



RINA

VERIFICATION/CERTIFICATION REPORT

Final

“Bundled wind energy power projects (2003 policy) in
Rajasthan”
in
India


Monitoring period: 17/05/2011 to 31/10/2011

Report N°2011-MU-42-MD

Revision N°1.1



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Project Title: Bundled wind energy power projects (2003 policy) in Rajasthan	Country: India	Estimated CERs (tCO₂e): 50,119 annual average
CDM Registration Reference N°: 1167	Monitoring period: 17/05/2011 to 31/10/2011 (first and last days included)	Certified CERs (tCO₂e): 17,809
Client: Enercon (India) Limited	Client contact: Mr. Yogesh Mehra	
Report No.: 2011-MU-42-MD	Revision: 1.1	Date of this report: 04/06/2012
Approved by (Final Report – Decision Maker):  Roberto Cavanna		Date of approval: 30/07/2012

Methodology

Number: ACM0002	Version: 06 of 19/05/2006	Title: Consolidated baseline methodology for grid-connected electricity generation from renewable sources	Scale Large	SS(s): 1
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RINA Services S.p.A. (RINA), commissioned by M/s. Enercon (India) Limited, has verified of the greenhouse gas emission reductions reported for the project activity “Bundled wind energy power projects (2003 policy) in Rajasthan” in India, CDM Registration Reference N° 1167, for the period 17/05/2011 to 31/10/2011 (first and last days included), with regard to the relevant requirements for CDM activities. The verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable CDM requirements in order to be certified.

The project was validated by SGS United Kingdom Limited (validation report N° CDM.VAL0801, version 3.1 issued on 04/05/2011) and it was registered on 17/05/2011 under the CDM registration reference N° 1167 .

The GHG emission reductions were calculated on the basis of the approved methodology ACM0002, version 6, “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” of 19/05/2006 and the monitoring plan included in the registered Project Design Document, version 7.0 of 03/05/2011.

In conclusion, it is RINA's opinion that the project activity “Bundled wind energy power projects (2003 policy) in Rajasthan”, in “India”, as described in the Monitoring Report version 8 of 18/07/2012, meets all relevant requirements for CDM activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology “ACM0002”, “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, version 06 of 19/05/2006. Hence RINA is able to certify that the emission reductions from the project during the monitoring period 17/05/2011 to 31/10/2011 (first and last days included) amount to 17,809 tCO₂e.

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Work verified by (Final Report – Authorized office signing for the DOE)

Laura Severino



Keywords:

Climate Change, Kyoto Protocol, Clean Development Mechanism, Verification

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Abbreviations

BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CEA	Central Electricity Authority
CER(s)	Certified Emission Reduction(s)
CH ₄	Methane
CL	Clarification Request
CMS	Central Monitoring System
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
CRT	Coordination and Technical Control Staff
DCI	Certification Division of RINA Services Spa
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EB Substation	Electricity Board Substation
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval
MoV	Means of Verification
MR	Monitoring Report
NABL	National Accreditation Board for Testing and Calibration Laboratories
NEWNE	Northern Eastern Western and North Eastern
NGO	Non-governmental Organization
ODA	Official Development Assistance
PDD	Project Design Document
PE	Project Emission
PP(s)	Project Participant(s)
PPA	Power Purchase Agreement
QA/QC	Quality Assurance and Quality Control
Ref.	Document Reference
RINA	RINA Services Spa
RRVPN	Rajasthan Rajya Vidyut Prasaran Nigam Limited
SS(s)	Sectoral Scope(s)
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
WEC	Wind Energy Convertors

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Appendix A: Verification Protocol

VERIFICATION/CERTIFICATION REPORT

1 INTRODUCTION

Enercon (India) Limited has commissioned RINA to carry out the verification and certification of emission reductions reported for the registered “Bundled wind energy power projects (2003 policy) in Rajasthan” project in India, CDM Registration Reference N° 1167, for the period 17/05/2011 to 31/10/2011 (first and last days included).

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

1.1 Objective

The objective of the verification is to have an independent review ex post determination by a Designated Operational Entity (DOE) of the monitored reductions in GHG emissions that have occurred as a result of the registered CDM project activity during a defined monitoring period. Certification is the written assurance by the DOE that, during a specific time period, a proposed CDM project activity achieved the reductions in anthropogenic emissions by sources of GHGs as verified.

1.2 Scope

The verification scope is:

- to verify that actual monitoring systems and procedures are in compliance with the monitoring systems and procedures described in the monitoring plan;
- to evaluate the GHG emission reduction data and express a conclusion with a reasonable level of assurance about whether the reported GHG emission reduction data is free from material misstatement;
- to verify that reported GHG emission data is sufficiently supported by evidence.

Verification shall ensure that reported emission reductions are complete and accurate in accordance with applicable UNFCCC criteria for CDM in order to be certified.

UNFCCC criteria for CDM refer to Article 12 of the Kyoto Protocol, the CDM modalities and procedures, and the subsequent decisions by the CDM Executive Board.

Verification is not meant to provide any consultancy towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring.

2 METHODOLOGY

Verification was conducted using RINA procedures in line with the requirements specified in the CDM M&P, the latest version of the CDM Validation and Verification Standard, and relevant decisions of the COP/MOP and the CDM EB and applying standard auditing techniques.

The verification consisted of the following three phases:

- Desk review;
- On-site assessment;
- The resolution of outstanding issues and the issuance of the final verification report and certification.

The following sections outline each step in more detail.

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2.1 Desk Review

The monitoring report, version 01.0 of 22/11/2011, version 2 of 12/04/2012, version 3 of 19/04/2012, version 4 of 25/04/2012, version 5 of 09/05/2012, version 6 of 21/05/2012, version 7 of 23/05/2012 and latest version 8 of 18/07/2012 /02/, the emission reduction calculations provided in the form of a spreadsheet, "ER sheet", version 01 submitted on 22/11/2011 /07/, were assessed as part of the verification. In addition the Project Design Document (PDD) /01/ in particular the baseline estimations and the monitoring plan, and the validation report, revision 3.1 of 04/05/2011/05/ for the project were reviewed.

The monitoring report version 01.0 of 22/11/2011 /02/ was made publicly available on the CDM UNFCCC website on 25/11/2011.

The following table lists the documentation that was reviewed during the verification.

/01/	PricewaterhouseCoopers Private Limited: Registered CDM-PDD for project activity "Bundled wind energy power projects (2003 policy) in Rajasthan" in India, version 7.0 of 03/05/2011 and Revised CDM-PDD version 8.0 of 25/01/2012.
/02/	Enercon (India) Limited and Japan Carbon Finance, Ltd.: Monitoring report for project activity "Bundled wind energy power projects (2003 policy) in Rajasthan" in India, related to the monitoring period 17/05/2011 to 31/10/2011 (first and last days included) version 1 of 22/11/2011, version 2 of 12/04/2012, version 3 of 19/04/2012, version 4 of 25/04/2012, version 5 of 09/05/2012, version 6 of 21/05/2012, version 7 of 23/05/2012 and latest version 8 of 18/07/2012
/03/	CDM Executive Board: Validation and Verification Manual, version 01.2 of 30/07/2010
/04/	CDM Executive Board: Baseline and monitoring methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 06 of 19/05/2006
/05/	SGS United Kingdom Limited: Validation Report No. CDM.VAL0801, version 3.1 of 04/05/2011
/06/	CDM Executive Board: "Guidelines for completing the Monitoring Report form" version 01, dated 28/05/2010, EB 54, Annex 34 and version 02.0 dated 02/03/2012, EB 66 Annex 20
/07/	Enercon (India) Limited: Emission Reduction Calculation sheet "ER sheet", version 01 submitted on 22/11/2011
/08/	CDM Executive Board: "Tool for the demonstration and assessment of additionality", Version 3.0 dated 26/08/2008
/09/	Central Electricity Authority: "CO ₂ Baseline Database for Indian Power Sector", version 01.1 dated December 2006.
/10/	CDM Executive Board: "Guidelines for assessing compliance with the calibration frequency requirements" version 01, dated 12/02/2010, EB 52, Annex 60
/11/	Ministry of Environment & Forests, Government of India: Host country approval letter to Enercon (India) Limited dated 03/04/2007
/12/	Rajasthan Rajya Vidyut Prasaram Nigam limited: Metering code for Rajasthan Grid (part-III of the grid code) dated December 2002
/13/	M/s. Yadav Measurements Pvt. Ltd. : Calibration record for meter with Sr. No.TNU00945: certificate no. YMPL/174032/29111 dated 06/04/2010 and Certificate no. YMPL/201745/34199 dated 26/03/2011
/14/	M/s. Yadav Measurements Pvt. Ltd. : Calibration record for meter with Sr. No. TNU00946: certificate no. YMPL/174032/29112 dated 06/04/2010 and Certificate no. YMPL/201745/34197 dated 26/03/2011
/15/	M/s. Yadav Measurements Pvt. Ltd. : Calibration record for meter with Sr. No. RJB00052: certificate no. YMPL/174040/29123 dated 16/04/2010 and Certificate no. YMPL/201757/34220 dated 28/03/2011
/16/	M/s. Yadav Measurements Pvt. Ltd. : Calibration records for meter with Sr. No: ABB00691: certificate no. YMPL/174039/29122 dated 16/04/2010 and Certificate no. YMPL/201756/34217

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	dated 28/03/2011
/17/	CDM Executive Board: Clean Development Mechanism Project Cycle Procedure, version 01.0 of 25/11/2011, latest version 02.0 of 02/03/2012
/18/	CDM Executive Board: Clean Development Mechanism Project Standard, version 01.0 of 01/12/2011
/19/	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard, version 01.0 of 01/12/2011
/20/	Deed of transfer of interest and assignment between M/s. Dempo Industries Pvt. Ltd., and Enercon (India) Limited S.No 93917 dated 17/03/2008.
/21/	Purchase Deed: Deed of sale of asset along with right of ownership, between M/s Prerna Pharma Intermediates Pvt. Ltd., and Jitendra K. Newaskar S.No 8C3Y0 dated 01/11/2009 indicating change of ownership to Jitendra K. Newaskar
/22/	Enercon (India) Limited: Declaration on decommissioning dated 02/03/2012
/23/	Rajasthan Rajya Vidyut Prasaram Nigam Limited: Calibration record for meter with Sr. No.TNU00945 dated 29/01/2009.
/24/	Rajasthan Rajya Vidyut Prasaram Nigam Limited: Calibration record for meter with Sr. No.TNU00946 dated 29/01/2009.
/25/	Rajasthan Rajya Vidyut Prasaram Nigam Limited: Calibration record for meter with Sr. No. RJB00052 dated 30/01/2009.
/26/	Rajasthan Rajya Vidyut Prasaram Nigam Limited: Calibration record for meter with Sr. No. ABB00691 dated 30/01/2009.
/27/	CDM Executive Board: Monitoring Report Form (F-CDM-MR) Version 02.0 dated 13/03/2012
/28/	Enercon (India) Limited: Training program on Operation and Maintenance of Wind Turbine Generators (WTGs) of Enercon Wind Farms
/29/	<p>Commissioning certificates:</p> <p>Raj. Rajya Vidyut Prasaram Nigam Limited:</p> <p>Commissioning certificate No: RVPNL/XEN III (TCCIV) BAR/S: TECH/F:/D.135 dated 02/05/2005, Commissioning certificate No: RVPNL/XEN III (TCCIV) BAR/S: TECH/F:/D.136 dated 02/05/2005, Commissioning certificate No: RVPNL/XEN III (TCCIV) BMR/S: TECH/F:/D.168 dated 16/05/2005, Commissioning certificate No: RVPNL/XEN III (TCCIV) BMR/S: TECH/F:/D.235 dated 03/06/2005, Commissioning certificate No: RVPNL/XEN III (TCCIV) BAR/S: TECH/F:/D.264 dated 09/06/2005, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.993 dated 30/03/2004, Commissioning certificate No: RVPNL/XEN(P)TV/S.TECH/D.129 dated 14/06/2004, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.928 dated 11/03/2004, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.990 dated 30/03/2004, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.991 dated 30/03/2004, Commissioning certificate No: RVPNL/XEN-PROT/JDPR/S: TECH/F:/D.151 dated 02/07/2004, Commissioning certificate No: RVPNL/XEN-PROT/JDPR/S: TECH/F:/D.152 dated 02/07/2004, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.992 dated 30/03/2004, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.906 dated 04/03/2004, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.987 dated 30/03/2004, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.988 dated 30/03/2004, Commissioning certificate No: RVPNL/XEN III (TCCIV) BRM/S: TECH/F:/D.989 dated 30/03/2004,</p> <p>Jodhpur Vidyut Vitharan Nigam Limited:</p> <p>Commissioning certificate No: JVVNL/XEN/O&M/JSM/S:TECH/F:/D.1003 dated 29/09/2003, Commissioning certificate No: JVVNL/XEN/O&M/JSM/S:TECH/F:/D.1006 dated 29/09/2003, Commissioning certificate No: JVVNL/XEN/O&M/JSM/S:TECH/F:/D.1007 dated 29/09/2003, Commissioning certificate No: JVVNL/XEN/O&M/JSM/S:TECH/F:/D.1008 dated 29/09/2003, Commissioning certificate No: JVVNL/XEN/O&M/JSM/S:TECH/F:/D.1009 dated 29/09/2003, Commissioning certificate No: JVVNL/XEN/O&M/JSM/S:TECH/F:/D.1010 dated 29/09/2003, Commissioning certificate No: JVVNL/XEN/O&M/JSM/S:TECH/F:/D.1448 dated 30/11/2003,</p>

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2.2 On-site assessment

On 13/01/2012, RINA visited the project activity site at Temdarai, Alsoi, Sodabandhan and Korwa in Jaisalmer district of Rajasthan state in India. All the WECs, electricity meters and substations involved in the project activity were accessible to the verification team and the team has verified all the WECs and the monitoring system adopted in the project activity. During the on-site assessment of the project RINA assessed the implementation and operation of the proposed project activity, reviewed the information flows for generating, aggregating and reporting the monitoring parameters, interviewed key personnel of the plant to confirm the operational and data collection procedures, cross-checked between information provided in the monitoring report and data plant, checked the monitoring equipment including calibration performance, reviewed calculations and assumptions made in determining the GHG data and emission reductions, checked the quality control and quality assurance procedures in place to prevent or identify and correct any errors or omissions in the reported monitoring parameters.

The key personnel interviewed and the main topics of the interviews are summarized in the table below.

	Date	Name and Role	Organization	Topic
/a/	13/01/2012	Pawan Verma, Deputy Manager	Enercon (India) Limited	Implementation of project activity. Distribution of WEC sites and wind farm locations of Individual project developers.
/b/	13/01/2012	Sukhwinder Singh, Senior Engineer	Enercon (India) Limited	Locations of individual WEC, maintainence of CMS, monitoring of WEC data at CMS, data management, monitoring of check meters at Temderai substation.
/c/	13/01/2012	Mallika Bose, CDM Consultant	Enercon (India) Limited	Monitoring report, apportioning procedure and emission reduction claculations.
/d/	13/01/2012	Shyam Goopande, Maintenance Incharge	Enercon (India) Limited	Calibration of main meters and check meters
/e/	13/01/2012	Dhanna Ram, Intelligent data provider	Enercon (India) Limited	Monitoring of main meters at Amarsagar substation.

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2.3 Resolution of outstanding issues

The objective of this phase of the verification is to resolve any outstanding issues which need to be clarified for RINA's positive conclusion on the monitoring report and emission reductions.

To guarantee transparency a verification protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of verification and the results from verifying the identified criteria.

The verification protocol consists of three tables; the different columns in these tables are described in the figure below (see Figure 1). The completed verification protocol is enclosed in Appendix A to this report.

A corrective action request (CAR) is raised if one of the following occurs:

- Non-conformities with the monitoring plan or methodology are found in monitoring and reporting, or if the evidence provided to prove conformity is insufficient;
- Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impair the estimate of emission reductions;
- Issues identified in a FAR during validation to be verified during verification have not been resolved by the project participants.

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) is raised during verification for actions if the monitoring and reporting require attention and/or adjustment for the next monitoring period.

CARs, CLs and FARs identified are included in the verification protocol in Appendix A of this report.

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Figure 1 Verification protocol tables

Verification Protocol, Table 1 - Requirement checklist				
Checklist Question	Ref.	MoV	Comments	Conclusion
The checklist is organized in four different sections.	Makes reference to documents where the answer to the checklist question or item is found.	Explain how conformance with the checklist question is investigated. Examples are document review (DR), interview or any other follow-up actions (I), cross checking (CC) with available information relating to projects, (N/A) means not applicable.	The discussion on how the conclusion is arrived at and the conclusion on the compliance with checklist question so far.	For CAR, CL and FAR see the definitions above. OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements.

Verification Protocol, Table 2 - Resolution of Corrective Action Requests and Clarification			
Corrective action requests and/or clarification requests	Reference to Table 1	Response by project participants	Verification conclusion
The CAR and/or CLs raised in table 1 are repeated here.	Reference to the checklist question number in Table 1 where the CAR or CL is explained.	The responses given by the project participants to address the CARs and/or CLs.	The verification team's assessment and final conclusion of the CARs and/or CLs.

Verification Protocol, Table 3 - Forward Action Requests (if no FAR table 3 is deleted)		
Forward action request	Reference to Table 1	Response by project participants Verification conclusion
The FAR raised in table 1 is repeated here.	Reference to the checklist question number in Table 1 where the FAR is explained.	Response by the project participants on how forward action request will be addressed.

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2.4 Internal quality control

All the revisions of the verification report before being submitted to the client were subjected to an independent internal technical review to confirm that all verification activities had been completed according to the pertinent RINA instructions.

The technical review was performed by a technical reviewer(s) qualified in accordance with RINA's qualification scheme for CDM validation and verification.

2.5 Verification team and the technical reviewer(s)

The verification team and the technical reviewers consist of the following personnel:

Role	Last Name	First Name	Country
Team Leader CDM and Technical Expert CDM	Raghavan Nair	Reghu Kumar	India
CDM Verifier & Team Leader Under Training and Technical Expert CDM	Pallipogu	Sateesh Kumar	India
Technical Reviewer	Rekha	Menon	India
Technical Reviewer	Valaroso	Rita	Italy

3 VERIFICATION FINDINGS

The findings of the verification related to the monitoring period from 17/05/2011 to 31/10/2011 (first and last days included) as documented and described in the monitoring report version 8 of 18/07/2012 and previous versions /02/ are stated in the following sections.

The verification requirements, the means of verification and the results from verifying the identified criteria are documented in more detail in the verification protocol in Appendix A.

3.1 Description of the project activity

The main information of the project is summarized in the table below.

Project Participant(s)	Enercon (India) Limited and Japan Carbon Finance, Ltd.		
Project Title	Bundled wind energy power projects (2003 policy) in Rajasthan		
Location of the project	India		
Methodology(ies)	ACM0002, Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 06 of 19/05/2006 /04/		
Sectoral Scope(s)	1	RINA's Technical Area(s)	1.2 - Energy generation from renewable energy sources
Registered PDD	Revision 7.0 of 03/05/2011 /01/		
Date of registration	17/05/2011	CDM Registration Reference N°	1167

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Starting date of the crediting period	17/05/2011
Project's crediting period	17/05/2011 to 16/05/2021
Monitoring period	17/05/2011 to 31/10/2011 (first and last days included)
Project documentation link	http://cdm.unfccc.int/Projects/DB/SGS-UKL1181738388.43/view
Purpose of the project activity	The purpose of the project activity is to utilize renewable wind energy for generation of electricity.

3.2 Remaining issues (FARs) from previous validation or verification

Based on the review of validation report and previous verification report, no FAR is raised during the validation and hence there were no FARs to be addressed during verification as this is being the first verification.

3.3 Monitoring Report

The Monitoring Report for the project activity “ Bundled wind energy power projects (2003 policy) in Rajasthan”, in “India”, and latest version 8 of 18/07/2012 (previous versions version 1 of 22/11/2011, version 2 of 12/04/2012, version 3 of 19/04/2012, version 4 of 25/04/2012, version 5 of 09/05/2012 version 6 of 21/05/2012 and version 7 of 23/05/2012) submitted by the Enercon (India) Limited have been the basis for the verification process.

RINA confirms that the above MR is based on the currently valid MR template /25/ and is completed in accordance with the applicable latest guidance document/06/.

The main changes between the MR version 01.0 of 22/11/2011 published in the UNFCCC website on 25/11/2011 and the MR version 8 of 18/07/2012 submitted for registration are the following:

Section of the MR	Description and reason for changing the information in that section
Template of monitoring report	The monitoring report is revised and updated with the the latest monitoring report template available in the UNFCCC website.
Section A.1	The latest monitoring report is updated with the purpose of the project activity and implementation status of the project activity.
Section B.2.3	The latest monitoring report is made transparent on the permanent changes occurred from the registered monitoring plan.
Section B.2.4	The latest monitoring report is made transparent on the changes occurred to the project design of the project activity.
Section E.5	The values of estimated ex-ante calculated emission reductions as per the revised PDD is also included in the discussion for the comparison of estimated and actual emission reductions.

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3.4 Project implementation

Actual implementation of the registered project activity

The verification team has performed the on-site assessment on 13/01/2012. During the site visit, the team found that all the WECs as stated in the registered CDM PDD version 7.0 of 03/05/2011 /01/ are installed. The team has observed that the physical implementation of the project activity is also in line with the registered CDM PDD. The purchase order for the first project in the bundle was issued on 30/04/2003. The first machine under the project activity was commissioned on 29/09/2003 and the last machine under the project activity was commissioned on 29/05/2005. The DOE at the time of validation has verified the same with the purchase orders and commissioning certificates /29/ of the WECs. The same is reported in the validation report /05/. The project activity involves 30 numbers of wind energy converters (WECs) of Enercon make 800 kW E - 48, 6 WECs of Enercon make 600 kW E- 40 and 13 WECs of Enercon make 230 kW E – 30, with a total capacity of 30.59 MW, with internal electrical lines connecting the Project with local evacuation facility.

However, during the site visit the verification team has also noted that the sub-project in the bundle comprising of one WEC of 0.6 MW by Dempo Industries Pvt. Ltd. has been decommissioned and the ownership of another sub-project in the bundle comprising of one WEC of 0.23 MW by Prerna Pharma Intermediates Pvt. Ltd. has been changed to Jitendra K. Newaskar. Dempo Industries Pvt. Ltd. decided to decommission this sub-project (one WEG) due to shortfall in generation of power during the project operational period. The change in ownership of the sub-project (one WEG) of M/s. Prerna Pharma Intermediates Pvt. Ltd. to M/s. Jitendra K. Newaskar was a normal business decision. the same has been described in the revised PDD version 8.0 of 25/01/2012.

Post registration changes

As explained in the section above that the sub-project comprising of one WEC of 0.6 MW by Dempo Industries Pvt. Ltd. has been decommissioned on 18/03/2008 /22/ and the ownership of the other sub-project comprising of one WEC of 0.23 MW of Prerna Pharma Intermediates Pvt. Ltd. has been changed to Jitendra K. Newaskar on 01/11/2009 /21/. Hence the two sub-projects were excluded from the bundle of the project activity. The monitoring report /02/ is made transparent on these changes. PP has also submitted a revised PDD with version no 8.0 of 25/01/2012 /01/, which is made transparent on the post registration changes occurred in the project activity and also revised a monitoring plan to bring more clarity on monitoring of the parameters.

The verification team has assessed its impact on the additionality and scale of the of the project activity. As per the registered PDD the additionality of all the individual sub-projects in the bundle were demonstrated separately. Hence the exclusion of the two sub-projects have no impact on the additionality of the project activity. The original capacity of the project activity as described in the registered PDD is 30.59 MW. After the exclusion of the two sub-projects the revised capacity of the project activity is now 29.76 MW. Hence the project activity continues to be a large scale project activity thereby the changes to the project activity do not impact on the scale of the project activity. Moreover the baseline remains the same pre and post these changes.

Thus RINA confirms that the changes to the registered project activity does impact on the applicability of the methodology, baseline, additionality and scale of the project activity; therefore according the Appendix 1 of the CDM Project Standard /18/ it is not required the prior approval by the Board.

3.5 Methodology for determining Emission Reductions.

According to the applied methodology “ACM0002”, “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”, version 06 of 19/05/2006 /04/, the emission reductions have been calculated base on the following formula:

$$ER_y = BE_y - PE_y - L_y$$

Where,

ER_y = Emission Reductions in the year y

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BE_y = Baseline Emissions in the year y

PE_y = Project Emissions in the year y

L_y = Emissions due to Leakage in the year y

Whereas $BE_y = EG_y * EF_y$

EG_y = Net electricity supplied to the grid in year y

EF_y = CO_2 emission factor of the grid for the year y

3.5.1 Compliance of the monitoring plan with the monitoring methodology and applicable methodological tools

The EG_y (Net electricity supplied to the grid by the Project) is the parameters to be monitored according to the registered monitoring plan /01/ with the UNFCCC for the project activity.

However, as per the revised PDD version 8.0 of 25/01/2012 and revised monitoring report version 8 of 18/07/2012 the following parameters are included in the monitoring plan

Parameter	Description
EG_y	Net electricity supplied to the grid by the Project
$EG_{JMR, Export}$	Electricity exported as recorded by the main meter at EB substation.
$EG_{JMR, Import}$	Electricity import as recorded by the main meter at EB substation.
$EG_{Controller, Export}$	Electricity exported by a WEC, as measured at the controller panel.
$EG_{WEC, Export}$	Electricity exported to the grid by a WEC
$EG_{WEC, Import}$	Electricity Import from the grid by a WEC
EG_{Export}	Electricity exported to the grid by the project activity
EG_{Import}	Electricity Import from the grid by the project activity

PP has referred all the parameters in the monitoring report as mentioned in the PDD. The verification team has found that the PP is monitoring all the parameters as described in the monitoring plan in the revised PDD.

The team hereby confirms that monitoring plan in the revised PDD /01/ is in accordance with approved methodology applied by the project activity for the monitoring period 17/05/2011 to 31/10/2011 (first and last days included).

3.5.2 Compliance of monitoring with monitoring plan

The monitoring plan in the monitoring report version 8 of 18/07/2012/02/ complies with the monitoring plan in the revised PDD /01/ and the methodology ACM0002 version 06 /04/ has been properly implemented and followed. All the parameters, as listed in the following sections have been monitored in accordance with the monitoring plan in the revised PDD /01/ and the monitoring report /02/.

RINA can thus confirm that the project monitoring has been carried out in accordance with the monitoring plan contained in the revised PDD /01/ and monitoring report /02/.

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3.5.2.1 Data and parameters fixed ex-ante or at renewal crediting period

DATA/PARAMETER Unit	Source of data	Reported value for the project period	Assessment/Observation
EF _{OM, y} tCO ₂ e/MWh	"CO ₂ Baseline Database for Indian Power Sector", version 01.1 published by CEA /09/	2002-03: 0.9993 2003-04: 0.9869 2004-05: 0.9756	The value is cross checked with "CO ₂ Baseline Database for Indian Power Sector", version 01.1 of december 2006 /09/ and found to be correct.
EF _{BM, y} tCO ₂ e/MWh	"CO ₂ Baseline Database for Indian Power Sector", version 01.1 published by CEA /09/	2004-05: 0.5335	The value is cross checked with "CO ₂ Baseline Database for Indian Power Sector", version 01.1 of december 2006 /09/ and found to be correct.
EF _{CM, y} tCO ₂ e/MWh	"CO ₂ Baseline Database for Indian Power Sector", version 01.1 published by CEA /09/	0.87387	The calculation is cross checked with the methodology ACM0002 version 06 of 19/05/2006 /04/ and found to be correct.

VERIFICATION/CERTIFICATION REPORT

3.5.2.2 Data and parameters monitored ex-post

Data/Parameter	Assessment
Data Unit	EGy; MWh
Description	Net electricity supplied to the grid by the Project
Source of data to be used	Calculated as the difference of EG_{Export} and EG_{Import} and sourced from the monthly credit notes. This value can be cross-checked from the invoices raised to the DISCOM.
Value of monitored parameter for the monitoring period	20,547
Monitoring equipment	Not applicable as the parameter is calculated
Accuracy of the monitoring equipment	Not applicable as the parameter is calculated
Measuring/Reading/Recording frequency	Not applicable as the parameter is calculated
Calculation method (if applicable)	<p>The net electricity supply (EGy) is calculated as the difference between electricity exported to the grid by the project activity (EG_{Export}) and electricity import from the grid by the project activity (EG_{Import}).</p> $EGy = (EG_{Export} - EG_{Import})$
Calibration	
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PDD?	Not applicable as the parameter is calculated
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	Not applicable as the parameter is calculated
Calibration certificates	Not applicable as the parameter is calculated

VERIFICATION/CERTIFICATION REPORT

Data/Parameter	Assessment										
Data Unit	EG _{JMR, Export} : MWh										
Description	Electricity exported as recorded by the main meter at EB substation at Amarsagar.										
Source of data to be used	Export value from the Joint Meter reading taken at the substation in the presence of Enercon representatives and the State Utility representatives.										
Value of monitored parameter for the monitoring period	91,151										
Monitoring equipment	<p>Three phase energy meters of Secure make</p> <table border="1"> <thead> <tr> <th>Meter</th><th>Serial Number</th></tr> </thead> <tbody> <tr> <td>Main meter 1</td><td>TNU00946</td></tr> <tr> <td>Main meter 2</td><td>TNU00945</td></tr> <tr> <td>Check/ Back up meter 1</td><td>RJB0052</td></tr> <tr> <td>Check/ Back up meter 2</td><td>ABB00691</td></tr> </tbody> </table>	Meter	Serial Number	Main meter 1	TNU00946	Main meter 2	TNU00945	Check/ Back up meter 1	RJB0052	Check/ Back up meter 2	ABB00691
Meter	Serial Number										
Main meter 1	TNU00946										
Main meter 2	TNU00945										
Check/ Back up meter 1	RJB0052										
Check/ Back up meter 2	ABB00691										
Accuracy of the monitoring equipment	All the meters are of accuracy class 0.2 s /13/ /14/ /15/ /16/ /23/ /24/ /25/ /26/. The registered and revised PDD's does not refer to any accuracy.										
Measuring/Reading/Recording frequency	Measured in continuous basis and recorded on monthly basis										
Calculation method (if applicable)	Not applicable										
Calibration											
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PDD?	All the meters are calibrated annually, which is in line with the monitoring plan provided in the revised PDD										
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	Both the main meters were calibrated on 26/03/2011 and both the check meters were calibrated on 28/03/2011 which covers the monitoring period. The calibration frequency of all the meters were checked with the previous calibrations records and found that the calibration frequency has been respected. During the site visit it is noticed from the calibration records of the main meters (Sr. No. TNU00945 and Sr. No. TNU00946) for the year 2011 that the error levels 0.813 and 0.29 respectively have exceeded the permissible limit for the meters. PP has applied the error correction factor with 0.813 on a conservatory basis for the electricity generation data in the ER calculation for the current monitoring period.xx										
Calibration certificates	<p>Following are the details of calibration certificates</p> <table border="1"> <thead> <tr> <th>Meter no.</th><th>Calibration details</th></tr> </thead> <tbody> <tr> <td>TNU00945</td><td>by Rajasthan Rajya Vidyut Prasaram Nigam limited dated 29/01/2009 /23/ certificate no. YMPL/174032/29111 dated 06/04/2010 and certificate no. YMPL/201745/34199 dated 26/03/2011 by M/s. Yadav Measurements Pvt. Ltd. /13/</td></tr> <tr> <td>TNU00946</td><td>by Rajasthan Rajya Vidyut Prasaram Nigam Limited dated 29/01/2009 /24/ certificate no. YMPL/174032/29112 dated</td></tr> </tbody> </table>	Meter no.	Calibration details	TNU00945	by Rajasthan Rajya Vidyut Prasaram Nigam limited dated 29/01/2009 /23/ certificate no. YMPL/174032/29111 dated 06/04/2010 and certificate no. YMPL/201745/34199 dated 26/03/2011 by M/s. Yadav Measurements Pvt. Ltd. /13/	TNU00946	by Rajasthan Rajya Vidyut Prasaram Nigam Limited dated 29/01/2009 /24/ certificate no. YMPL/174032/29112 dated				
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VERIFICATION/CERTIFICATION REPORT

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	RJB00052	by Rajasthan Rajya Vidyut Prasaram Nigam Limited dated 30/01/2009 /25/ certificate no. YMPL/174040/29123 dated 16/04/2010 and certificate no. YMPL/201757/34220 dated 28/03/2011 by M/s. Yadav Measurements Pvt. Ltd. /15/
	ABB00691	by Rajasthan Rajya Vidyut Prasaram Nigam Limited dated 30/01/2009 /26/ certificate no. YMPL/174039/29122 dated 16/04/2010 and certificate no. YMPL/201756/34217 dated 28/03/2011 by M/s. Yadav Measurements Pvt. Ltd. /16/

VERIFICATION/CERTIFICATION REPORT

Data/Parameter	Assessment										
Data Unit	EG _{JMR, Import} : MWh										
Description	Electricity imported as recorded by the main meter at EB substation, Amarsagar.										
Source of data to be used	Import value from the Joint Meter reading taken at the substation in the presence of Enercon representatives and the State Utility representatives.										
Value of monitored parameter for the monitoring period	144										
Monitoring equipment	<p>Three phase energy meters of Secure make</p> <table border="1"> <thead> <tr> <th>Meter</th><th>Serial Number</th></tr> </thead> <tbody> <tr> <td>Main meter 1</td><td>TNU00946</td></tr> <tr> <td>Main meter 2</td><td>TNU00945</td></tr> <tr> <td>Check/ Back up meter 1</td><td>RJB0052</td></tr> <tr> <td>Check/ Back up meter 2</td><td>ABB00691</td></tr> </tbody> </table>	Meter	Serial Number	Main meter 1	TNU00946	Main meter 2	TNU00945	Check/ Back up meter 1	RJB0052	Check/ Back up meter 2	ABB00691
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Main meter 1	TNU00946										
Main meter 2	TNU00945										
Check/ Back up meter 1	RJB0052										
Check/ Back up meter 2	ABB00691										
Accuracy of the monitoring equipment	All the meters are of accuracy class 0.2 s /13/ /14/ /15/ /16/ /23/ /24/ /25/ /26/. The registered and revised PDD's does not refer to any accuracy.										
Measuring/Reading/Recording frequency	Measured in continuous basis and recorded on monthly basis										
Calculation method (if applicable)	Not applicable as the parameter is measured										
Calibration											
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PDD?	All the meters are calibrated annually,, which is in line with the monitoring plan provided in the revised PDD										
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	Both the main meters were calibrated on 26/03/2011 and both the check meters were calibrated on 28/03/2011 which covers the monitoring period. The calibration frequency of all the meters were checked with the previous calibrations records and found that the calibration frequency has been respected. During the site visit it is noticed from the calibration records of the main meters (Sr. No. TNU00945 and Sr. No. TNU00946) for the year 2011 that the error levels 0.813 and 0.29 respectively have exceeded the permissible limit for the meters. PP has applied the error correction factor with 0.813 on a conservatory basis for the electricity generation data in the ER calculation for the current monitoring period.										
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Data/Parameter	Assessment
Data Unit	EG _{Controller, Export} ; MWh
Description	Electricity exported by a WEC, as measured at the controller panel.
Source of data to be used	This value is monitored on continuous basis by online monitoring system at the site and can also be seen at the electronic panel inside the WTG tower.
Value of monitored parameter for the monitoring period	93,895
Monitoring equipment	The LCS meter
Accuracy of the monitoring equipment	Not applicable as in case, there is any mismatch in the energy values recorded by the LCS meter and the energy values calculated by the inverting system, the machine will stop working and generate the error report.
Measuring/Reading/Recording frequency	Measured on continuous basis by online monitoring system at the site and recorded on monthly basis.
Calculation method (if applicable)	Not applicable as the parameter is measured
Calibration	
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PDD?	The LCS meters (for panel reading) do not require calibration as the energy readings of electricity generated at the LCS meter is cross verified by the energy calculated by inverting system installed in the WECs. In case, there is any mismatch in the energy values recorded by the LCS meter and the energy values calculated by the inverting system, the machine will stop working and generate the error report.
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	Not applicable
Calibration certificates	Not applicable

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Data/Parameter	Assessment
Data Unit	EG _{Export} ; MWh
Description	Electricity exported to the grid by the project activity
Source of data to be used	Calculated with the help of electricity exported by the WECs to the grid (E _{WEC, Export})
Value of monitored parameter for the monitoring period	20,580
Monitoring equipment	Not applicable as the parameter is calculated
Accuracy of the monitoring equipment	Not applicable as the parameter is calculated
Measuring/Reading/Recording frequency	Not applicable as the parameter is calculated
Calculation method (if applicable)	$EG_{Export} = \sum EG_{WEC, Export} = \text{Export from all the WECs under the project activity}$
Calibration	
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PDD?	Not applicable as the parameter is calculated
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	Not applicable as the parameter is calculated
Calibration certificates	Not applicable as the parameter is calculated

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Data/Parameter	Assessment
Data Unit	EG _{Import} ; MWh
Description	Electricity imported from the grid by the project activity
Source of data to be used	Calculated with the help of electricity imported by the WECs to the grid (E _{WEC, Import})
Value of monitored parameter for the monitoring period	33
Monitoring equipment	Not applicable as the parameter is calculated
Accuracy of the monitoring equipment	Not applicable as the parameter is calculated
Measuring/Reading/Recording frequency	Not applicable as the parameter is calculated
Calculation method (if applicable)	EG _{Import} = \sum EG _{WEC, import} = Import from all the WECs under the project activity
Calibration	
Calibration frequency/interval Is the calibration interval in line with the monitoring plan of the PDD?	Not applicable as the parameter is calculated
Does the calibration cover the monitoring period? Has the calibration frequency been respected?	Not applicable as the parameter is calculated
Calibration certificates	Not applicable as the parameter is calculated

$$EG_y = EG_{Export} - EG_{Import}$$

Where:

EG_{Export} = Electricity exported to the grid by the project activity = $\sum EG_{WEC, Export}$

EG_{Import} = Electricity imported from the grid by the project activity = $\sum EG_{WEC, Import}$

Electricity exported by each WEC (EG_{WEC, Export}) is apportioned on the basis of electricity export recorded at the controller of each WEC and the electricity export at the main meter as mentioned in the JMR. The export multiplication factor is calculated as follows:

$$\text{Export Multiplication factor} = E_{JMR, Export} / \sum EG_{Controller, Export}$$

Therefore, the energy exported by a WEC to the grid is calculated as:

$$EG_{WEC, Export} = \text{Export Multiplication factor} \times EG_{Controller, Export}$$

As the controller meter doesn't record import, the apportioning of energy import by each WEC (EG_{WEC, Import}) is also done on the basis of electricity exported recorded at the controller of each WEC and the electricity import at the main meter as mentioned in the JMR. The import multiplication factor is calculated as follows:

$$\text{Import Multiplication factor} = E_{JMR, Import} / \sum EG_{Controller, Export}$$

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Therefore, the energy imported by a WEC to the grid is calculated as:

$$EG_{\text{WEC, Import}} = \text{Import Multiplication factor} \times EG_{\text{Controller, Export}}$$

PP has referred all the parameters in the monitoring report as mentioned in the revised PDD. The team hereby confirms that monitoring plan in the registered PDD /01/ is in accordance with approved methodology applied by the project activity for the monitoring period 17/05/2011 to 31/10/2011 (first and last days included).

3.5.3 Assessment of data and calculation of emission reductions

Availability of the data

The data of the monitoring parameters available in the monitoring period is described below.

As described in the registered PDD, the baseline emission (BE_y) = $EG_y \times EF_y$

Where,

BE is baseline emissions in year y , tCO_2e

EG_y is the net electricity supplied to the grid in year y and is sourced from the credit notes and can be cross-checked with the invoices raised to the DISCOM.

EF_y is the CO_2 emission factor of the grid = $0.87387 \text{ tCO}_2e/\text{MWh}$

Therefore, Baseline Emission calculation for the period of 17/05/2011 to 31/10/2011 (first and last days included) is as follows:

$$BE_y = EG_y \times EF_y$$

EG_y = Net electricity supplied to the grid in year y

EF_y = CO_2 emission factor of the grid for the year y

$$EG_y = \text{net electricity generated} \times \text{correction factor for the error observed in electricity meter} = 20,547 \times (1 - 0.813\%) = 20,380 \text{ MWh}$$

$$EF_y = 0.87387 \text{ tCO}_2e/\text{MWh}$$

$$\begin{aligned} \text{Baseline Emission (BE}_y) &= 20,380 \text{ (MWh)} \times 0.87387 \text{ (tCO}_2e/\text{MWh)} \\ &= 17,809 \text{ tCO}_2e \end{aligned}$$

The project activity uses wind power to generate electricity and hence, the emissions from the project activity have been taken as zero. $PE_y = 0$

No leakage has been considered from the project activity as per approved methodology ACM0002. Hence, $Ly = 0$

Total baseline emissions: $17,809 \text{ tCO}_2e$

Total project emissions: 0

Total leakage: 0

$$\begin{aligned} \text{Total Emission reductions (ER}_y) &= BE_y - PE_y - Ly \\ &= 17,809 \text{ tCO}_2e \end{aligned}$$

Cross-check reported data

The data presented in the monitoring report, version 08 /02/ were assessed by reviewing in detail project documentation, collection of monitored data, observation of established monitoring and

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reporting practices and assessment of the reliability of monitoring equipment. Sufficient evidence was presented and verified by RINA for the reported emission reductions as listed in the above Section.

The project emissions (PEy) and Leakage (Ly) are cross checked with the methodology and confirmed that the project emissions and leakage need not be considered for the project activity. Thus RINA confirms that the method and formulae used in the monitoring report are in line with the methodology applied for the project activity.

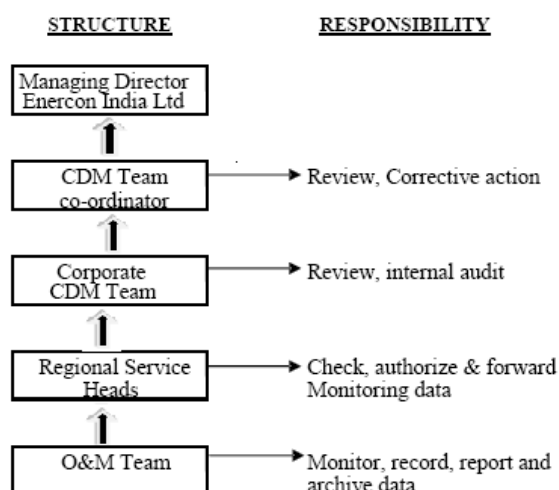
3.5.4 Accuracy of emission reduction calculations

The emission reduction calculations provided in the spreadsheet/07/ have been verified to be correct and in line with the revised PDD /01/.

The emission reductions from the project for the monitoring period as reported in the monitoring report revision 7 of 23/05/2012 /02/ is equivalent to 17,809 tCO_{2e}. The reported emission reductions are 14.72 % lower than the estimated emission reduction of 20,882 tCO_{2e} for the period as per the revised PDD/01/.

3.5.5 Management system and quality control

The management has identified a separate team for effective monitoring of the parameters as per the monitoring plan and reporting of actual emission reductions achieved to the management. The following are the details of the identified team and their responsibilities.



The reporting of monitored parameters is done on a daily basis by the O&M team. The data is then transferred into the soft copy, which is used for the calculation of emission reductions and the daily reporting, respectively. The heads of regional services updates the summary daily report to the corporate CDM team and the compiled data to the managing director. The managing director and CDM team coordinator interact on regular basis to discuss emission reduction reporting.

QA / QC Procedures:

The QC team ensures the timely calibrations of the monitoring devices, data acquisition and storage of data for the entire crediting period. Further, the data is stored for a period of 2 years after the completion of the crediting period.

The data will be archived electronically as well as on paper. The data will be kept for the period up to two years after the completion of the crediting period.

The monitoring and reporting of electricity data is in accordance with well-established operational procedures. The site visit confirmed that the management system for the CDM project is in place and can be traced, such as the organizational structure with responsibilities, monitoring procedure and monitoring management, internal audit and competence criteria of CDM personnel involved in the

VERIFICATION/CERTIFICATION REPORT

CDM project. The Operation and the Management of the project activity is handled by the O&M team (Enercon India Pvt. Ltd). Since the O&M provider is also an ISO certified organization, the same would also take care of the training to be provided to the O&M personnel. RINA confirmed the same with the registered PDD and also crosschecked with the training certificates /26/.

During the onsite verification by RINA, it was noticed that the monitoring of the parameters are carried out as per the monitoring plan /01/.

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4 VERIFICATION AND CERTIFICATION OPINION

RINA Service Spa (RINA) has performed verification of the emission reductions reported for the project activity "Bundled wind energy power projects (2003 policy) in Rajasthan" in India, CDM Registration Reference N° 1167, for the period 17/05/2011 to 31/10/2011 (first and last days included), with regard to the relevant requirements for CDM activities.

The project participants of the "Bundled wind energy power projects (2003 policy) in Rajasthan" project are responsible for:

- the preparation of greenhouses gas emissions data and the reported greenhouse gas emission reductions from the project on the basis set out in the monitoring plan contained in the revised project design document version 8.0 of 25/01/2012
- the development and maintenance of records and reporting procedures in accordance with that plan, including the calculation and determination of greenhouse gas emission reductions of the project

It is the responsibility of RINA to express an independent verification opinion about the project's conformity with the requirements of paragraph 62 of the CDM modalities and procedures and on the reported greenhouse gas emission reductions from the project.

Based on documented evidence and corroborated by an on-site assessment RINA can confirm that:

- the project has been implemented and operated as per the revised PDD; excepting for the changes described in section 3.4 of this report.
- the changes post registration has not affected the applicability of the methodology, baseline, additionality or scale of the project activity,
- the monitoring report and other supporting documents provided are complete and verifiable and in accordance with the applicable CDM requirements;
- the monitoring is in place as per the applied baseline and monitoring methodology;
- the monitoring complies with the monitoring plan in the revised PDD;
- the monitoring plan in the revised PDD is as per the applied baseline and monitoring methodology.

It is RINA's opinion that the GHG emission reduction stated in the monitoring report version 8 of 18/07/2012 for the "Bundled wind energy power projects (2003 policy) in Rajasthan" project in India for the period 17/05/2011 to 31/10/2011 (first and last days included) are fairly stated. The GHG emission reductions were calculated correctly on the basis of the approved monitoring methodology "ACM0002", "Consolidated baseline methodology for grid-connected electricity generation from renewable sources", version 06 of 19/05/2006 and the monitoring plan contained in the revised.

Hence RINA is able to certify that the emission reductions from the project during the monitoring period 17/05/2011 to 31/10/2011 (first and last days included) amount to 17,809 tCO₂e.

Chennai, 01/06/2012

Signature :

Name : R. Reghu Kumar
CDM Team Leader
RINA India Pvt Ltd

Genova, 30/07/2012



Laura Severino
Authorized officer signing for the DOE
RINA Services S.p.A.

APPENDIX A

VERIFICATION PROTOCOL

TABLE 1 REQUIREMENTS CHECK LIST

Checklist Question		Reference	MoV ¹	Comments	Draft Conclusion	Final Conclusion																																																												
A Description of Project Activity																																																																		
A.1	Title of the project activity, revision number and date of Monitoring Report	/01/, /02/	DR	The title of the project activity is “Bundled wind energy power projects (2003 policy) in Rajasthan”, which is also crosschecked with the registered PDD and found to be correct. The monitoring report is of version 1 dated 22/11/2011. However the title of the project activity mentioned in the monitoring report is in upper case which is not matching with the registered PDD. PP is requested to clarify the same.	CAR-1	OK																																																												
A.2	Is the actual implementation and operation of the proposed project activity in accordance with the project activity in the registered PDD?	/01/, /02/, /07/	DR, I	<div>The project activity is registered under CDM program with the UNFCCC on 17/05/2011. The crediting period for the project activity under CDM is starting from 17/05/2011 to 16/05/2021. The monitoring period as stated in the current monitoring report is from 17/05/2011 to 31/10/2011.</div> <div>As per the MR, the project activity involves in installation of WECs of Enercon make of various capacities as listed below</div> <table><thead><tr><th>S. No</th><th>Name of customers</th><th>Capacity of 1 WEC (MW)</th><th>Total Capacity (MW)</th><th>Date of Commissioning</th></tr></thead><tbody><tr><td>1</td><td>Enercon Wind Farm Rajasthan Pvt. Ltd</td><td>0.80</td><td>24</td><td>29/05/2005</td></tr><tr><td>2</td><td>Prerna Pharma Intermediates Pvt. Ltd.</td><td>0.23</td><td>0.23</td><td>29/03/2004</td></tr><tr><td>3</td><td>Modular Power</td><td>0.23</td><td>0.23</td><td>29/03/2004</td></tr><tr><td>4</td><td>Vijay Traders</td><td>0.23</td><td>0.23</td><td>29/03/2004</td></tr><tr><td>5</td><td>Vijay Developers</td><td>0.23</td><td>0.23</td><td>29/03/2004</td></tr><tr><td>6</td><td>Vikas Agencies</td><td>0.23</td><td>0.23</td><td>29/03/2004</td></tr><tr><td>7</td><td>G. C. Chemie Pharmie Ltd.</td><td>0.23</td><td>0.23</td><td>29/03/2004</td></tr><tr><td>8</td><td>Cooper Metals Pvt. Ltd.</td><td>0.23</td><td>0.46</td><td>29/03/2004 and 12/06/2004</td></tr><tr><td>9</td><td>Kataria Infrastructure Corporation</td><td>0.60</td><td>0.60</td><td>29/07/2003</td></tr><tr><td>10</td><td>Dempo Industries Pvt. Ltd.</td><td>0.60</td><td>0.60</td><td>10/03/2004</td></tr><tr><td>11</td><td>D.P. Power</td><td>0.23</td><td>0.23</td><td>29/07/2003</td></tr></tbody></table>	S. No	Name of customers	Capacity of 1 WEC (MW)	Total Capacity (MW)	Date of Commissioning	1	Enercon Wind Farm Rajasthan Pvt. Ltd	0.80	24	29/05/2005	2	Prerna Pharma Intermediates Pvt. Ltd.	0.23	0.23	29/03/2004	3	Modular Power	0.23	0.23	29/03/2004	4	Vijay Traders	0.23	0.23	29/03/2004	5	Vijay Developers	0.23	0.23	29/03/2004	6	Vikas Agencies	0.23	0.23	29/03/2004	7	G. C. Chemie Pharmie Ltd.	0.23	0.23	29/03/2004	8	Cooper Metals Pvt. Ltd.	0.23	0.46	29/03/2004 and 12/06/2004	9	Kataria Infrastructure Corporation	0.60	0.60	29/07/2003	10	Dempo Industries Pvt. Ltd.	0.60	0.60	10/03/2004	11	D.P. Power	0.23	0.23	29/07/2003	CAR-2	OK
S. No	Name of customers	Capacity of 1 WEC (MW)	Total Capacity (MW)	Date of Commissioning																																																														
1	Enercon Wind Farm Rajasthan Pvt. Ltd	0.80	24	29/05/2005																																																														
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¹ MoV: DR document review, I interview, CC cross checking

Checklist Question		Reference	MoV ¹	Comments					Draft Conclusion	Final Conclusion		
				12	Kataria Infrastructure Corporation	0.23	0.23	29/07/2003				
				13	Kataria Wires	0.23	0.23	29/07/2003				
				14	Ratlam Wires	0.23	0.23	29/07/2003				
				15	Kwality Tobacco Products	0.23	0.23	29/07/2003				
				16	D P Power	0.60	0.60	30/06/2004				
				17	Unique Power Corporation	0.60	0.60	30/06/2004				
				18	P.V. Chandran	0.60	0.60	30/11/2003				
				19	Srinivaas Sirigeri	0.60	0.60	03/03/2004				
				<p>In total, 13 WECs of 0.23 MW capacity, 6 WECs of 0.6 MW capacity and 30 WECs of 0.8 MW capacity developed by Enercon and other developers. Thereby total capacity of the project activity is adding up to 30.59 MW. However it is stated in the monitoring report and ER calculation sheet that the one WEC of 0.6 MW capacity of Dempo Industries Pvt. Ltd. has been decommissioned which is also noticed during the site visit. Further, the name of the project developer as per registered PDD “Prerna Pharma Intermediates Pvt. Ltd.” has been changed to Jitendra K. Newaskar. PP is requested to clarify and submit the supporting evidences for:</p> <p>i) On the reason for decommissioning and status of the decommissioned WEC and also clarify how does it impact the additionality and ER calculations.</p> <p>ii) The reason for name change</p> <p>iii) If the PP has taken any steps to get the approval from CDM EB for the changes in the project implementation with respect to registered PDD.</p> <p>Further, the commissioning dates as mentioned in the monitoring report for the individual WECs are not matching with the commissioning dates of the respective WECs painted on the WECs as seen at the site. PP is requested to submit the commissioning certificates of all the WECs in the project activity.</p> <p>It is also noted that the village name as mentioned in MR are not consistent within the MR and not consistent with registered PDD.</p> <p>The project activity involves 30 numbers of 800 kW wind energy converters (WECs) of Enercon make E - 48, 6 WECs of 600 kW of</p>								

Checklist Question	Reference	MoV ¹	Comments	Draft Conclusion	Final Conclusion
			<p>Enercon make E- 40 and 13 WECs of 230 kW of Enercon make E – 30. However it is not clear on salient features provided in section A.4 of MR is for which model of the WEC.. Also the monitoring report is not transparent on the implementation status and actual operation of the project activity. PP is requested to make it transparent in the MR and provide supporting evidences for the same.</p> <p>Further the following points were noticed in the monitoring report</p> <ul style="list-style-type: none"> • There is no diagram in section A.4 as required by Guidelines documents • Monitoring also states regarding training. No training records are provided • Complete information as per Guidelines for completing monitoring report is not included in section B1 of monitoring report • Complete information as per Guidelines for completing monitoring report is not included in section E4 of monitoring report • PP is requested to submit the supporting evidences for all the values considered in the ER sheet. • Also the monitoring report is not transparent on the role of backup meters located at Temderai substation and also the location of the individual metering point. 	CAR-3	
A.3	Methodology applied for the registered project activity	/01/, /02/, /04/	DR	As per the MR, Version 1.0, dated 22/11/2011 the approved methodology ACM0002 version 06 of 19/05/2006 is applied for the project activity, which is in line with the registered PDD (Reference No: 1167).	OK
B Monitoring					
B.1 Monitoring plan					
B.1.1	Does the monitoring plan included in the registered CDM project activity comply with the applied methodology?	/01/, /02/, /04/	DR	Yes, the monitoring plan included in the registered PDD complies with applied methodology ACM0002 version 6.	OK
B.1.2	Does the monitoring comply with the monitoring plan in the registered PDD?	/01/, /02/, /04/	DR, I	Monitoring comply with the monitoring plan in the registered PDD. In the registered PDD only the net export is identified as parameter. However the Gross export, Gross import and controller reading are also shown separately as a parameter under section D.2 in the monitoring report which is not in line with the registered PDD. PP is requested to clarify. Further the Appendix I is not transparent on the monitoring of controller	OK

Checklist Question		Reference	MoV ¹	Comments	Draft Conclusion	Final Conclusion
				reading. Also the apportionment procedure mentioned in the monitoring report is not matching with the procedures defined in the registered PDD.		
B.2 Data and parameters that are available at validation and that are not monitored						
B.2.1	Which parameters were available at validation and how were they verified?	/01/, /02/, /04/, /09/	DR, I	<p>The following parameters were available at the time validation.</p> <p>EF_{OM, y}: Operating Margin Emission Factor of Northern Regional Electricity Grid. The average value for the years from 2002-03, 2003-04 and 2004-05 is found to be 0.98732 tCO₂e/MWh.</p> <p>EF_{BM, y}: Build Margin Emission Factor of Northern Regional Electricity Grid. The value for the year 2004-05 is found to be 0.5335 tCO₂e/ MWh</p> <p>EF_{CM, y}: Combined Margin Emission Factor of Northern Regional Electricity Grid. The value is found to be 0.8738 tCO₂e/ MWh.</p> <p>The values were checked with the “CO₂ Baseline Database for Indian Power Sector”, version 01.1 published by the Central Electricity Authority, Ministry of Power, Government of India and is found correct. The EF is fixed ex-ante for the entire crediting period.</p>		OK
B.3 Data and parameters monitored						
B.3.1	Data/Parameter monitored / Data unit / Description / Source of data to be used / Value data for the monitoring period.	/01/, /02/, /04/, /07/ /09/	DR, I	<p>The data/ parameter to be monitored, its data unit, description and the sources of data are as follows:</p> <p>Data/ parameter : EG_y Unit: MWh Description: Net electricity supplied to the grid by a WEC of the Project Source of Data: Calculated as the difference of EG_{Export} and EG_{Import} and sourced from the invoice raised to the DISCOM. Value applied for the monitoring period: 20,712</p> <p>Data/ parameter : EG_{JMR,Export} Unit: MWh Description: Electricity export as recorded by the main meter at EB substation Source of Data: Measured Value applied for the monitoring period: 91,151</p> <p>Data/ parameter : EG_{JMR,Import}</p>		OK

Checklist Question	Reference	MoV ¹	Comments	Draft Conclusion	Final Conclusion
			<p>Unit: MWh Description: Electricity Import as recorded by the main meter at EB substation Source of Data: Measured Value applied for the monitoring period: 144</p> <p>Data/ parameter : EG_{Controller,Export} Unit: MWh Description: Electricity exported by a WEG, as measured at the control panel Source of Data: Measured Value applied for the monitoring period: -</p> <p>Data/ parameter : EG_{WEG,Export} Unit: MWh Description: Electricity exported to grid by a WEG Source of Data: Calculated Value applied for the monitoring period: -</p> <p>Data/ parameter : EG_{WEG,Import} Unit: MWh Description: Electricity Import to grid by a WEG Source of Data: Calculated Value applied for the monitoring period: -</p> <p>Data/ parameter : EG_{Export} Unit: MWh Description: Electricity exported to the grid by a WEC of the project activity Source of Data: Calculated Value applied for the monitoring period: 20,746</p> <p>Data/ parameter : EG_{Import} Unit: MWh Description: Electricity Import from the grid by a WEC of the project activity Source of Data: Calculated Value applied for the monitoring period: 33</p>	CAR-3	

Checklist Question	Reference	MoV ¹	Comments	Draft Conclusion	Final Conclusion
			<p>The monitoring report is not transparent on the source of data with which the parameters EG_{Export} and EG_{Import} are calculated. Further the measuring frequency of the parameters EG_y, $EG_{JMR,Export}$, $EG_{JMR,Import}$ and $EG_{Controller,Export}$ are not provided in the monitoring report.</p> <p>XX</p> <p>The parameters $EG_{JMR,Export}$ and $EG_{JMR,Import}$ are monitored through the 2 main meters (sr no TNU00945 and sr no TNU00946) located at the EB substation. However the same is not in line with the registered PDD.</p> <p>The values applied in the monitoring report are as per the ER calculation sheet. It is noticed that the current monitoring period is from 17/05/2011 to 31/10/2011, whereas the generation details in the ER sheet are provided only for the months from June 2011 to October 2011. The monitoring report states that part of the generation values for the month of May 2011 are not considered in ER sheet as the generation details are monitored on 1st day of every month. However PP is requested to submit the supporting documents for all the values and calculations used in the ER sheet. Also the ER calculation sheet is not transparent on the respective period (start and end dates) of all the months for which the readings were taken. PP is requested to make it transparent in the ER sheet.</p> <p>PP is requested to submit the soft copies of JMR/ credit sub division readings for the individual WECs along with the copies of invoices raised by the respective project developer and payments received against the invoice raised during the current monitoring period.</p>		
B.3.2	Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and deemed appropriate?	/01/, /02/, /12/	DR, I The project activity involves two main meters with serial numbers TNU00945 and TNU00946 located at the 220 K.V Amarsagar grid substation and two check meters with serial numbers RJB0052 and ABB00691 located at the Temdarai substation of Enercon from where the electricity is exported to Amarsagar substation. All the meters are of Tri-vector of make Secure Meters Ltd. and are of accuracy class 0.2s. This is in accordance with the Metering code for Rajasthan Grid (part-III of the grid code) dated December 2002. However the same is not in line with the registered PDD.	CL-4	OK
B.3.3	Are the requirements for maintenance and calibration of measurement equipment	/01/, /02/, /07/, /09/, /13/, /14/	DR, I As per the registered PDD and monitoring report the "QA/QC procedures will be implemented by RRVPN/ Jodhpur Discom pursuant to the provisions of the PPA and metering code of Rajasthan". It is stated in the	CAR-4	OK

Checklist Question		Reference	MoV ¹	Comments	Draft Conclusion	Final Conclusion
	described and deemed appropriate?	/15/, /16/		monitoring report that the meters are being calibrated once in a year as per the PPA. The calibration records of the meters were crosschecked during site visit and found that the meters were calibrated once in a year. All the meters were calibrated by M/s. Yadav Measurements Pvt. Ltd (an NABL accredited laboratory) for the year 2011. Both the main meters (sr no TNU00945 and sr no TNU00946) were calibrated on 26/03/2011 and both the check meters (sr no RJB00052 and sr no ABB00691) were calibrated on 28/03/2011. During the site visit it is noticed from the calibration records of the main meters (sr no TNU00945 and sr no TNU00946) for the year 2011 that the error levels 0.793 and 0.29 respectively have exceeded the permissible limit for the meters. PP is requested to apply the error correction factor for the data used in the ER calculations as per the procedure in EB 52, Annex 60. PP is also requested to submit the soft copies of the calibration certificates		
B.3.4	Is the monitoring frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?	/01/, /02/	DR	The "Net electricity supplied to the grid" is the only parameter to be monitored for the current monitoring period. At site it is noticed that the same is measured continuously for all the WECs at the substation and CMS. However it is noticed that neither the registered PDD nor the monitoring report is transparent on the measuring frequency of the monitoring parameters. PP is requested to make it transparent in the monitoring report.	CL-2	OK
B.3.5	Is the recording frequency adequate for all monitoring parameters? Is it in line with the registered monitoring plan?	/01/, /02/	DR	The "Net electricity supplied to the grid" is the only parameter recorded on 1 st day of every month during the current monitoring period. This is in line with the registered monitoring plan and also the approved methodology "ACM0002" version 6.		OK
B.3.6	Does data management (from monitoring equipment to emission reduction calculation) ensure correct transfer of data and reporting of emission reductions?	/01/, /02/, /07/	DR	The monitoring report is not transparent on the data management adopted in the project activity for the transfer of data from monitoring equipment to ER calculation sheet. PP is requested to clarify the same.	CL-3	OK
B.4 Monitoring of sustainable development indicators/environmental impacts						
B.4.1	Is the monitoring of sustainable development indicators/ environmental	/01/, /02/, /11/	DR	The legislation in the host country (India) does not warrant monitoring of any sustainable development indicators. This is also cross checked with the Host Country Approval (HCA) obtained from the DNA of the host	CL-4	OK

Checklist Question		Reference	MoV ¹	Comments	Draft Conclusion	Final Conclusion
	impacts warranted by legislation in the host Country?			country. As per the HCA, PP is not required to monitor the sustainable development indicators/ environmental impacts. However, PP is requested to submit the action plan submitted to DNA .		
B.4.2	Does the monitoring report provide for the collection and archiving of relevant data concerning environmental, social and economic impacts?	/01/, /02/, /11/	DR	Please refer section B.4.1 above	CL-4	OK
B.5 Management, quality assurance and quality control						
B.5.1	How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design?	/01/, /02/, /07/	DR, I	Verification team has conducted the site visit on 13/09/2011 and 14/09/2011 and checked the procedures followed at site in monitoring and calculating the net electricity exported to the grid. There were 4 tri-vector (two way) meters installed in the project activity which measure Export, Import and Net export to the grid. Out of which 2 meters are main meters located the Amarsager substation and 2 meters are check meters located at the Temdarai substation. This is not in line with the registered PDD. Also the monitoring report states about the control panel reading. This is also not in line with the registered PDD. PP is requested to clarify the same.	CL-4	OK
B.5.2	Are procedures identified for day-to-day record handling (including what records to keep, storage area of records and how to process performance documentation)?	/01/, /02/	DR, I	During site visit it was noticed that the procedures for day-to-day record handling as mentioned in the approved monitoring plan is followed by the PP. However, the monitoring report is not transparent on the day to day record handling procedures followed at the site for the project activity. PP is requested to make it transparent in the monitoring report.	CL-3	OK
B.5.3	Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the project can be reported ex post and verified?	/01/, /02/	DR, I	The quality assurance and quality control procedures mentioned in the monitoring report ensure that the emission reductions achieved by/resulting from the project can be reported ex post and verified. As per the registered PDD, the main and backup/ check meters will jointly inspected/tested once in a year as per the terms of the PPA. Joint inspection and testing will also be carried out as and when difference in monthly meter readings exceeds the sum of maximum error as per accuracy class of main and backup meters. During site visit it was noticed that the procedures as in the approved monitoring plan is followed by the PP. However the monitoring report is not transparent in the data	CL-3	OK

Checklist Question	Reference	MoV ¹	Comments	Draft Conclusion	Final Conclusion
B.5.4 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 project activity, whichever occurs later?	/01/, /02/	DR, I	management system adopted at the site for the project activity. PP is requested to clarify. During site visit it was noticed that the generation from the individual WECs are recorded in the CMS and the soft copy is maintained. The same is also communicated to the individual PPs in the bundle through e- mails. Enercon (India) Ltd being the PP on behalf of all the project developers in the bundle is also maintaining the records in hard and soft form. However, the monitoring report is not transparent on the data management system and archival of data up to two years after the end of crediting period. PP is requested to clarify.	CL-3	OK

TABLE 2 RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
CAR 1 The title of the project activity mentioned in the monitoring report is not matching with the registered PDD.	A.1	The title of the project activity has been matched with the registered PDD. Please refer to the revised Monitoring report.	The response provided by the PP is accepted as the title of the project activity is updated in the revised MR and is in line with the registered PDD. Hence accepted. CAR 1 is closed.
CAR 2 1. PP is requested to clarify and submit the supporting evidences for: i) On the reason for decommissioning and status of the decommissioned WEC and also clarify how does it impact the additionality and ER calculations ii) The reason for name change of the WEC	A.2	1. i) The documentary evidence on the decommissioning of the WEC has been submitted to the DOE. The WEC is not supplying power to the grid after decommissioning and has been taken back in the spare inventory section. Hence, this sub-project has been removed from the bundle. Hence, the Emission reduction resulting from the generation of the WEC of this particular customer is not considered in the ER calculation. The additionality assessment of this bundle is done separately for all the sub-projects. Therefore, the project will still remain additional after removal of the decommissioned sub – project (one WEG) by Dempo Industries Pvt. Ltd. from the bundle. The PP has also submitted the revised PDD to the DOE for submission of notification of changes to the CDM Executive board in line with <u>para C & D, EB 48, Annex 66</u> . 2nd Response: Please refer to page no. 3; point 2 of the Transfer Deed submitted, where it has been mentioned that the reason of decommissioning is related to the shortfall in generation of power. ii) The ownership of the sub-project project has been transferred from Purna Pharma Intermediates Pvt. Ltd.	1. i) PP has submitted the revised PDD version no 8.0 dated 25/01/2012. The WEG of 0.6 MW by Dempo Industries Pvt. Ltd. out of the 49 WEGs of this bundle have been decommissioned on 18/03/2008. The same has been confirmed through the transfer deed of the wind energy generator (WEG) of M/s. Dempo Industries Pvt Limited to Enercon (India) Limited, the wind farm Manager, declaration given by Enercon on the decommissioning of the WEG, site visit observations at the central monitoring station of the wind farm and the WEG location. The additionality assessment of this bundle has been done separately for all the sub-projects at the time of registration. Therefore, the project will still remain additional even after removal of the decommissioned sub – project (one WEG) by Dempo Industries Pvt. Ltd. from the bundle. The

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
<p>iii) If the PP has taken any steps to get the approval from CDM EB for the changes in the project implementation with respect to registered PDD.</p> <p>2. PP is requested to submit the commissioning certificates of all the WECs and also make it transparent in the monitoring report on the unique identification details of all the individual WECs involved in the project activity.</p> <p>3. It is also noted that the village name (Temdarai) as mentioned in MR are not consistent within the MR and not consistent with registered PDD.</p> <p>4. it is not clear on salient features provided in section A.4 of MR is for which model of the WEC.</p> <p>5. The monitoring report is not transparent on the implementation status and actual operation of the project activity. PP is requested to make it transparent in the MR and provide supporting evidences for the same.</p> <p>6. There is no diagram in section A.4 as required by Guidelines documents</p> <p>7. Monitoring also states regarding training. No training records are provided</p>		<p>to Jitendra K. Newaskar. The documentary evidence for the same has been provided to the DOE. Further, as the additionality for each of the sub-project of this bundle has been done separately, therefore, this particular sub-project has been removed from the bundle and removal of this sub-project (one WEG) by Jitendra K. Newaskar (formerly Perna Pharma Industries Pvt. Ltd.) does not have any impact on the overall additionality of this bundle. The PP has also submitted the revised PDD to the DOE for submission of notification of changes to the CDM Executive board in line with <u>para C & D, EB 48, Annex 66</u>.</p> <p>iii) The revised PDD with a mention of these two changes has already been submitted to the DOE for submission of notification of changes to the CDM Executive Board in line with <u>para C & D, EB 48, Annex 66</u>.</p> <p>2nd Response:</p> <p>The notification approval process is undergoing. In line with the notification, the MR & the ER sheet have also been revised.</p> <p>2. The Commissioning certificates have been submitted to the DOE. The Unique identification details have been given in the monitoring report, section A.3.</p> <p>3. The Monitoring report has been revised. Please refer to the revised monitoring report, section C.</p> <p>4. The monitoring report reflects the common salient features for all the WEGs. This is also in line with the</p>	<p>decommissioning of this WEG will reduce the size of this bundle and the estimated emission reduction will be lower than as stated in the registered PDD (will be 50,506 CERs instead of 51,517 CERs per annum). However the response provided by the PP is not accepted as it is not transparent on the reason for decommissioning and submit the supporting evidences for the same.</p> <p>This part of CAR 2 is open</p> <p>DOE Comments: The response provided by the PP is accepted as it is evident from the transfer deed agreement that there was a shortfall in the generation by the WEG. This part of the CAR 2 is closed.</p> <p>ii) The ownership of the sub project of 0.23 MW capacity WEG of Perna Pharma Intermediates Pvt. Ltd. has been transferred to Jitendra K. Newaskar on 01/11/2009. The same has been confirmed through the purchase deed between Perna Pharma Intermediates Pvt. Ltd and Jitendra K. Newaskar and site visit observations at the central monitoring station of the wind farm and the WEG location. It is noticed that the change in ownership of 0.23 MW is having an impact on the additionality of</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
<p>8. Complete information as per Guidelines for completing monitoring report is not included in section B1 of monitoring report</p> <p>9. Complete information as per Guidelines for completing monitoring report is not included in section E4 of monitoring report</p> <p>10. Also the monitoring report is not transparent on the role of backup meters located at Temderai substation and also the location of the individual metering point.</p>		<p>registered PDD.</p> <p>2nd Response: The model of the WECs differ only in terms of the capacity, e.g. wind energy converters (WECs) of Enercon make E – 48model is of 800 kW, Enercon make E- 40 model is of 600 kW and Enercon make E – 30model is of 230 kW. The common salient features as mentioned in the MR are applicable for all these three models of WECs.</p> <p>The MR and the PDD have been revised. Please refer to the revised MR and the PDD.</p> <p>5. The implementation status (commissioning dates) have been mentioned in the monitoring report, section B 1. The copy of the Purchase order has already been provided to the DOE. Please refer to the Validation report, page no.6, point 1.3.</p> <p>6. The monitoring report has been revised. Please refer to section A.4 of the revised monitoring report.</p> <p>7. The ISO certificates have been submitted to the DOE. All the operational activities and the training procedures provided to the professionals are performed in line with the requirement of the ISO procedures only.</p> <p>2nd Response: Further, the details of the training programme conducted has been submitted to the DOE.</p> <p>8. The monitoring report has been revised. Please refer to section B1 of the revised monitoring report.</p>	<p>this sub-project after considering the revised cost (cost at which the transaction of the WEG is made) in the investment analysis. As per the registered PDD, the equity IRR crosses the benchmark (16.09%) at a negative variation of 27.97% of the cost for this sub-project. As per the transaction cost mentioned in the purchase deed, the variation in cost is 53.85% and hence will exceed the benchmark, making this sub project in the bundle non additional. Hence the PP preferred to remove this sub-project from the bundle. The project will still remain additional after exclusion of this sub – project (one WEG) of Jitendra K. Newaskar (formerly Prerna Pharma Industries Pvt. Ltd.). The change in ownership will reduce the size of this bundle, as this particular sub- project has been removed from the bundle. Accordingly, the emission reduction will be lower than as stated in the registered PDD (will be 50, 130 CERs instead of 51, 517 CERs per annum).</p> <p>This part of CAR 2 is closed iii) The response provided by the PP is accepted as PP has submitted the revised PDD version no 8.0 dated 25/01/2012 for notification of changes to UNFCCC. This part of the CAR will be closed once</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
		<p>9. The monitoring report has been revised. Please refer to section E 4 of the revised monitoring report.</p> <p>10. Please refer to section D and Appendix I of the monitoring report.</p> <p>2nd Response: Please refer to section C of the monitoring report (Inspection of Energy meters), point 2, where it has been clearly stated that, "Whenever a main meter goes defective, the consumption recorded by the backup meter will be referred".</p> <p>Further, in the registered PDD, there is a mention of the main & check/back up meters. As per EB 65, Annex 5, point 1, "Any corrections to project information of a registered CDM project activity that do not affect the design of the project activity do not require prior approval by the Board. Such corrections may include typographical errors, location, names and numbers of components, etc."</p> <p>In line with the actual scenario, the metering details have been mentioned in the MR, which does not have any impact on applicability of the methodology, additionality and scale of the project in line with EB 65, Annex 5, point 6.</p>	<p>the notification to the changes has been submitted to the UNFCCC and approved by UNFCCC.</p> <p>This part of CAR 2 is open</p> <p>DOE Comments: Please see the comment above. This part of CAR 2 is open.</p> <p>2. The PP has submitted the commissioning certificates of all the WEGs and also the unique identification details were now provided in the section A.3 of the revised MR. Hence accepted. This part of CAR 2 is closed.</p> <p>3. The name of the village is now changed in the revised MR and is consistent with the registered PDD. Hence accepted. This part of CAR 2 is closed.</p> <p>4. The response provided by the PP is not accepted as the MR is still not transparent on for which model of the WEC the salient features is provided. Further it is noted in revised MR and revised PDD that in some places WEC is used and in some places WEG is used for the wind mill. PP is requested to use one consistently. This part of CAR 2 is open.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
			<p>DOE Comments: The response provided by the PP is accepted as WEC is only used throughout in the revised MR and revised PDD. This part of CAR 2 is closed.</p> <p>5. The response provided by the PP is accepted as the monitoring report is now transparent on the implementation status of the project activity. PP has also submitted the purchase order issued on 30/04/2003 and the commissioning certificates for all he WECs. This part of CAR 2 is closed.</p> <p>6. The MR is now made transparent on the diagram as required by the monitoring report completeness guidelines. Hence accepted. This part of CAR 2 is closed.</p> <p>7. The response provided by the PP is not accepted as it is answering the specific query asked. This part of CAR 2 is open.</p> <p>DOE Comments: The response provided by the PP is accepted as the PP has submitted the supporting evidence for the training program conducted from 24/08/2008 to 09/02/2009.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
			<p>This part of CAR 2 is closed.</p> <p>8. The response provided by the PP is accepted as the revised MR is transparent on the information as required by the MR completeness guidelines.</p> <p>This part of CAR 2 is closed.</p> <p>9. The response provided by the PP is accepted as the revised MR is transparent on the information as required by the MR completeness guidelines.</p> <p>This part of CAR 2 is closed.</p> <p>10. The MR is now made transparent on the location of all the meters involved in the project activity. However it is not transparent on the role of backup meters located at Temderai substation. Further the project activity consists of 2 main meters and 2 backup meters which is not in line with the registered PDD. PP is requested to clarify.</p> <p>This part of CAR 2 is open.</p> <p>DOE Comments:</p> <p>The response provided by the PP is accepted as it is mentioned in the section C of the monitoring report that the reading from the back up meters are used whenever a main meter goes defective.</p> <p>This part of CAR 2 is closed.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
<p>CAR 3</p> <p>The measuring frequency of the parameters EG_y, $EG_{JMR,Export}$, $EG_{JMR,Import}$ and $EG_{Controller,Export}$ are not provided in the monitoring report.</p> <p>The parameters $EG_{JMR,Export}$ and $EG_{JMR,Import}$ are monitored through the 2 main meters (sr no TNU00945 and sr no TNU00946) located at the EB substation. However the same is not in line with the registered PDD. PP is requested to submit the supporting evidences for all the values considered in the ER sheet.</p> <p>The ER calculation sheet is not transparent on the respective period (start and end dates) of all the months for which the readings were taken. PP is requested to make it transparent in the ER sheet.</p> <p>PP is requested to submit the soft copies of JMR / credit sub division readings for the individual WECs along with the copies of invoices raised by the respective project developer and payments received against the invoice raised during the current monitoring period.</p>	A.2, B.3.1	<p>1. Please refer to the monitoring report, section D; where the monitoring frequency of all the parameters are mentioned clearly.</p> <p>2nd Response: Please specify as the monitoring frequency has been already mentioned in the monitoring report, section D.</p> <p>3rd Response: The monitoring report has been revised. Please refer to the revised monitoring report, section D.</p> <p>2. In the registered PDD, Annex 4, the main meter and back up meters have been mentioned. The supportive documents for all the values considered in the ER sheet have been provided to the DOE.</p> <p>2nd Response: In the registered PDD, there is a mention of the main & check/back up meters. As per EB 65, Annex 5, point 1, "Any corrections to project information of a registered CDM project activity that do not affect the design of the project activity do not require prior approval by the Board. Such corrections may include typographical errors, location, names and numbers of components, etc."</p> <p>In line with the actual scenario, the metering details have been mentioned in the MR, which does not have any impact on applicability of the methodology, additionality and scale of the project in line with EB 65,</p>	<p>1. The response provided by the PP is not accepted as the MR is not transparent on the measuring and recording frequency clearly.</p> <p>This part of CAR 3 is open</p> <p>DOE Comments: The response provided by the PP is not accepted as the MR is still not transparent on the measuring and recording frequency of the parameters that are being monitored.</p> <p>This part of CAR 3 is open.</p> <p>DOE Comments: The response provided by the PP is accepted as the MR is now transparent on the measuring and recording frequencies.</p> <p>This part of CAR 3 is closed.</p> <p>2. As per the registered PDD there is only one main meter and one backup meter involved in the project activity and as per the MR there are 2 main meters and 2 backup meters involved in the project activity. PP is requested to clarify. Further the supporting evidences for the values used in the ER sheet are also not provided.</p> <p>This part of CAR 3 is open</p> <p>DOE Comments:</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
		<p>Annex 5, point 6.</p> <p>The supportive documents for the values used in the ER sheet have been submitted to the DOE.</p> <p>3. The ER sheet has been revised considering the start and end date of the month of the respective monitoring period.</p> <p>4. The same has already been submitted to the DOE.</p> <p>2nd Response:</p> <p>The supportive documents have been submitted to the DOE.</p>	<p>The response provided by the PP is accepted as it is allowed as per the Appendix 1 and point no 1 of EB 65 Annex 5. The MR is also transparent on the meters used in the monitoring of the parameters. Further the supporting evidences (credit notes and invoice copies) were submitted by the PP for the values used in the ER sheet.</p> <p>This part of CAR 3 is closed.</p> <p>3. The response provided by the PP is accepted as the ER calculation sheet is now made transparent on the respective period (start and end dates) of all the months for which the readings were taken.</p> <p>This part of CAR 3 is closed.</p> <p>4. The response provided by the PP is not accepted as the documents are not yet submitted.</p> <p>This part of CAR 3 is open</p> <p>DOE Comments:</p> <p>The response provided by the PP is accepted as PP has submitted the credit notes and invoice copies.</p> <p>This part of CAR 3 is closed.</p>
<p>CAR 4</p> <p>The error levels of the main meters with sr no TNU00945 and sr no TNU00946 in calibration records for the year 2011 found to be the 0.793 and 0.29 respectively. Which have exceeded the permissible limit for the meters. PP is requested to</p>	B.3.3	<p>Please refer to the ER sheet, where the maximum error limit (0.813%) has already been applied (EB 52, Annex 60) in line with the calibration report for the year 2011. The calibration report of 2011 has also been submitted to the DOE.</p>	<p>The response provided by the PP is accepted as the maximum error observed in the calibration certificate is found to ± 0.813. further the calibration report for the year 2011 is also submitted by the PP.</p> <p>CAR 4 is closed.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
apply the error correction factor for the data used in the ER calculations as per the procedure in EB 52, Annex 60. PP is also requested to submit the soft copies of the calibration certificates			
<p>CL 1</p> <p>The Gross export and, Gross import and controller reading are also shown separately as a parameter under section D.2 in the monitoring report which is not in line with the registered PDD.</p> <p>The Appendix I is not transparent on the monitoring of controller reading. Also the apportionment procedure mentioned in the monitoring report is not matching with the procedures defined in the registered PDD.</p> <p>The project activity consists of the 2 main meters and 2 check meters at the EB substation and Enercon substation respectively. However the same is not in line with the registered PDD.</p> <p>Also the monitoring report states about the control panel reading. This is also not in line with the registered PDD. PP is requested to clarify the same.</p>	B.1.2, B.3.2	<p>As per the registered PDD, the procedures for metering and meter reading are as per the provisions of the Power Purchase Agreement (PPA). Further details of the monitoring procedure and metering details have been described in the MR.</p> <p>2nd Response:</p> <p>In the registered PDD, there is a mention of the main & check/back up meters. As per EB 65, Annex 5, point 1, "Any corrections to project information of a registered CDM project activity that do not affect the design of the project activity do not require prior approval by the Board. Such corrections may include typographical errors, location, names and numbers of components, etc."</p> <p>In line with the actual scenario, the metering details have been mentioned in the MR, which does not have any impact on applicability of the methodology, additionality and scale of the project in line with EB 65, Annex 5, point 6.</p> <p>3rd Response:</p> <p>In line with the monitoring report, a revised monitoring plan (RMP) has been incorporated in the revised PDD and has been submitted to the DOE.</p> <p>4th Response:</p> <p>The revised monitoring plan (RMP) has been revised and has been submitted to the DOE.</p>	<p>The response provided by the PP is not accepted as it is not addressing the query sorted.</p> <p>CL 1 is open</p> <p>DOE Comments:</p> <p>Though the monitoring parameters as mentioned in the section D.2 of the MR is in accordance with the actual scenario, it is not in line with the registered PDD. Hence is requested to take the necessary action to address the issue. Further the line diagram provided in the Appendix I is not transparent on the control panel reading as mentioned in MR. Also the line diagram is not clear. Hence the response provided by the PP is not accepted.</p> <p>CL 1 is open.</p> <p>The Appendix I in the MR is now made clear in the MR. The line diagram is also made transparent on the control panel reading. PP has also submitted the revised monitoring plan. The revised monitoring plan is as per the actual practice. However PP is requested to justify the values of all the parameters. Further it is stated in the section B.7.2 that 'The sole parameter for monitoring is the net electricity supplied by the Project to the grid', PP is requested to clarify the same.</p> <p>CL 1 is open.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
			The response provided by the PP is accepted as the PP has submitted the calculation based on which the parameter EGy is estimated. Further the statement has been removed from the section C of the MR and Section B.7.2 of the revised PDD. CL 1 is closed.
CL 2 Neither the registered PDD nor the monitoring report is transparent on the monitoring frequency of the monitoring parameters. PP is requested to make it transparent in the monitoring report.	B.3.3, B.3.4, B.5.1 & B.5.3	Please refer to the monitoring report, section D; where the monitoring frequency is clearly mentioned. 2nd Response: Please specify as the monitoring frequency has been already mentioned in the monitoring report, section D. 3rd Response: The monitoring report has been revised. Please refer to the revised monitoring report, section D.	The response provided by the PP is not accepted as the MR is not transparent on the measuring and recording frequency clearly. CL 2 is open DOE Comments: The response provided by the PP is not accepted as the MR is still not transparent on the measuring and recording frequency of the parameters that are being monitored. CL 2 is open. The MR is now made transparent on the measuring and recording frequencies of all the monitoring parameters. Hence accepted. CL 2 is closed.
CL 3 The monitoring report is not transparent on the day to day record handling procedures followed at the site, data management system adopted in the project activity for the transfer of data from monitoring equipment to ER calculation sheet and archival of data up to two years after the end of crediting period. PP is requested to clarify the same.	B.3.6, B.5.2, B.5.3 & B.5.4	Please refer to the monitoring report, section C & D. 2nd Response: Please specify as the details have already been mentioned in the monitoring report, section C & D.	The response provided by the PP is not accepted as the section C and section D are not transparent on the day to day record handling procedures followed at the site, data management system adopted in the project activity for the transfer of data from monitoring equipment to ER calculation sheet and archival of data up to two years after the end of crediting period. CL 3 is open.

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Verification Conclusion
		<p>3rd Response: The monitoring report has been revised. Please refer to the revised monitoring report, section C.</p> <p>4th Response: The monitoring report has been revised. Please refer to the revised monitoring report, section C.</p>	<p>DOE Comments: Please see above comment which clearly states on missing information. CL 3 is open.</p> <p>DOE Comments: The response provided by the PP is not accepted as the MR is still not transparent on the data management system adopted in the project activity for the transfer of data from monitoring equipment to ER calculation sheet. CL 3 is open.</p> <p>The response provided by the PP is accepted as the section C of the monitoring report is now made transparent on the data management system adopted in the project activity for the transfer of data from monitoring equipment to ER calculation sheet. CL 3 is closed.</p>
CL 4 PP is requested to submit the action plan submitted to DNA.	B.4.1	The project has received the host country approval on 3rd April, 2007. At that point of time, there was no such requirement, hence no action plan was submitted.	The response provided by the PP is accepted as there was no such requirement to spend 2% of the revenue from sale of CERs for the CSR activities at the time of application for the HCA. Further the requirements as mentioned in the HCA doesn't specify on this. CL 4 is closed.

TABLE 3 FORWARD ACTION REQUEST

Forward action request	Reference to Table 2	Response by project participants	Verification Conclusion
No FARs			

Forward action request	Reference to Table 2	Response by project participants Verification Conclusion



RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:

Reghu Kumar Raghavan Nair

We declare that Mr/Mrs/Ms:

è qualificato come¹:
is qualified as:

CDM-TEC, CDM-VAL, CDM-VER, CDM-TL, CDM-FIN-EXP
VCS-VAL, VCS-VER, VCS-TL
GS-VAL, GS-VER, GS-TL
SCS-VAL, SCS-VER, SCS-TL

per le seguenti aree tecniche:
for the following technical areas:

1.1, 1.2, 4.3, 4.4, 4.5, 4.6, 4.7, 4.8, 5.1, 6.1, 11.1, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal energy generation from fossil fuel and biomass including thermal electricity from solar	1
1.2	Energy generation from renewable energy sources	1
4.3	Iron and steel	4
4.4	Refinery	4
4.5	Rubber and Plastics	4
4.6	Electrical/electro technical products	4
4.7	Coke/coal/char-coal production	4
4.8	Pulp and paper production	4
5.1	Chemical process industries	5
6.1	Construction	6
11.1	Chemical process industries	11
13.1	Waste Handling and Disposal	13

in accordo alle istruzioni della Divisione Certificazione.
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	31-08-2009	-
1	10-02-2010	Updating with new qualification instruction revision
2	05-03-2010	Annual revision
3	18-10-2010	Changes in certificate module
4	17-03-2011	Changes due to new accreditation standard
5	06-06-2011	Annual revision

Il Responsabile di Schema
Scheme Manager

Il Resp. Tecnico della Divisione
Head of CRT

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

CDM: Clean Development Mechanism
VCS: Verified Carbon Standard
GS: Gold Standard
SCS: SocialCarbon Standard
JI: Joint Implementation

RINA Services S.p.A. è accreditato da UNFCCC, quale Entità Operativa Designata (DOE), per condurre la Validazione e la Verifica di Progetti CDM, da VCSA per condurre la Validazione e la Verifica di Progetti VCS, da GS Foundation, per condurre la Validazione e la Verifica di Progetti GS, da Ecologica Institute per condurre la Validazione e la Verifica di rapporti SCS

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RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:

Sateesh Kumar Pallipogu

We declare that Mr/Mrs/Ms:

è qualificato come¹:
is qualified as:

**CDM-TEC, CDM-VAL, CDM-VER, VCS-VAL, VCS-VER, GS-VAL,
GS-VER, SCS-VAL, SCS-VER, CDM-FIN-EXP**

per le seguenti aree tecniche:
for the following technical areas:

1.2, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Energy generation from renewable energy sources	1
13.1	Waste Handling and Disposal	13

in accordo alle istruzioni della Divisione Certificazione.
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	15-03-2010	-
1	18-10-2010	Changes in certificate module
2	17-03-2011	Changes due to new accreditation standard
3	06-06-2011	Annual Revision
4	09-09-2011	Changes due to extension to CDM/VCS/GS/SCS verifier qualification
5	30-11-2011	Added TA 1.2

Il Responsabile di Schema
Scheme Manager

Il Resp. Tecnico della Divisione
Head of CRT

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RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:

Rekha Menon

We declare that Mr/Mrs/Ms:

è qualificato come¹:
is qualified as:

CDM-TEC, CDM-VAL, CDM-VER, CDM-TL, CDM-FIN-EXP, VCS-VAL, VCS-VER,
VCS-TL, GS-VAL, GS-VER, GS-TL, SCS-VAL, SCS-VER, SCS-TL

per le seguenti aree tecniche:
for the following technical areas:

1.2, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Energy generation from renewable energy sources	1
13.1	Waste Handling and Disposal	13

in accordo alle istruzioni della Divisione Certificazione.
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	06-03-2008	-
1	04-05-2009	Annual revision
2	14-12-2009	Changes in module structure
3	22-03-2010	Annual revision
4	18-10-2010	Changes in certificate module
5	17-03-2011	Changes due to new accreditation standard
6	06-06-2011	Annual Revision

Il Responsabile di Schema
Scheme Manager

Il Resp. Tecnico della Divisione
Head of CRT

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RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:
We declare that Mr/Mrs/Ms:

Rita Valoroso

è qualificato come¹:
is qualified as:

**CDM-TEC, CDM-VAL, CDM-VER, CDM-TL, CDM-FIN-EXP
VCS-VAL, VCS-VER, VCS-TL
GS-VAL, GS-VER, GS-TL
SCS-VAL, SCS-VER, SCS-TL**

per le seguenti aree tecniche:
for the following technical areas:

1.2, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Energy generation from renewable Energy sources	1
13.1	Waste Handling and Disposal	13

in accordo alle istruzioni della Divisione Certificazione.
in accordance with the instructions of the Certification Division.

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	18-01-10	-
1	03-05-10	Annual Revision
2	18-10-10	Changes in certificate module
3	04-01-11	Removed TAs taken through the ETS/EPD verifications/validations
4	17-03-11	Changes due to new accreditation standard
5	14-07-11	Annual Revision

Il Responsabile di Schema
Scheme Manager

Il Resp. Tecnico della Divisione
Head of CRT

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