, the name of applied methodology is incorrect in the compliance of CPA column. – CAR # 3	<i>CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, generic CPA-DD template</i>	~~CAR # 3~~	OK
6. The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in sub-section A under Section “III. Requirements” of EB65, Annex3;	The eligibility criteria number f) and its respective condition of PoA, compliance of CPA mentioned under section B.5 of the PoA-DD is not inadequate and not in line with para 10, 11 and 12 of referred EB 65, annex 3 standard. – CAR # 3	<i>CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, generic CPA-DD</i>	~~CAR # 3~~	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
		template, EB 65, annex 3 Standard		
7. The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	The eligibility criteria number g) mentioned under section B.5 of the PoA-DD clearly defined that the local stakeholder consultation and environmental impact assessment will be conducted for each CPA.	CDM- PoA-DD, version 01.1,	OK	OK
8. Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	The eligibility criteria number h) mentioned under section B.5 of the PoA-DD clearly defined that each CPA should demonstrate that no Official Development Assistance (ODA) is being used. However, the information on compliance of CPA is inadequate. CL # 3	CDM- PoA-DD, version 01.1,	CL #3	OK
9. Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid connected/ off-grid) and distribution mechanisms (e.g. direct installation);	The eligibility criteria number h) mentioned under section B.5 of the PoA-DD clearly defined that <i>Each CPA can have solar/ wind power plants that supply to the national grid or sale electricity to identified customer through contractual agreement.</i> However, this information under condition of PoA and compliance of CPA is contradicting with each other and purpose of CAP mention under section A.1, part II of the PoA-DD. – CL # 3	CDM- PoA-DD, version 01.1,	CL #3	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
10. Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;	The eligibility criteria number i) mentioned under section B.5 of the PoA-DD clearly defined that <i>Each CPA should implement independent monitoring system and sampling method is not allowed.</i>	CDM- PoA-DD, version 01.1,	OK	OK
11. Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or micro scale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;	The proposed PoA is of large scale and any future CPAs to be included in the PoA are also be of large scale. Thus, this criteria is not applicable.	CDM- PoA-DD, version 01.1,	OK	OK
12. Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or micro scale project categories.	The proposed PoA is of large scale and any future CPAs to be included in the PoA are also be of large scale. Thus, this criteria is not applicable.	CDM- PoA-DD, version 01.1,	OK	OK
13. Other Criteria defined by CDM-PoA-DD	The CME has not defined any other criteria for inclusion of any typical CPA other than mentioned eligibility criteria in the PoA-DD.	CDM- PoA-DD, version 01.1,	OK	OK
A.4.3 Description of how the anthropogenic emissions of GHG by sources are reduced by a any typical CPA below those that would have occurred in the absence of the registered PoA (assessment and demonstration of additionality of PoA):				



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
i) Has it been demonstrated that the programme is a voluntary coordinated action that would not be implemented in the absence of CDM? ii) If the programme is implementing a mandatory policy/regulation, has it been demonstrated whether the policy/regulation is being enforced? iii) Does the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation?	i) Yes, in the section B.1 of the PoA-DD, PP has clearly confirmed that proposed PoA is the voluntary action by CME. GC has provided the declaration dated 15 June 2012 for the same which has been checked and found ok. However, PP is requested to clarify the statement “....the proposed PoA will facilitate access to carbon revenues to small scale renewable energy developers.” considering the fact that PoA has applied large scale methodology (i.e. ACM0002, version 13) – CL # 4 ii) PP has provided the inadequate information in the section B.1 of the PoA-DD, PP has clearly confirmed that proposed PoA is the voluntary action by CME and not implementing any mandatory policy/regulation of the host country. iii) PP has clearly mentioned in the section B.1 of PoA-DD that PoA is the voluntary action by the CME and there is no any mandatory policy/regulation for renewable energy power generation exist in the host country i.e. India.	CDM- PoA-DD, version 01.1, ACM0002, version 13	~~CL # 4,~~ ~~CAR # 4~~	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
iv) Does the PoA-DD constitute the demonstration of additionality of the PoA as a whole?	iv) Yes, in the section B.1 of PoA-DD, PP defined approach for demonstration of additionality for PoA as well as approach for demonstration of additonality on CPA level. However, PP is requested to clarify the following statements: <i>"...PoA will facilitate access to carbon revenues to small scale renewable energy developers."</i> <i>"By providing capacity building and carbon finance platforms to small renewable energy power plants, the proposed REG-PoA will support the sector in overcoming these barriers."</i> – CL # 4			
v) Are all assumptions stated in a transparent and conservative manner?	v) No, PP is requested to clarify all assumptions for financial indicator and respective benchmark calculation, template for investment analysis in the PoA-DD and Generic CPA-DD. – CL # 4			
vi) Is sufficient evidence provided to support the relevance of the additionality arguments made?	vi) No, PP is requested to provide supportive documents for all the assumptions and claims referred for demonstration on additionality of PoA and the CPA. – CL # 4			



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
vii) If the starting date of the programme activity is before the date of validation, has sufficient evidence been provided that the incentive from the CDM was seriously considered in the decision to proceed with the programme?	vii) No, PP is requested to specify the start date of programme activity under section D.1 of PoA-DD and provide supportive evidence for the same. Further, PP is also requested to provide supportive evidence for serious consideration CDM in the investment decision. – CAR # 4			
A.4.4 Operational, management and monitoring plan for the programme of activities (PoA):				
A.4.4.1 Operational and management plan:				
i) Is there a clear and transparent description of the operational and management arrangements established by the coordinating/managing entity? ii) Do the operational and management arrangements established by the coordinating entity include a record keeping system for each CPA under the programme? iii) Do the operational and management arrangements established by the	i) Yes, CME has incorporated the description of the operational and management arrangements for PoA and CPA under section C of PoA-DD. ii) Yes, the operational and management arrangements established by the CME include a record keeping system for each CPA under the programme. However, PP is requested to provide supportive documents for the same. – CL # 5 iii) Yes, the operational and management	CDM- PoA-DD, version 01.1,	CL #5	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
coordinating entity include a system/procedure to avoid including CPAs that have already been registered either as CDM project activity or as a CPA of another PoA? iv) Do the operational and management arrangements established by the coordinating entity include provisions to ensure that CPA implementers are aware and have agreed that their activity is being subscribed to the PoA? v) is there procedure defined to detect for PoA to avoid double counting of CERs? vi) Is there a system or procedure to detect whether a CDM-CPA to be included in the PoA is not a de-bundled	arrangements established by the CME include a system/procedure to avoid including CPAs that have already been registered either as CDM project activity or as a CPA of another PoA. However, PP is requested to submit the referred contract agreement with CPA, excel database for validation. – CL #5 iv) Yes, the operational and management arrangements established by the CME include provisions to ensure that CPA implementers are aware and have agreed that their activity is being subscribed to the PoA. However, PP is requested to submit the referred contract agreement with CPA for validation. – CL #5 v) Yes, PP has defined a procedure to avoid double counting of CERs from any CPA under under the PoA. However, PP is requested to provide supportive documents to support the claim. – CL #5 vi) The PoA has applied large scale methodology ACM0002, version 13 and will have only large scale CPA for inclusion under			



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PoA VALIDATION REPORT

CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
component of another CPA or CDM project? vii) Are provisions in place to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA? viii) Is there a monitoring plan for the PoA, including a description of the proposed statistically sound sampling methods or procedures to be used by the DOE for the verification (please consider sampling among CPAs and within CPAs)?	the PoA. vii) Yes, CME has made the provision under eligibility criteria number l) clearly defined that <i>“Have a contract of services and cessation of rights with the CME that governs the CPA’s participation in the REG-PoA, and comply with the code of conduct of the CME.”</i> Thus, the provisions is in place to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA. viii) The eligibility criteria number j) clearly defined that <i>“Each CPA should implement independent monitoring system and sampling method is not allowed”</i> Thus, sampling method for CPAs inclusion under PoA is not applicable.			
A.4.4.2 Monitoring plan:				
i) Does the monitoring plan include a	The PoA does not use use verification method	CDM- PoA-	CL#6	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
description of a proposed statistically sound sampling method and procedure to be used by designated operational entities for verification of GHG emission reductions by CPAs under the programme? OR If the programme does not use verification method that applies a statistical method for sampling, has a system been defined to avoid double counting of CERs, and is the system transparent	that applies a statistical method for sampling CPAs inclusion. PP has defined in the monitoring plan that, each CPA which will be included in PoA will have standard monitoring plan and no sampling method is allowed for verification. Further, CME has defined the procedure to avoid double counting of CERs. However, PP is requested to provide supportive documents for the defined procedure. – CL # 6	DD, version 01.1,		
A.4.5. Public funding of the programme of activities (PoA):				
i) Is the information provided on public funding in compliance with the actual situation or planning as available by the project participants? ii) Is all information provided consistent with the details given in remaining chapters of the PoA-DD (in particular annex 2)?	i) In the section A. 7 of PoA-DD, PP has defined that “<i>The PoA will not involve public funding or ODA diversion from Annex I countries</i>”. However, PP is requested to provide documents to support the compliance with actual situation. – CL # 7 ii) Yes, the information in the appendix 2 of the PoA-DD is consistent with section A. 7 of PoA-DD.	CDM- PoA-DD, version 01.1,	CL #7	OK
B. Duration of the programme of activities (PoA)				
B.1 Is the programme starting date and	PP has defined 15/06/2012 as starting date for	CDM- PoA-	CL #8	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
length of the programme clearly defined and evidenced?	PoA and 28 years as the length of PoA under section D.2 of PoA-DD. However, PP is requested to justify the defined starting date of PoA. – CL #8	DD, version 01.1,		
B.2 Does the PoA design documentation confirm that the length of the PoA does not exceed 28 years	Yes, the information of length of PoA has been clearly defined as 28 years and 00 months under section D.2 of PoA-DD.	CDM- PoA-DD, version 01.1,	OK	OK
C. Environmental Impacts				
C.1. Is it defined whether the environmental analysis takes place at PoA or CPA level?	Yes, in the section E.1 of PoA-DD, PP clearly defined that environmental analysis takes place at each CPA level.	CDM- PoA-DD, version 01.1,	OK	OK
C.2. Is the choice whether the environmental analysis takes place at PoA or CPA level justified?	PP has defined that environmental analysis takes place at each CPA level. However, PP has not justified the choice. – CL #9	CDM- PoA-DD, version 01.1,	CL #9	OK
C.3. Has an analysis of the environmental impacts of the programme been sufficiently described?	In the section E.1 of PoA-DD, PP mentioned that power projects that are excluded from conducting EIA as per host country (i.e. India) EIA notification. The same has not been conducted as PoA level.	CDM- PoA-DD, version 01.1,	OK	OK
C.4. Have the project participants undertaken an analysis of environmental impacts under the host country regulations?	In the section E.1 of PoA-DD, PP mentioned that power projects that are excluded from conducting EIA as per host country (i.e. India) EIA notification 2006. The same has not been conducted as PoA level.	CDM- PoA-DD, version 01.1,	OK	OK
C.5. If EIA is conducted at PoA level, will	PP has not conducted EIA at PoA level. Further,	CDM- PoA-	OK	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
the programme create any adverse environmental effects?	the CPA is involve wind power technology. This wind power project type are also excluded from the from conducting EIA as per host country (i.e. India) EIA notification 2006. Thus, EIA has also not been conducted at the CPA level.	DD, version 01.1,		
C.6. Are transboundary environmental impacts considered in the analysis?	PP has not conducted EIA at PoA level. Further, the CPA is involve wind power technology. This wind power project type are also excluded from the from conducting EIA as per host country (i.e. India) EIA notification 2006. Thus, EIA has also not been conducted at the CPA level. Hence, PP has not further carried out analysis of transboundary environmenatal impacts.	CDM- PoA-DD, version 01.1,	OK	OK
C.7. Have identified environmental impacts been addressed in the programme design?	PP has not conducted EIA at PoA level. Further, the CPA is involve wind power technology. This wind power project type are also excluded from the from conducting EIA as per host country (i.e. India) EIA notification 2006. Thus, EIA has also not been conducted at the CPA level. Hence, PP has not identified any adverse environmenatal impacts.	CDM- PoA-DD, version 01.1,	OK	OK
C.8. Does the programme comply with environmental legislation in the host country?	Yes, the project complies with the applicable environmental legislation (i.e. EIA notification 2006) in India.	CDM- PoA-DD, version 01.1,	OK	OK
D. Stakeholder Comments				



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
D.1. Is there a clear statement whether the stakeholder comments will be invited at PoA or CPA level?	Yes, PP has clearly defined in the section F of PoA-DD that local stakeholder will be held at CPA level.	CDM- PoA-DD, version 01.1,	OK	OK
D.2. Is the choice justified in a clear and reasonable manner?	The justification for choice of local stakeholder consultation at CPA level defined in the section F of PoA-DD is inadequate. CL # 10	CDM- PoA-DD, version 01.1,	~~CL # 10~~	OK
D.3. If the stakeholder comments will be invited at PoA level, is there sufficient information provided, on how comments by local stakeholders were invited?	PP has clearly defined in the section F of PoA-DD that local stakeholder will be held at CPA level.	CDM- PoA-DD, version 01.1,	OK	OK
D.4. Have all relevant stakeholders been identified for the project activity?	In the section C.1 of CPA-DD, PP has identified local residents, elected representatives, WTG supplier and representatives of local electricity distribution company as potential stakeholders. The same has been found ok.	CDM- CPA-DD, version 01.1,	OK	OK
D.5. What means have been used for the inviting comments from the stakeholders?	In the section C.1 of CPA-DD, PP has mentioned that PP has published invitation notice in local news paper "Nafa Nuksan" dated 25 April 2012 for inviting all stakeholder for meeting. However, PP is requested to provide the supportive document for statement. – CL # 10	CDM- CPA-DD, version 01.1,	~~CL # 10~~	OK
D.6. Does the PoA-DD include a summary of the comments received from the stakeholders?	PP has clearly defined in the section F of PoA-DD that local stakeholder will be held at CPA level.	CDM- PoA-DD, version 01.1, CDM-	OK	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
	However, PP has incorporated detailed summary of the comments received from the stakeholders in the section C.2 of the CPA-DD.	CPA-DD, version 01.1,		
D.7. Has due account been taken of any stakeholder comments received?	PP has mentioned the information comments received and how the comments addressed under the section C.2 and C.3 of CPA-DD. However, PP is requested to provided supportive documents for detailed stakeholder consultation meeting conducted for the CPA. – CL # 10	CDM- CPA-DD, version 01.1,	~~CL # 10~~	OK
Application of a baseline and monitoring methodology				
E.1 Title and reference of the approved baseline and monitoring methodology applied to the CPA included in the PoA:				
i) Does the programme apply an approved methodology and the correct version?	i) Yes, PP has applied approved consolidated baseline and monitoring methodology ACM 0002, version 13. The applied methodology and its latest version has been checked and found ok.	CDM- PoA-DD, version 01.1, CDM- CPA-DD, version 01.1,	OK	OK
ii) Are the applicability criteria in the baseline methodology all fulfilled?	ii) PP has mentioned justification for each applicability criteria under section B.2 of PoA-DD and under section D.2 of CPA-DD. However, the applicability criteria mentioned in the section B.2 of PoA-DD and under section D.2 of CPA-DD and section D.2 of generic CPA-DD is not inline with applied approved consolidated baseline and monitoring methodology ACM 0002, version 13 – CAR #	CDM- PoA-DD, version 01.1, CDM- CPA-DD, version 01.1,	~~CAR # 5~~	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
	5			
E.2 Justification of the choice of the methodology and why it is applicable to a CPA:				
i) Is the applied methodology considered the most appropriate one? ii) Does the methodology account for leakage in the context of a CPA? iii) Does each of applicability criteria have been checked?	i) Yes, PP has applied the ACM 0002, version 13 methodology inline with methodology applied for PoA. As the PoA involves large scale grid connected renewable electricity generation (i.e. wind/ solar power project). Thus, the applied methodology is found ok. ii) The applied methodology ACM 0002, version 13 defined that no leakage emissions needs to be considered. iii) Yes, each applicability criteria mentioned in the CPA-DD has been checked and found that the same is not in line with applied methodology ACM 0002, version 13. – CAR # 4	CDM- CPA-DD, version 01.1,	CAR #4	OK
E.3 Description of the sources and gases included in the CPA boundary				
i) Does the CPA boundary include the physical and geographical location where the programme activities take place? ii) Are all sources and gases within the boundary considered in a clear manner?	i) Yes, the section A. 7 of CPA-DD, clearly defined that the CPA is located in Rajasthan state of India i.e. with in the boundary of PoA. ii) Yes, in the section D.3 of the CPA-DD, PP has clearly mentioned all sources and gases with the boundary. The same has been checked and found ok.	CDM- CPA-DD, version 01.1,	OK	OK



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iii) Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PoA-DD?	iii) The CPA is yet to commission and thus, on - site visit is yet to be happened.			
E.4 Description of how the baseline scenario is identified and description of the identified				
E.4.1.Does the applicable methodology define the baseline scenario?	Yes, the applied ACM 0002, version 13 methodology clearly defines the baseline scenario for each applicable technology. PP has listed the same in section D.4 of generic CPA-DD template. The same has been checked and found consistent with applied ACM 0002, version 13 methodology.	CDM- PoA-DD, version 01.1	OK	OK
E.4.2.Have all technically feasible baseline scenario alternatives to the CPA been identified and discussed by the PoA-DD? Why can this list be considered as being complete?	Yes, section B.4 of PoA-DD, clearly mentions all technically feasible baseline scenario alternatives for the CPAs which will be included in the PoA. The baseline scenario alternatives is in line with applied methodology ACM 0002, version 13. Further it covers all plausible technologies of CPAs (i.e. wind and solar power projects) to be included in the PoA. Thus, the same is considered as complete.	CDM- PoA-DD, version 01.1	OK	OK
E.4.3.Is a complete list of barriers discussed that prevents the project activity to occur?	No, since the applied methodology ACM 0002, version 13 methodology clearly defines the baseline scenario for the CPA (Green field technology) the barriers identification is not	CDM- PoA-DD, version 01.1, CPA-DD, version	OK	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
	required for CPA. However, in the PoA-DD, generic CPA-DD has not listed the barriers which prevents the project activity to occur in the section	01.1		
E.4.4. What other alternative scenarios have been considered and why is the selected scenario the most likely one? Have the major risks to the baseline been identified?	PP has identified the other alternative scenario in line with step 1 of applied methodology ACM 0002, version 13 and hence, acceptable.	CDM- PoA-DD, version 01.1, ACM 0002, version 13	OK	OK
E.4.5. Has the baseline scenario been determined according to the methodology?	PP has determined the baseline scenario in-line with section II of ACM 0002, version 13 and hence, acceptable.	CDM- PoA-DD, version 01.1, ACM 0002, version 13	OK	OK
E.4.6. Has the baseline scenario been determined using conservative assumptions where possible?	No, the description for determination of baseline scenario in the section B.4 of PoA-DD and in the section D.4 of CPA-DD is inadequate and not in line with generic CPA-DD. – CL #11	CDM- PoA-DD, version 01.1, ACM 0002, version 13	~~CL #11~~	OK
E.4.7. Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations?	PP to clarify how the identified baseline scenario takes relevant national and/or sectoral policies, macro-economic trends and political aspirations. – CL#11	CDM- PoA-DD, version 01.1, ACM 0002, version 13	~~CL #11~~	OK
E.4.8. Is the baseline scenario determination	The description of baseline scenario	CDM- PoA-	~~CL #11~~	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
compatible with the available data and are all literature and sources clearly referenced?	determination in the section B.4 of PoA-DD and in the section D.4 of CPA-DD is inadequate. Further, the linking with available data and reference is missing. – CL # 11	DD, version 01.1, ACM 0002, version 13		
E.5 Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the CPA being included as registered PoA (Assessment and demonstration of additionality for CPA)				
E.5.1. Are the key criteria and data for assessing additionality of a CPA that is to be included into the PoA clearly and unambiguously stated?	PP has defined the eligibility criteria and key approach for demonstration of additionality for inclusion of CPA into the PoA. However, the information on choice financial indicator, financial indicator calculation template, its justification, benchmark approach and its justification in the PoA-DD, CPA-DD and generic CPA-DD is inadequate. Further, PP requested to submit the detailed spreadsheet for financial indicator calculation, sensitivity calculation and benchmark calculation sheet for the CPA– CL #12	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1	CL #12	OK
E.5.2. Are the key criteria and data for assessing additionality of a CPA that is to be included into the PoA-DD based on the additionality assessment in section E.5.1 of the PoA-DD?	The key criteria and data for assessing additionality of CPA mentioned in the section E.5.1 of PoA-DD and the CPA-DD is inadequate. – CL # 12	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1	CL #12	OK
E.5.3. Is the choice of the criteria justified, based on the analysis in section E.5.1	The justification for choice of criteria in the E.5.1 of the PoA-DD and the CPA-DD is inadequate. –	CDM- PoA-DD, version	CL #12	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
of the PoA-DD?	CL #12	01.1, CPA-DD, version 01.1		
E.5.4. Does it become evident how these criteria would be applied to assess the additionality of a typical CPA at the time of inclusion?	The information provided for the inclusion of typical CPA in the PoA-DD is inadequate. CL#12	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1	~~CL #12~~	OK
E.5.5.Does the discussion sufficiently take into account relevant national and/or sectoral policies?	Yes, the discussion in the sub step 1b, under section D.5 of CPA-DD on relevant national and/or sectoral policies has been checked and found ok.	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1	OK	OK
E.5.6.Is transparent and documented evidence provided on the existence and significance of these barriers?	The information on the barrier analysis is inadequate.	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1	~~CL #12~~	OK
E.5.7.Is it appropriately explained how the approval of the project activity will help to overcome the identified barriers?	The information on the barrier analysis is inadequate.	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1	~~CL #12~~	OK
E.6 Estimation of Emission reductions of a CPA				
Calculation of GHG Emission Reductions – Baseline Emissions				



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
E.6.1.Has the procedure to calculate baseline emissions of an individual CPA been documented according to the approved methodology and in a complete and transparent manner?	Yes, PP has incorporated detailed baseline emissions calculation approach of an typical CPA in the generic CPA-DD template. The same has been found inline applied ACM0002, version 13. However, information mentioned in the CPA-DD for baseline emissions calculation is not inline with generic CPA-DD template. – CL # 13	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	~~CL #13~~	OK
E.6.2.Have conservative assumptions been used when determining the procedure to be used to calculate the baseline emissions?	Yes, the baseline emission factor has been calculated in line with referred “Tool to calculate the emission factor for an electricity system”, version 02.2.1. and used CO ₂ baseline emissions database, version 07 published by CEA, Govt. of India. However, the information mentioned in the section D.6 of CPA-DD is not consistent with the information mentioned in the generic CPA-DD template. – CL # 13	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	~~CL #13~~	OK
E.6.3.Are uncertainties in the baseline emission estimates properly addressed?	PP has used reliable and authentic publically available data for the calculation of baseline emission factor and referred “Tool to calculate the emission factor for an electricity system”, version 02.2.1. and used CO ₂ baseline emissions database, version 07 published by CEA, Govt. of India. The same has been found ok.	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	OK	OK
Calculation of GHG Emission Reductions – Project Emissions				



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
E.6.4.Has the procedure to calculate project emissions of an individual CPA been documented according to the approved methodology and in a complete and transparent manner?	The information on project emissions under section D.6 of generic CPA-DD is inadequate with respect to applied methodology ACM 0002, version 13, referred “Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion”, version 02 and applied technology under PoA.– CL #14	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	~~CL#14~~	OK
E.6.5.Have conservative assumptions been used when determining the procedure to be used to calculate the project emissions?	The detailed calculation apporach for project emissions has not been provided under section D.6 of generic CPA-DD – CL #14	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	~~CL#14~~	OK
E.6.6.Are uncertainties in the project emission calculation procedure properly addressed?	The detailed calculation apporach for project emissions has not been provided under section D.6 of generic CPA-DD – CL #14	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	~~CL#14~~	OK
Calculation of GHG Emission Reductions – Leakage Emissions				
E.6.7.Has the procedure to calculate leakage emissions of an individual CPA been documented according to the approved	PP has defined in the section B.6 of PoA-DD and in the section D.6 of generic CPA-DD that no leakage emissions needs to be considered in line	CDM- PoA-DD, version 01.1, CPA-	OK	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
methodology and in a complete and transparent manner?	with applied methodology ACM0002, version 13. The approach has been checked and found ok.	DD, version 01.1, Generic CPA-DD template		
Emission Reductions				
E.6.8.Does the PoA-DD provide a clear and correct way of calculating the emission reductions from each CPA?	Yes, , PP has clearly defined the approach for emission reduction calculation in the section B.6 of PoA-DD in line with applied methodology ACM0002, version 13. The same has been checked and found ok.	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	OK	OK
Data and parameters that are to be reported in CDM-CPA-DD form:				
E.6.9.Is the list of parameters presented in chapter E.6.3 considered to be complete with regard to the requirements of the applied methodology?	Yes, PP has applied “Tool to calculate the emission factor for an electricity system”, version 02.2.1. for the calculation of combined margin baseline grid emission factor. This combined margin grid emission factor has been fixed ex-ante and will not be monitored during the entire crediting period. PP has mentioned information on all the parameters considered for combined margin grid emission factor in the section B.6.2 of PoA- DD, D.6.2 of the CPA-DD and generic CPA-DD. However, the generic CPA-DD template is not	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	CL#15	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
	consistent with PoA-DD.- CL# 15			
E.7 Application of the monitoring methodology and description of the monitoring plan:				
E.7.1.Does the monitoring plan defined in the PoA-DD, contain all necessary parameters required for calculating 'baseline emissions' in line with the methodology?	PP had defined monitoring plan for all the required monitoring parameters applicable for the technology under the PoA-DD in line with applied methodology ACM0002, version 13. However, the information for the monitoring parameters and monitoring plan is inadequate. Further, the information PoA-DD and generic CPA-DD is inconsistent. – CL #15	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template	CL#15	OK
E.7.2.Does the monitoring plan defined in the PoA-DD, contain all necessary parameters required for calculating 'project emissions' in line with the methodology?	Yes, PP has defined $PE_{EE,y}$ as parameter in line with applied methodology ACM0002, version 13 for project emissions calculation.	CDM- PoA-DD, version 01.1, ACM0002, version 13	OK	OK
E.7.3.Does the monitoring plan defined in the PoA-DD; contain all necessary parameters required for calculating 'leakage emissions' in line with the methodology?	According to applied methodology ACM0002, version 13 leakage emissions need not required to be monitored for the project activity. Thus, PP has not defined any monitoring parameter linking with leakage emissions calculation.	CDM- PoA-DD, version 01.1, ACM0002, version 13	OK	OK
E.7.4.Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the greenhouse gas	The information on the identified monitoring parameter data collection and archiving has been mentioned in the section B.7.2 of the PoA-DD. However, PP has not specify the same in the	CDM- PoA-DD, version 01.1, CPA-DD, version	CL#15	OK



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CDM PoA Validation Requirement	Remarks	Evidence	Draft Conclusion	Final Conclusion
emissions within the programme boundary during the crediting period?	generic CPA-DD and the CPA-DD. – CL #15	01.1, Generic CPA-DD template		
E.7.5.Has the feasibility of the monitoring arrangements within the project design been confirmed through interviews and physical visits to the site, where required?	The physical site visit conducted however, as the project is yet to implemented actual monitoring arrangements has been confirmed through interviews of CPA implementer's representative and WTGs supplier's representatives.	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template, site visit	OK	OK
E.7.6.The implementation of the monitoring plan, quality assurance and quality control procedures are verifiable	The physical site visit conducted however, as the project is yet to implemented actual monitoring plan, quality assurance and quality control procedures has been confirmed through interviews of CPA implementer's representative and WTGs supplier's representatives.	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD template, site visit	FAR#1	FAR#1
E.7.7.Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this programme,	PP has not defined the record keeping/archiving time frame for each monitoring parameter under section B.7.1 of PoA-DD. – CL # 15	CDM- PoA-DD, version 01.1, CPA-DD, version 01.1, Generic CPA-DD	~~CL#15~~	OK



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<i>CDM PoA Validation Requirement</i>	<i>Remarks</i>	<i>Evidence</i>	<i>Draft Conclusion</i>	<i>Final Conclusion</i>
		<i>template</i>		



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TABLE 3: RESOLUTION OF ISSUES IDENTIFIED IN TABLE 2 OF THE VALIDATION PROTOCOL

<i>Draft report clarification requests, corrective action requests and forward action request</i>	<i>Ref. to the section of the table 2 above</i>	<i>Summary of project owner response</i>	<i>Validation team conclusion</i>
CAR 01: PJRCES has requested written approval from respective DNA's of Parties to confirm participation of programme participants (PP) involved in the PoA.	Section A.3.1	The host country approval is awaited for the PoA.	PJRCES dated 23/11/2012: Ok, the CAR has been kept open. Please refer next CAR 01.1.
# CAR 01.1 dated 23/11/2012: PP is requested to provide copy of letter of approval and letter of authorisation from respective DNA of parties to confirm participation of programme participants (PP) involved in the PoA.		PP had now submitted the LoA for both PoA as well as real case CPA issued by DNA of host country, India	PJRCES dated 24/12/2012: PP has now provided letter of approval for PoA dated 12 December 2012 and for real case CPA dated 21 December 2012 from the host country DNA. The same has been checked and found ok. Thus, CAR01.1 has been closed.



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CAR 02: The version number of applied methodology ACM 0002 mentioned in the real case CPA-DD, is not consistent with the PoA-DD and generic CPA-DD template.		PP has now corrected the version (ACM0002, version no. 13.0.0) of the methodology and is now consistent with the PoA-DD and generic CPA-DD template.	PJRCES dated 24/12/2012: Ok, PP has now corrected the version number of the applied methodology consistently with the PoA-DD and generic CPA-DD. Thus, CAR 02 has been closed.
CAR 03: The eligibility criteria number b) mentioned under section B.5 of the PoA-DD clearly defined that each CPA to be included in the PoA will be given unique identification number by CME to avoid double counting. However, unique identification number for the CPA-DD titled Wind Power Project at Bakhrani, Rajasthan has not been mentioned.	Section A.4.2.2	The unique ID No. of first real case CPA 'Wind Power Project at Bakhrani, Rajasthan' is given as CPA 001. Please refer Section D.5, condition No. b in specific CPA-DD.	PJRCES dated 23/11/2012: PP has revised the CPA-DD, however, the information mentioned under section A.2 and D.5 is inadequate. Thus, the CAR 02 has been kept open. Please refer next CAR 03.1.



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# CAR 03.1 dated 23/11/2012: PP has revised the CPA-DD, however, the information mentioned under section A.2 and D.5 is inadequate.		PP has now mentioned required the information in CPA DD section A.2 and D.5.	PJRCES dated 24/12/2012: Ok, PP has now revised the CPA-DD, eligibility criteria the PoA-DD and generic CPA-DD. Further, PP has now also incorporate unique identification number for the real case CPA in the CAP-DD. Thus, CAR 02 has been closed.
CAR 04: 1. The eligibility criteria number e) mentioned under section B.5 of the PoA-DD clearly defined that each CPA should use methodology ACM0002 and meet all the applicability criteria. However, the name of applied methodology is incorrect in the compliance of CPA column. 2. The eligibility criteria number f) and its respective condition of	Section A.4.2.2	1) The name of applied methodology is now corrected in the CPA column of section B.5 of the PoA-DD. 2) eligibility criteria number f) and its respective condition of PoA, compliance of CPA mentioned under section B.5 of the PoA-DD is now updated to be in line with the referred guidance.	PJRCES dated 23/11/2012: 1. Ok, PP has now corrected the name of applied methodology in the CPA column of section B.5 of the PoA-DD. Thus, CAR 04.1 has been closed. 2. Ok, PP has now updated the eligibility criteria in the revised PoA-DD and CPA-DD. The same has been



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PoA, compliance of CPA mentioned under section B.5 of the PoA-DD is not inadequate and not in line with para 10, 11 and 12 of referred EB 65, annex 3 standard.			checked and found ok. Thus, CAR 04.2 has been closed.
CAR 05 : PP is requested to specify the start date of programme activity under section D.1 of PoA-DD and provide supportive evidence for the same. Further, PP is also requested to provide supportive evidence for serious consideration CDM in the investment decision.	Section A.4.3	The start date of of programme activity is now given in the PoA-DD section D.1 of PoA-DD and supporting document for evidence of serious consideration CDM in the investment decision is being submitted (Att. CAR 05).	PJRCES dated 23/11/2012: PP has now revised the start date of PoA section D.1 of PoA-DD and also has provided minutes of CME's board meeting dated 10 April 2012. The same has been checked and found ok. Thus, CAR 05 has been closed.
CAR 06 : The applicability criteria mentioned in the section B.2 of PoA-DD and under section D.2 of CPA-DD and section D.2 of generic CPA-DD is not inline with	Section E.1,E.2,	The applicability criteria mentioned in the section B.2 of PoA-DD and under section D.2 of CPA-DD and section D.2 of generic CPA-DD is now updated to be in line with the applied approved consolidated baseline and monitoring methodology ACM 0002, version 13.	PJRCES dated 23/11/2012: The revised applicability criteria mentioned in the section B.2 of PoA-DD an section D.2 of CPA-DD and section D.2 of generic CPA-DD is not inline with applied approved consolidated baseline and monitoring methodology



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applied approved consolidated baseline and monitoring methodology ACM 0002, version 13			ACM 0002, version 13. Thus, CAR 06 is kept open. Please refer below CAR 06.1.
# CAR 06.1 dated 23/11/2012: The revised applicability criteria mentioned in the section B.2 of PoA-DD and section D.2 of CPA-DD is not inline with applied approved consolidated baseline and monitoring methodology ACM 0002, version 13.		PP has now corrected the applicability criteria mentioned in the section D.2 of CPA-DD and section D.2 of generic CPA-DD. PP feels that the section B.2 of PoA-DD is not for repeating applicability conditions of baseline methodology (that are covered in Serction B.3). Thus, section B.2 of PoA-DD has different 'additional' conditions from CME for elibility conditions of inclusion of CPA in the PoA.	PJRCES dated 24/12/2012: Ok, PP has now revised the applicability criteria under section B.3 of PoA-DD, section D.2 of CPA-DD and section D.2 of generic CPA-DD has been checked and found ok. Thus, CAR 06.1 has been closed.
CL 01: 1. PoA-DD identifies General Carbon Advisory Services Pvt. Ltd. Mumbai as the project participants. However, the information on	Section A.2.2	1) General Carbon Advisory Services Pvt. Ltd. Mumbai is the CME for this PoA and all CPA under the PoA will share all required information (related to eligibility criteria for inclusion of CPA in PoA) with the CME.	PJRCES dated 23/11/2012: 1. The response provided is not not in line with clarification raised. Thus, CL 01.1 is kept open.



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identified Project participants may or may not be involved in one of the CPAs related to the PoA is inadequate. 2. Further, the name of CME as mentioned in section A.3 of PoA-DD is internally inconsistent with the name provided in Annex 1 of the CDM-PoA-DD. PP is requested to clarify the same and maintain consistency throughout the CDM-PoA-DD. 3. PP is requested to clarify the scale of the proposed CDM PoA in the PoA-DD.		2) The name of CME is made consistent in section A.3 of PoA-DD and Annex 1. 3) The scale of PoA is now discussed in the PoA-DD.	2. The name of CME is still not consistent throughout the PoA-DD. Thus, CL 01.2 is kept open. 3. Ok, now PP has mentioned the scale of PoA in the PoA-DD as large scale PoA. Thus, CL 01.3 has been closed.
# CL 01.1 dated 23/11/2012: 1. The response provided is not in line with clarification raised.		1. It is now clarified in the PoA-DD, Section A.2 that the identified 'CME will be involved in all the CPAs under this PoA. The CME will not be the CPA implementer in any of the CPAs under this PoA.'	1. PJRCES dated 24/12/2012: Ok, PP has now incorporated the statement that CME will not be the CPA implementer in any of the CPAs under this



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2. The name of CME is still not consistent throughout the PoA-DD.		2. The name of CME (General Carbon Advisory Services Pvt. Ltd.) is now consistent throughout the PoA-DD which is in accordance with the	PoA. Thus, CL 01.1 has been closed. 2. PJRCES dated 24/12/2012: Ok, PP has now incorporated consistent name of CME throughout the PoA-DD. Thus, CL 01.2 has been closed.
CL 02: The PoA-DD and the CPA-DD has not mentioned any information on technology transfer from Annex-I countries to the host country.	Section A.4.2	The PoA-DD and the CPA-DD are now updated to discuss information on technology transfer. This check/information is included in the eligibility criteria for inclusion of CPA in PoA.	PJRCES dated 23/11/2012: The information on technology transfer from Annex-I countries to the host country is missing in the PoA-DD and the CPA-DD. Thus, #CL 02.1 has been kept open.
#CL 02.1 dated 23/11/2012: The information on technology transfer from Annex-I countries to the host country is missing in the PoA-DD and the CPA-DD.		PP has now mentioned the same in PoA-DD (in Section A.6) as well as in CPA-DD (in Section A.5).	PJRCES dated 24/12/2012: Ok, now PP has incorporated the information on how technology transfer from Annex-1 country at each CPA under section A.6 of PoA-DD and section A.5 of generic CPA-DD template. Thus, CL 02.1 has been closed.



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CL 03: 1. The eligibility criteria number h) mentioned under section B.5 of the PoA-DD clearly defined that each CPA should demonstrate that no Official Development Assistance (ODA) is being used. However, the information on compliance of CPA is inadequate. 2. The eligibility criteria number h) mentioned under section B.5 of the PoA-DD clearly defined that <i>Each CPA can have solar/ wind power plants that supply to the national grid or sale electricity to identified customer through contractual agreement.</i> However, this information under condition of PoA and	Section A.4.2.2	1) The information on compliance of CPA in terms of sharing sources of funding with CME and giving an undertaking that no ODA is involved is now included in the section B.5 of the PoA-DD. 2) The information on referred criteria is now made consistent in the places identified in CL.	PJRCS dated 23/11/2012: 1. Ok, now PP has updated the eligibility criteria number h) under section B.5 of the PoA-DD. The same has been checked and found ok. Thus, CL 03.1 has been closed. 2. Ok, PP has now updated eligibility criteria number c). Thus, CL 03.2 has been closed.
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compliance of CPA is contradicting with each other and purpose of CPA mention under section A.1, part II of the PoA-DD.			
CL 04 : 1. PP is requested to clarify the statement “...the proposed PoA will facilitate access to carbon revenues to small scale renewable energy developers.” considering the fact that PoA has applied large scale methodology (i.e. ACM0002, version 13) 2. PP is requested to clarify the following statements: “...PoA will facilitate access to carbon revenues to small scale renewable energy developers.”	Section A.4.3	1) The statement is made from the point of view of removing registration risk to any renewable energy developer and related costs (CDM consulting, validation, registration etc.). The differentiation is no in terms of project size within 15 MW. This is clarified in the PoA-DD now. 2) The statement is made from the point of view of removing registration risk to any renewable energy developer and related costs (CDM consulting, validation, registration etc.). This is clarified in the PoA-DD now.	PJRCES dated 23/11/2012: 1. Ok, PP has now revised the statement under section B.1 of PoA-DD. The provided clarification is accepted. Thus, the CL 04.1 has been closed. 2. Ok, PP has now revised the statement under section B.1 of PoA-DD. The provided clarification is accepted. Thus, the CL 04.2 has been closed.



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<i>“By providing capacity building and carbon finance platforms to small renewable energy power plants, the proposed REG-PoA will support the sector in overcoming these barriers.”</i> 3. PP is requested to clarify all assumptions for financial indicator and respective benchmark calculation, template for investment analysis in the PoA-DD and Generic CPA-DD. 4. PP is requested to provide supportive documents for all the assumptions and claims referred for demonstration on		3) The PoA-DD and Generic CPA-DD are now updated to give all assumptions for financial indicator and respective benchmark calculation, template for investment analysis. 4) PP is submitting evidences for assumptions and claims referred for demonstration on additionality of PoA and the CPA (Att. CL 04).	3. Ok, PP has now updated generic CPA-DD template and incorporate the provision for financial indicator and benchmark calculation. However, the information on financial indicator and benchmark calculation is inadequate considering the difference of CPA. Thus, the CL 04.3 is kept open. 4. Ok, PP has now provided the MOU and related supportive evidence and referred RERC tariff orders referred for inputs values for the first real case CPA. The same has been
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additionality of PoA and the CPA.			checked and found ok. However, PP is requested to clarify The PLF of 22.12% is considered as per MoU with Enercon (India) Ltd; however the same is not available in the MoU submitted to DOE. Further, PP is requested to clarify how the PLF value sourced from MOU with technology supplier is inline EB 48 Annex 11 guidelines. The source of PLF value is inconsistent in the real case CPA-DD and investment analysis sheet. Thus, the CL 04.4 is kept open. Moreover, the provided financial analysis for real case CPA has been reviewed and the issues has been identified under CL # 4.1.
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# CL 04.1 dated 23/11/2012: 3. PP has now updated generic CPA-DD template and incorporate the provision for financial indicator and benchmark calculation. However, the information on financial indicator and benchmark calculation is inadequate considering the difference of CPA. 4. The PLF of 22.12% is considered as per MoU with Enercon (India) Ltd; however the same is not available in the MoU submitted to DOE. Further, PP is requested to clarify how		3. The CME has now elaborated on benchmark calculation steps in the generic CPA-DD to fit for any type of CPA envisaged under the PoA. The options are included to calculate common type of benchmarks used in the Indian industry. 4. PP has consider the PLF value from the third party report (GL Garrad Hasan, page no. 79, 80) which was availaibble before the investment decision. The financial analysis is corrected with respect to this value taken from the primary source for the PLF which is a third party report and in line with EB 48 Annex 11. The PLF study was conducted for 43.2 MW compared to the CPA001 size 25.6 MW. The	3. PJRCES dated 24/12/2012: PP has now incorporated the detailed information selection, justification on financial indicator and applicable suitable benchmark in the section D.5 of generic CPA-DD template. The same has been checked and found ok. Thus, CL 04.1.3 has been closed. 4. PJRCES dated 24/12/2012: PP has now provided the contract details for third paty (M/s Garrad Hassan India Private Ltd.) and PLF report dated 16 March 2012. The same has been checked, found inline with EB 48, annex 11 requirement and available at
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³ <http://rbi.org.in/scripts/NotificationUser.aspx?Id=5579&Mode=0>



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the PLF value sourced from MOU with technology supplier is inline EB 48 Annex 11 guidelines. The source of PLF value is inconsistent in the real case CPA-DD and investment analysis sheet. 5. PP is requested to clarify the following: a) PP to provide evidence for lifetime of the project equipment. b) The working capital requirement for receivable is 1.5 months as per RERC order dated		25.6 MW size in line with the MoU with Enercon, Board resolution by the CPA implementer. Hence, PLF study conducted for same site, even though for a higher capacity is used here. The same source is mentioned in CPA-DD as well as in excel sheet. The following documents are made available to the DOE now (1) PLF report (2) offer for preparation of PLF report (3) acceptance of offer and (4) evidence of payment made for the services 5) Clarifications a) PP has now corrected the lifetime of the project equipment. PP has now used the source of RERC Tariff order dated: 14th Dec 2011 (Page no. 3 of PDF) which is well before the investment decision. The manufacturer specifications also mention 25 year lifetime. b) The working capital is corrected to 1.5 months for the receivables in line with the source used.	the time of investment decision . Further, revised the reference for the ex-ante PLF in the investment analysis sheet and real case CPA-DD has been checked and found ok. Thus, CL 04.1.4 has been closed. 5. a) PJRCES dated 24/12/2012: PP has now provided supportive documents for the lifetime of project activity equipment. The referred tariff order dated 14 December 2011. The same has been checked and found ok. Thus, CL 04.1.5 a) has been closed. b) The revised financials have been reviewed and PP has now made the values consistent with the reference provided. Thus, CL 04.1.5 b) has been closed.
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14 December 2011. c) Service tax of 10.30% is sourced from Indian IT Act; PP to provide precise web link reference as rates of service tax are not stated in the IT Act. Further, PP has provided reference of rate of depreciation on civil works; however the same is not present in the spreadsheet calculations. d) PP to provide precise web link reference for rate of depreciation as per Companies Act; Income tax Act; Income tax rate of 33.22% and MAT rate of 19.93%.		c) PP has now given the precise source of service tax. PP has not considered the dereprciation on civil work and same has now removed from CPA-DD. d) PP has now given the precise weblink for all the parameter which is mentioned in this comment. Also PP has revised the Total income tax rate from 33.22% to 32.45% as there is a correction in the surcharge (earlier it was mentioned 7.5% which is now corrected to 5%)	c) The revised input parameters and references have been reviewed and PP has now provided precise source for rate of service tax and deleted the rate of depreciation on civil works; Thus, CL 04.1.5 c) has been closed. d) The revised input parameters and references have been reviewed and PP has now corrected the value of Income tax and MAT. The reference for rate of depreciation as per Companies Act has also been reviewed and found correct. Thus, CL 04.1.5 d) has been closed.
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e) The rate of interest of debt, 10.50% is as per lending rate of previous project; PP to provide supportive document and justify how the same is inline with para 6 of EB 62, Annex 5. Further, the rate of interest is not consistent in the investment analysis sheet and in the CPA-DD. f) The repayment tenure and moratorium period is considered as per RERC Order dated 14 December 2011; however the input values are not consistent with the reference. Further, PP is requested clarify why the values for		e) RBI has switched over to the system of base rate from the BPLR system with effect from July 1, 2010³. In the absence of this PP has taken the average BPLR of five Nationalised banks [i.e.Scheduled Banks in India constitute those banks which have been included in the Second Schedule of Reserve Bank of India(RBI) Act, 1934 and hence these chosen banks are authentic one and appropriate for the project activity.(http://wiki.answers.com/Q/WHAT IS scheduled bank)] of India for benchmark calculation at the investment decision which is coming 14.90%. This computation of BPLR was available at the time of investment decision and hence this interest rate is appropriate for the project activity. This is also in accordance with para 6 of EB 62, Annex 5. PP has now maintained the consistency in the interest rate. f) The reference for repayment tenure and moratorium period is corrected to RERC wind tariff order, March 2007 (pg. 19, para 40). Any tariff order after this did not change repayment tenure and moratorium period, hence same is valid at investment decision in 2012.	e) PP to provide an explanation for the selection of the five nationalised banks in India. Thus, CL 04.1.5 e) has been closed. f) The revised input parameters and references have been reviewed and PP has now considered the repayment and moratorium period as per RERC tariff order dated 15 March 2007; which was available at the investment decision time.Thus, CL 04.1.5
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interest calculation has been sourced from different sources. g) The O & M is applicable from the 3rd year onwards; clarify for considering the same from the 2nd year in the investment analysis. h) PP to provide Precise reference for insurance cost considered in the investment analysis. i) Provide reference for considering margin money at 25% of total working capital requirement.		g) PP has now corrected the O&M cost and its is now taken from 3rd year onwards. h) PP has now removed the insurance cost considered in the investment analysis on a conservative basis. i) Margin money as 25% of the working capital is standard requirement from the bankers and an evidence is shared with this response to the DOE.	f) has been closed. g) The revised financials have been reviewed and PP has now considered O & M cost from the third year onwards as per MOU with Enercon dated December 2011. Thus, CL 04.1.5 g) has been closed. h) The revised financials have been reviewed and PP has not considered insurance cost in the investment analysis. Thus, CL 04.1.5 h) has been closed. i) The evidence provided has been reviewed and margin money at 25% of total working capital requirement is accepted. Thus, CL 04.1.5 i) has been closed. j) The revised financials have been reviewed and necessary
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j) PP to clarify the depreciation working as per IT Act for the 14th year. Moreover the depreciation to be calculated on WDV basis; PP has calculated on straight line basis. k) PP to re-check the calculation u/s. 80IA and tax liability. l) The reference provided for salvage value of 10% is RERC Order, December 2011; however the same has not found in the referred tariff order, please clarify. m) The revenues and expenses are calculated for 23 years whereas the profit and loss account is presented for 25 years, please clarify.		j) PP has now corrected the depreciation and it on WDV basis. k) The calculation of tax liability is found alright. l) PP has now considered the salvage value as per The Companies Act which is 5%. m) PP has calculated the revenues and expenses for 25 years only. Rows were in hidden by mistaken and rectified now.	corrections are made. Thus, CL 04.1.5 j) has been closed. k) The revised financials have been reviewed and found ok. Thus, CL 04.1.5 k) has been closed. l) The revised financials have been reviewed and PP has now considered 5% of the project cost as salvage value. Thus, CL 04.1.5 l) has been closed. m) The revised financials have been reviewed and PP has provided clear spreadsheet calculations for 25 years; issue is now closed. n) PP has now provided separate spreadsheet for benchmark calculations. Thus, CL 04.1.5
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n) PP to provide spreadsheet calculation (separate) for benchmark calculations. o) PP to re-check the formula for benchmark conversion from nominal terms to real terms. p) PP to clarify the inflation rate, 6% considered in the benchmark estimation. The value of 6% is neither WPI nor CPI inflation rate for the next ten years. The web link reference is also dated 12 August 2011 (Q1: 2011-12) when the investment decision is dated 23		n) PP has now provided the separate spreadsheet for benchmark calculation. o) PP has rechecked the formula and it is in accordance with the source which is mentioned in spreadsheet. p) PP has now given the correct inflation rate which is 4.5% as per the WPI which is the latest report available before the investment decision dated: 23 March 2012.	n) has been closed. o) The revised benchmark calculations have been reviewed and PP has now considered the correct formula for conversion from nominal terms to real terms. Thus, CL 04.1.5 o) has been closed. p) The revised benchmark calculations have been reviewed and PP has considered the WPI forecast for the next ten years, 4.5%. Thus, CL 04.1.5 p) has been closed. q) PP has now mentioned the assumptions in the CPA-DD
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March 2012. q) The assumptions mentioned in the CPA-DD are not consistent with the investment analysis sheet. 4. However, PP is requested to provide supportive document for the commitment amount paid to technology supplier by the CPA operator inline with Article 4.1 of referred MOU dated 13 December 2011. Further, PP is requested to clarify how the referred MOU term was still valid at investment decision time in line with Article 1 of the MOU. PP is requested to provide the definitive agreement referred in Article 1 of MOU.		q) PP has now corrected the assumption in CPA- DD as per the investment analysis speardsheet. 4) PP has now made available evicen of commitment amount paid to Enercon. This shows that the MOU terms were followed and MOU was valid at the time of investment decision. Since as per the MOU, Enercon also gave bank guarantee of same amount as the commitment amount, and further, MOU requires PP to give purchase orders for further project deliveries, this is not considered as 'CDM starting date' i.e. financial commitment to implement the project.	consistent with the investment analysis sheet. Thus, CL 04.1.5 q) has been closed. 4. PJRCES dated 24/12/2012: PP has now provided the bank account statement as a evidence for commitment amount paid on 28 December 2011 by Renew Wind Power Private Limited to (technology supplier) i.e. Enercon at the time of Signing MOU dated 13 December 2011. The provided bank statement has been checked and found ok. Thus, the CL 4 has been closed.
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CL 05 : 1. The operational and management arrangements established by the CME include a record keeping system for each CPA under the programme. However, PP is requested to provide supportive documents for the same. 2. PP is requested to submit the referred contract agreement with CPA, excel database for validation.	Section A.4.4.1	1) A example of record keeping system for each CPA is submitted with this response (Att. CL 05 – 1). 2) The contract of CME with frist reac case CPA implementer is submiited with this response (Att. CL 05 – 2).	PJRCES dated 23/11/2012: 1. The referred supportive document/template for record keeping has not been submitted. Thus, CL 05.1 is kept open. 2. Ok, PP has not provided the referred contract agreement dated 17 April 2012 between CME and CPA implementer. The same has been checked and found ok. Thus, CL 05.2 has been closed.
# CL 05.1 dated 23/11/2012: The referred supportive document/ template for record keeping has not been submitted.		A example of record keeping system for each CPA is submitted with this response (Att. CL 05 – 1).	PJRCES dated 24/12/2012: Ok, PP has now provided the template for record keeping system for each CPA maintained by CME. The same has been checked and found ok. Thus, CL 05.1 has been



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			closed.
CL 06 : CME has defined the procedure to avoid double counting of CERs. However, PP is requested to provide supportive documents for the defined procedure.	Section A.4.4.2	As any of the CPAs in this PoA (including first real case CPA) has not commissioned project, whether those machines are also in other PoA can not be established. However, at the time of addition of each CPA, CME will check discussed databases and take an undertaking of from CPA implementer that the project is not part of any other PoA or CDM project activity. The CME is now submitting an undertaking of this effect from the first real case CPA owner/ implementer (Att. CL 06).	PJRCES dated 23/11/2012: PP has not submitted the referred declaration from the real case CPA implementer. Further, the defined eligibility criteria has not mentioned the referred information on declaration letter by CPA implementer. Thus, CL 06 is kept open.
# CL 06.1 dated 23/11/2012: PP has not submitted the referred declaration from the CPA implementer. Further, the defined eligibility criteria has not mentioned the referred information on declaration letter by CPA implementer.		PP has now submitted the declaration from the real case CPA implementor.	PJRCES dated 24/12/2012: Ok, PP has now provided the referred declaration dated 30 November 2012 by CPA implementer to avoid double counting of CERs. Further, PP has also updated the eligibility criteria in the real case CPA-DD for double counting of CERs. The same has been checked and found ok. Thus, CL 06.1 has been closed.



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CL 07 : In the section A. 7 of PoA-DD, PP has defined that <i>"The PoA will not involve public funding or ODA diversion from Annex I countries"</i> . However, PP is requested to provide documents to support the compliance with actual situation.	Section A.4.5	As any of the CPAs in this PoA (including first real case CPA) has not achieved financial closure/ or placed purchase orders, the actual documents to establish no public funding can not be given at this stage. However, as mentioned in the PoA-DD and eligibility criteria, each CPA will provide documents related to its sources of funding and an undertaking on no use of public funding to PP and DOE at the time of its addition in the PoA.	PJRCS dated 23/11/2012: PP has not submitted the referred declaration from the real case CPA implementer. Thus, CL 07 is kept open.
# CL 07.1 dated 23/11/2012: PP has not submitted the referred declaration from the real case CPA implementer.		PP has now submitted the referred declaration from the real case CPA implementer.	PJRCS dated 24/12/2012: Ok, PP has now provided the declaration by CPA implementer dated 30 November 2012 for ODA diversion. The same has been checked and found ok. Thus, CL 07.1 has been closed.
CL 09 : PP has defined that environmental analysis takes place at each CPA level. However, PP has not justified the choice.	Section C.2	The justification of EIA analysis as CPA level is now given in the PoA-DD and generic CPA-DD.	PJRCS dated 23/11/2012: Ok, PP has now incorporated the justification for the choice of environmental analysis takes place at each CPA level. The same has been checked and found ok. Thus, CL 09 has been closed.



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CL 10 : 1. The justification for choice of local stakeholder consultation at CPA level defined in the section F of PoA-DD is inadequate. 2. In the section C.1 of CPA-DD, PP has mentioned that PP has published invitation notice in local news paper “Nafa Nuksan” dated 25 April 2012 for inviting all stakeholder for meeting. However, PP is requested to provide the supportive document for statement.	Section D.2, D.5, D.7	1) The justification for choice of local stakeholder consultation at CPA level is now elaborated in the section F of PoA-DD. 2) A copy of local news paper “Nafa Nuksan” dated 25 April 2012 for inviting local stakeholders for meeting is submitted with this response.	PJRCES dated 23/11/2012: 1. Ok, PP has now incorporated the justification for the choice of local stakeholder consultation meeting takes place at each CPA level under section F of revised PoA-DD and revised generic CPA-DD. The same has been checked and found ok. Thus, CL 10.1 has been closed. 2. PP has provided the scan copy of publication notice published for local stakeholder consultation meeting. However, the provided supportive document is inadequate and the information on name and date of newspaper is missing. Thus, CL 10.2 has been kept open.
# CL 10.1 dated 23/11/2012: PP has provided the scan		PP has now provided the scan copy of the newspaper where name and date (25/04/2012) of the newspaper is	PJRCES dated 24/12/2012: Ok, now PP has provided the legible

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copy of publication notice published for local stakeholder consultation meeting. However, the provided supportive document is inadequate and the information on name and date of newspaper is missing.		visible. Please refer pg. 2 of pdf file.	scan copy of the public notice published in local news paper dated 25 April 2012 for local stakeholder consultation meeting. The provided supportive scan copy has been checked and found ok. Thus, CL 10.2 has been closed.
CL11 : 1. The description for determination of baseline scenario in the section B.4 of PoA-DD and in the section D.4 of CPA-DD is inadequate and not in line with generic CPA-DD. 2. PP to clarify how the identified baseline scenario takes relevant national and/or sectoral policies, macro-economic trends and	Section E.4.6, E.4.7, E.4.8	1) The description for determination of baseline scenario in the section B.4 of PoA-DD and in the section D.4 of CPA-DD is now made in line with the generic CPA-DD. 2) The identification of baseline scenarios is now discussed by taking into account the applicable relevant national and/or sectoral policies, macro-economic trends and political aspirations.	PJRCES dated 23/11/2012: 1. Ok, PP has now incorporated the description on identification of baseline scenario considering all possible future CPAs to be included in the PoA. The same has been checked and found inline with applied ACM 0002, version 13. Thus, CL11.1 has been closed. 2. Ok, PP has now incorporated the description on identification of baseline scenario considering all possible future CPAs to be included in the PoA. The same



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political aspirations. 3. The description of baseline scenario determination in the section B.4 of PoA-DD and in the section D.4 of CPA-DD is inadequate. Further, the linking with available data and reference is missing.		3) The description of baseline scenario determination in the section B.4 of PoA-DD and in the section D.4 of CPA-DD is now updated. The available data and reference is given now.	has been checked and found inline with applied ACM 0002, version 13. Thus, CL11.2 has been closed. 3. Ok, PP has now incorporated the description on identification of baseline scenario considering all possible future CPAs to be included in the PoA. The same has been checked and found inline with applied ACM 0002, version 13. Thus, CL11.2 has been closed.
CL12 : 1. The information on choice financial indicator, financial indicator calculation template, its justification, benchmark approach and its justification in the PoA-DD, CPA-DD and generic CPA-DD is inadequate. Further, PP	Section E.5.1, E.5.2, E.5.4, E.5.6	1) The information on choice financial indicator, financial indicator calculation template, its justification, benchmark approach and its justification is now provided in the PoA-DD, CPA-DD and generic CPA-DD. For specific CPA, financial analysis sheet with sensitivity and benchmark calculation are now submitted with this responses.	PJRCES dated 23/11/2012: 1. Ok, PP has now incorporated information on investment analysis. However, the information on choice of financial indicator, benchmark approach and its justification is inadequate. Thus, CL 12.1 is kept open. Further, the issues on provided financial analysis, sensitivity and benchmark calculation has been provided under above #CL 4.1



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requested to submit the detailed spreadsheet for financial indicator calculation, sensitivity calculation and benchmark calculation sheet for the CPA. 2. The key criteria and data for assessing additionality of CPA mentioned in the section E.5.1 of PoA-DD and the CPA-DD is inadequate. 3. The information provided for the inclusion of typical CPA in the PoA-DD is inadequate. 4. The information on the barrier analysis is inadequate.		2) The key criteria and data for assessing additionality of CPA mentioned in the section E.5.1 of PoA-DD and the CPA-DD are now updated. 3) The information provided for the inclusion of typical CPA in the PoA-DD is now updated. 4) The information on barriers is now deleted. Only a provision is kept if any CPA has specific prohibitive barrier, may discuss same.	2. PP has now revised the key criteria and data for assessing additionality of CPA in the generic CPA-DD template. The same has been checked and found ok. Thus, CL 12.2 has been closed. 3. The eligibility criteria for the inclusion of typical CPA in the PoA has been now updated in the revised PoA-DD, CPA-DD. Thus, the CL 12.3 has been closed. 4. The revised generic CPA-DD template has been checked and found that such referred provision is missing. Thus,
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			CL 12.4 has been kept open.
# CL12.01 dated 23/11/2012: 1. The information on choice of financial indicator, benchmark approach and its justification is inadequate. 2. The revised generic CPA-DD template has been checked and found that such referred provision is missing.		1) CME has now updated information on financial indicator and benchmark approach to match all CPAs envisaged under the PoA. Most common financial indicators and benchmarks used in Indian wind and solar power sector sare covered now. 2) The barrier analysis provision is made in both generic CPA DD templates and in real case CPA DD as well.	1. PJRCES dated 24/12/2012: Ok, PP has now incorporated the information on choice of financial indicator, justification for suitable benchmark approach in the revised PoA-DD and generic CPA-DD template for both Solar and Wind technology under the proposed PoA. The same has been checked and found ok. Thus, CL 12.01 has been closed. 2. PJRCES dated 24/12/2012: The revised generic CPA-DD template has been checked and found that such referred provision for barrier analysis has been incorporated in the both generic CPA-DD template and in the real case CPA-DD. Thus, CL 12.02 has been closed.



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CL13 : 1. The information mentioned in the CPA-DD for baseline emissions calculation is not inline with generic CPA-DD template. 2. The information mentioned in the section D.6 of CPA-DD is not consistent with the information mentioned in the generic CPA-DD template.	Section E.6.1, E.6.2,	1) The information mentioned in the CPA-DD for baseline emissions calculation is now updated in line with the generic CPA-DD template. 2) The information mentioned in the section D.6 of CPA-DD is now made consistent with the information mentioned in the generic CPA-DD template.	PJRCES dated 23/11/2012: 1. Ok, now the revised information in the CPA-DD for baseline emissions calculation has checked and found is inline with generic CPA-DD template. Thus, CL 13.1 has been closed. 2. Ok, now the revised information under section D.6 in the CPA-DD has checked and found is inline with generic CPA-DD template. Thus, CL 13.2 has been closed.
CL14 : 1. The information on project emissions under section D.6 of generic CPA-DD is inadequate with respect to applied methodology ACM 0002, version 13, referred "Tool to	Section E.6.4, E.6.5, E.6.6,	1) The information on project emissions under section D.6 of generic CPA-DD is now updated in line with the referred Tool and technologies applied under the PoA.	PJRCES dated 23/11/2012: 1. The information on monitoring of project emissions is still inadequate and not inline with is inline applied methodology ACM0002, version 13, referred "Tool to calculate project or leakage CO₂



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calculate project or leakage CO ₂ emissions from fossil fuel combustion”, version 02 and applied technology under PoA.			emissions from fossil fuel combustion”, version 02 and applied technology under PoA. Thus, CL 14.1 has been kept open.
# CL 14.01 dated 23/11/2012: The information on monitoring of project emissions is still inadequate and not inline with is inline applied methodology ACM 0002, version 13, referred “Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion”, version 02 and applied technology under PoA.		The information on monitoring of project emissions is now made inline with is inline applied methodology ACM 0002, version 13, referred “Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion”, version 02 and applied technology under PoA.	PJRCES dated 24/12/2012: Ok, PP has now incorporated the monitoring parameters for project emissions under revised generic CPA-DD template for Solar technology under the PoA. The provided information has been checked and found inline applied methodology ACM 0002, version 13, referred “Tool to calculate project or leakage CO ₂ emissions from fossil fuel combustion”, version 02. Thus, CL 14.01 has been closed.
CL 15 : 1. The information for the monitoring parameters and monitoring plan is	Section E.6.9, E.7.1, E.7.4	1) The information on monitoring parameters and monitoring plan is updated now. The information in PoA-DD and generic CPA-DD is made consistent now.	PJRCES dated 23/11/2012: 1. The revised information on monitoring parameters and monitoring plan in the PoA-DD and generic CPA-DD,



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inadequate. Further, the information PoA-DD and generic CPA-DD is inconsistent. 2. The information on the identified monitoring parameter data collection and archiving has been mentioned in the section B.7.2 of the PoA-DD. However, PP has not specify the same in the generic CPA-DD and the CPA-DD. 3. PP has not defined the record keeping/archiving time frame for each monitoring parameter		2) The generic CPA-DD and the specific CPA-DD are now updated to give information on the identified monitoring parameter data collection and archiving. 3) The section B.7.1 of PoA-DD is now updated to give record keeping/ archiving time frame for each monitoring parameter.	CPA-DD has been checked. The information is still inadequate and inconsistent. Further,the formula notations is not inline with referred “Tool to calculate the emission factor for an electricity system”. Thus, CL 15.1 has been kept open. 2. The information the identified monitoring parameter data collection and archiving mentioned in the real case CPA-DD is not consistent with PoA-DD and generic CPA-DD. Thus, CL 15.2 has been kept open. 3. The information under section B.7.1 of revised PoA-DD has been checked. However, the information on record keeping/archiving time frame
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under section B.7.1 of PoA-DD.			has not been identified for each monitoring parameter. Thus, CL 15.3 has been kept open.
# CL 15.1 dated 23/11/2012: 1. The revised information on monitoring parameters and monitoring plan in the PoA-DD and generic CPA-DD, CPA-DD has been checked. The information is still inadequate and inconsistent. Further, the formula notations is not inline with referred “Tool to calculate the emission factor for an electricity system” 2. The information the identified monitoring parameter data collection and archiving mentioned in the real case CPA-DD is not consistent with		1. PP has now checked the notation and it is now inline with the “Tool to calculate the emission factor for an electricity system”. 2) The information the identified monitoring parameter data collection and archiving mentioned in the real case CPA-DD is now made consistent with the PoA-DD and generic CPA-DD.	1. PJRCES dated 24/12/2012: Ok, now the information on monitoring parameters, formula notations in the revised PoA-DD and generic CPA-DD, CPA-DD has been checked and found consistent and inline with applied methodology ACM0002, version 13 and referred “Tool to calculate the emission factor for an electricity system”. Thus, CL 15.1 has been closed. 2. PJRCES dated 24/12/2012: Ok, now the information on monitoring parameters data collection and archiving mentioned in the revised PoA-DD and generic



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PoA-DD and generic CPA-DD. 3. The information under section B.7.1 of revised PoA-DD has been checked. However, the information on record keeping/archiving time frame has not been identified for each monitoring parameter.		3) The information on record keeping/ archiving time frame has now been identified for each of the monitoring parameters.	CPA-DD, CPA-DD has been checked and found consistent and inline with applied methodology ACM0002, version 13. Thus, CL 15.2 has been closed. 3. PJRCES dated 24/12/2012: Ok, now PP has incorporated the record keeping/archiving time frame for all parameters under section B.7.1 of the revised PoA-DD. Thus, CL 15.3 has been closed.
FAR 01: The project is yet to be commissioned, thus, the verification entity is requested to verify the geocoordinates for each WTGs, implementation of monitoring plan in line real case CAP-DD and PoA-DD.			



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APPENDIX B

VALIDATION TEAM DETAILS



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<i>Team Member Name</i>	<i>Role</i>	<i>Experience</i>
Rohit Badaya	Team Leader	Rohit holds specialization in Paper technology in the domain of Chemical Engineering, has more than 4 years of experience in the area of Climate Change both as a Validator and CDM Consultant. He is currently a Lead Validator and Team Leader, handled various validation and verification projects both in India & abroad in different areas like renewable energy, energy efficiency, fuel switch, waste heat recovery and waste handling. Apart from CDM, he has also worked on validation and verification of Verified Carbon Standard and Gold Standard projects. Prior to Validation, he had worked as CDM consultant and provided CDM related technical and financial consulting to industries like dairy, distilleries and industries manufacturing tiles, textiles, plastics, paper, guar gum etc in the sectors of renewable energy, energy efficiency and waste handling. He has CDM documentation experience including preparation of project information note, project design development, host country approval and responding to project related technical and financial issues. He has also done an extensive research in CDM related areas of Indian paper industries. His competence in renewable energy based energy generation, energy efficiency and waste handling is sufficiently demonstrated through his education qualification and experience in CDM.
Tushar Chaudhari	Team Member	Tushar Chaudhari has completed his Masters Degree in Environmental Sciences. He has been working for more than past 5 years in Climate change. After his Masters he worked with the M/s. Jain Irrigation Systems Limited , Jalgaon in EHS Department. He later worked with MITCON Consultancy Services Ltd. as CDM consultant working on different renewable energy, waste



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		handling and disposal projects, Carbon Foot printing/GHG emission inventory. He has been working in both regulatory and open markets. Based on his work experience he has competency to work on renewable energy industries and waste handling and disposal projects.
Anjana Sharma	Technical Expert	Anjana Sharma holds a Bachelor in Chemical Engineering. She has a combined experience of 10 years. Prior to her entry into the CDM world, she worked for 3 years in Chlor-Alkali industry wherein she was involved mainly in the plant operations, energy conservation measures and QMS. During her stint in industry, her technical responsibilities included involvement in day-to-day plant operations, analysis of consumption of different inputs to the Chlor-Alkali process (primarily the raw material, power, fuels like FO/HSD for boilers etc) on daily basis and preparation of consolidated monthly report. Based on that, she, in consultation with Head of Works, would identify the potential areas of improvement and presenting the same to the management. Being the member of Technical Services Cell of the company, she was actively involved in market research for the energy efficient technologies for the Chlor-Alkali process. Apart from above technical part, she was also an internal auditor for ISO 9001. She has been trained as an internal auditor for QMS as well as Lead Auditor for QMS (ISO 9001) and EMS (ISO 14001). Her experience in CDM includes 5 years and 4 months (as on date) in validation and verification of projects in regulated as well as non-regulated market. Prior to joining PJRCMD, she worked as a CDM Validator and



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		Technical Reviewer at DNV for 4 years. She has handled validation and verification of numerous CDM projects, both in India & abroad in different areas like renewable energy, energy efficiency, waste heat recovery, waste handling and disposal (especially landfill gas recovery and utilization, and waste water treatment), fuel switch etc. Her sufficient sectoral competence in renewable energy based energy generation, energy efficiency and waste handling and disposal is sufficiently demonstrated through her education qualification, industry experience and experience in CDM.
Bilal Anwar	Technical Reviewer	Mr. Bilal Anwar has over twelve years of experience in International Climate Change Policy and CDM. He gained over ten years experience in UNFCCC Secretariat where he was involved in the CDM from its inception and was team leader for CDM accreditation unit. He also worked for two years on CDM and other GHG related projects in another DOE based in London.
Anuradha S.	Financial Expert	She is a Chartered Accountant from Institute of Chartered Accountants of India. She has experience in handling financial statements and tax implications of Indian Corporate Entities. She has verified and analyzed more than 40 VCS projects and being involved in CDM validation projects currently.