VALIDATION REPORT

11.35 MW GRID CONNECTED WIND ELECTRICITY PROJECT AT POHRA (RAJASTHAN) IN INDIA

REPORT NO. BVQI/INDIA/16.49

REVISION NO. 01

BUREAU VERITAS QUALITY INTERNATIONAL

VALIDATION REPORT

Date of first issue: 18/01/2006	Project No.: BVQI/INDIA/16.49
Approved by: Ashok Mammen	Organisational unit: BVQI Holdings
Client: Senergy Global Private Limited.	Client ref.: Dr Ajay Mathur, President

Summary:

Bureau Veritas Quality International (BVQI) has performed a validation of the 11.35 MW Grid Connected Wind Electricity Project (hereafter called “the project”)located at Pohra in Jaisalmer district state Rajasthan, India on the basis of UNFCCC criteria for the CDM, as well as criteria given to provide for consistent project operations, monitoring and reporting. UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.
The validation scope is defined as an independent and objective review of the project design document, the project’s baseline study, monitoring plan and other relevant documents, and consisted of the following three phases: i) desk review of the project design and the baseline and monitoring plan (October 2005); ii) follow-up interviews with project stakeholders (October 2005); iii) resolution of outstanding issues and the issuance of the final validation report and opinion (June 2006). The overall validation, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (BMS, September 2003), which were audited by the UN CDM Accreditation Team in December 2004.
The first output of the validation process is a list of Clarification and Corrective Actions Requests (CL and CAR), presented in Appendix A. Taking into account this output, the project proponent revised its project design document.
In summary, it is BVQI’s opinion that the project correctly applies the baseline and monitoring methodology Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories TYPE ID and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.

Report No.: BVQI/INDIA/16.49	Subject Group: GHG/CDM	
Report title:		
Work carried out by: Mr.HB Muralidhar Mr.KH Sharma		
Work verified by: Ashok Mammen		
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Indexing terms

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Abbreviations change / add to the list as necessary

BMS	BVQI Management System
BVQI	Bureau Veritas Quality International
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reductions
CL	Clarification Request
CO_2	Carbon Dioxide
CPP	Captive Power Plant
DIS	Draft of International Standard
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
FRP	Fibre Reinforced Plastic
GHG	Green House Gas (es)
I	Interview
IETA	International Emissions Trading Association
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organisation for Standardization
MoV	Means of Verification
MP	Monitoring Plan
mW	megaWatts
NGO	Non Government Organisation
PDD	Project Design Document
PLF	Plant Load Factor
RVPNL	Rajashtan Vidyut Prasadan Nigam Limited
SWSPL	Suzlon Wind Farm Services Private Limited
UNFCCC	United Nations Framework Convention for Climate Change
V	Volts
WEG	Wind Electricity Generator
WTG	Wind Turbine Generator

3

Table of Contents *Page*

1 Introduction

Senergy Global Private Limited has commissioned Bureau Veritas Quality International (BVQI) to validate its of the 11.35 MW Grid Connected Wind Electricity Project located at Pohra in Jaisalmer district state Rajasthan, India

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

1.1 Objective

The validation serves as project design verification and is a requirement of all Client projects. The validation is an independent third party assessment of the project design. In particular, the project's baseline, the monitoring plan (MP), and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design, as documented, is sound and reasonable, and meets the stated requirements and identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

UNFCCC criteria refer to Article 12 of the Kyoto Protocol, the CDM rules and modalities and the subsequent decisions by the CDM Executive Board, as well as the host country criteria.

1.2 Scope

The validation scope is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. BVQI has, based on the recommendations in the Validation and Verification Manual (IETA/PCF, v. 3.3, 2004), employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

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

1.3 GHG Project Description

The project activity is an initiative of Senergy Global Private Limited representing a group of investor companies namely Vishal Exports Overseas Ltd., Vishal Plastomer Private Limited, Jaswant Mathur, Shrenik Marbles Ltd., Vijay Bhavnani, Laxmi Spinning Mills, Prakash Bhavnani, Deepak Bhavnani, Rajni K. Bhavnani, Arora Textiles, Chirash Associates Pvt. Ltd and Kanhalyalal Kalyanmal which involves operation and maintenance of six state-of-art Wind Electricity Generators of individual capacities 1.25

Mw each and eleven WEGs of 350Kw each , at Pohra in the District of Jaisalmer in the State of Rajasthan aggregating to a total seventeen WTGs with an installed capacity of 11.35Mw.

The generated electricity from the aforesaid wind farm is evacuated to the RVPNL grid under a power purchase agreement and subsequently all the electricity generated is sold to the state electricity utility.

The project activity will generate approximately 15.98 million units per year, contributing an estimated reduction of **138214** tCO2e over the ten-year crediting period starting from 2003-2013.

1.4 Validation team

The validation team consists of the following personnel:

Mr. HB Muralidhar	**BVQI India**	**Team Leader, GHG Validator**
Mr. KH Sharma	**BVQI India**	**GHG Validator**
Dr. Ashok Mammen	**BVQI India**	**Internal Technical Reviewer**

2 Methodology

The overall validation, from Contract Review to Validation Report & Opinion, was conducted using internal procedures (BMS, September 2003) that were audited by the CDM Accreditation Team in December 2004.

In order to ensure transparency, a validation protocol was customised for the project, according to the Validation and Verification Manual (IETA/PCF, v. 3.3, 2004). The protocol shows, in a transparent manner, criteria (requirements), means of verification and the results from validating the identified criteria. The validation protocol serves the following purposes:
It organises, details and clarifies the requirements a CDM project is expected to meet;
It ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of three tables. The different columns in these tables are described in Figure 1.

The completed validation protocol is enclosed in Appendix A to this report.

Validation Protocol Table 1: Mandatory Requirements			
Requirement	Reference	Conclusion	Cross reference
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), a Corrective Action Request (CAR) or a Clarification	Used to refer to the relevant protocol questions in Table 2 to show how the specific requirement is validated. This is to

		Request (CR) of risk or non-compliance with stated requirements. The CAR's and CR's are numbered and presented to the client in the Validation Report.	ensure a transparent validation process.

Validation Protocol Table 2: Requirements checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organised in several sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to non-compliance with the checklist question. (See below). Clarification Request (CL) is used when the validation team has identified a need for further clarification.

Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests			
Report clarifications and corrective action requests	Ref. to checklist question in tables 2/3	Summary of project owner response	Validation conclusion
If the conclusions from the Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Tables 2 or 3 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the validation team should be summarised in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Tables 2/3, under "Final Conclusion".

Figure 1 Validation protocol tables

2.1 Review of Documents

The Project Design Document (PDD) submitted by Senergy Global Private Limited and additional background documents related to the project design and baseline, i.e. Indian Law, Guidelines for completing the Simplified Project Design Document (CDM-SSC-PDD) and the form for submissions on Methodologies for Small-Scale CDM Project Activities (F-CDM-SSC-Subm) Version 01, Appendix B of the simplified modalities and procedures for small scale CDM project activities: (Latest amended Version 09 – 28th July 2006), Kyoto Protocol, Clarifications on Validation Requirements to be checked by a Designated Operational Entity were reviewed.

The following documents were used as references to the validation work, in addition to internal BVQI procedures: IETA/PCF – Validation and Verification Manual (v. 3.3, Mar 2004); ISO FDIS DIS 14064-3 - Greenhouse gases — Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions; ISO FDIS DIS 14064-2 - Greenhouse gases — Part 2: Specification with guidance at the project level for quantification, monitoring and reporting of greenhouse gas emission reductions or removal enhancements.
To address BVQI corrective action and clarification requests Senergy Global Private Limited revised the PDD and resubmitted it on August 2006.

The validation findings presented in this report relate to the project as described in the PDD (Version 03 dated 12/08/2006).

2.2 Follow-up Interviews

On 28th October 2005 BVQI performed interviews with project participants and stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of SENERGY GLOBAL PVT LIMITED and consultants were interviewed (see References). The main topics of the interviews are summarised in Table 1.

Table 1 Interview topics

Interviewed organisation	Interview topics
Project Participant **Senergy Global Private Limited and Investor Companies i.e** Vishal Exports Overseas Ltd., Vishal Plastomer	Commitment of organisation towards GHG emission reduction Evidence of date of starting of project activity Checking the documentation of procurements of WEGs Discussions on additionality and related evidences Control of operations for WEGs outsourced to Suzlon Wind Farm Services Limited Power Purchase Agreements with state electricity board Base line emissions and the emissions reduction

Private Limited, Jaswant Mathur, Shrenik Marbles Ltd., Vijay Bhavnani, Laxmi Spinning Mills, Prakash Bhavnani, Deepak Bhavnani, Rajni K. Bhavnani, Arora Textiles, Chirash Associates Pvt. Ltd and Kanhalyalal Kalyanmal,	Record keeping and QA/QC of data Sensitivity towards local stakeholders and actions on their comments Monitoring methodologies. Project category Additionality Source of data
Local Stakeholders	Social and Economical Benefits

2.3 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation was to raise the requests for corrective actions and clarification and any other outstanding issues that needed to be clarified for BVQI positive conclusion on the project design.

To guarantee the transparency of the validation process, the concerns raised are documented in more detail in the validation protocol in Appendix A.

3 VALIDATION FINDINGS

In the following sections, the findings of the validation are stated. The validation findings for each validation subject are presented as follows:
1)The findings from the desk review of the original project design documents and the findings from interviews during the follow up visit are summarized. A more detailed record of these findings can be found in the Validation Protocol in Appendix A.

2)Where BVQI had identified issues that needed clarification or that represented a risk to the fulfillment of the project objectives, a Clarification or Corrective Action Request, respectively, have been issued. The Clarification and Corrective Action Requests are stated, where applicable, in the following sections and are further documented in the Validation Protocol in Appendix A. The validation of the Project resulted in seven Corrective Action Requests and one Clarification Requests.

3)The conclusions for validation subject are presented.

3.1 Project Design

Over the last 25 years, considerable progress has been made in wind energy technology and its application for grid power generation. The wind turbine size has grown from 30 kilowatt to 5 Megawatt with the rotor diameter increasing from 10 meters

to 120 meters. This project activity of Senergy Global Private Limited and group companies involves installation of seventeen megawatt and kilowatt class of wind energy generators (aggregating to 11.35Mw) in the state of Rajasthan to harness the available wind potential at the site with allied benefits in providing clean energy to the local grid.

The wind farm is situated about hundred kilometers from the India – Pakistan border.

Although Rajashtan State has an average wind energy generation potential for a considerable part of the year, the harnessing potential has been comparatively low due to several reasons.

The project activity is not a debundled component of a larger project activity according to the rules for "determining the occurrence of debundling" as outlined in Appendix C of the Simplified Modalities and procedures for Small-Scale CDM activities. It is assured that the project will remain in the small-scale category over the ten-year crediting period.

The commissioning of the first batch of five 1.25MW machines was completed on 29th September 2003 and the entire project was completed in January 2005.

The Management of each of the investor companies have considered risks of investment in wind energy projects (as explained in Section 3.2 below) and the possibility of obtaining CDM benefits for offsetting these risks. The resolution of the Board of Directors of each of the investor companies has been verified.

The project design engineering reflects the current good practises. The best current available technology has been adopted .The Wind Energy Generators (WEG) has been supplied by M/s Suzlon Energy Ltd a leading manufacturer and supplier of WEGs in India.
The 3 phase 690V 50Hz wind energy generators are connected to a 33/11 KV grid.

The project activity is operated, maintained and monitored by M/s. Suzlon Wind Farm Services Private Limited [SWSPL], a sister company of the equipment manufacturer. . It has systems and procedures to ensure optimum performance of the wind energy generators. The company has implemented Quality Management System (ISO 9001:2000 certification for Installation, Commissioning, Operation and Maintenance). Employees have been provided with adequate training for ensuring competent operation and management.

BVQI recognises that this Renewable Wind Energy Project is helping Rajasthan State and India fulfil its goals of promoting sustainable development. This project is in line with host country specific –CDM requirements.
BVQI also recognises that the main purpose of this project is to generate electrical energy through sustainable means utilizing wind energy for generating electricity which otherwise would have been generated through alternate fuels (most likely –fossil fuel).

The project has led to an investment of about Rs 550 million which otherwise would not have happened in that region. Also the project activities earns additional revenue for project participants enabling the organisations to partially meet its financial needs
As per the indicators stipulated by Ministry of Environment and Forests, Govt. of India (Host county DNA), this project leads to alleviation of poverty by establishing direct and indirect employments.

The project design is sound and the geographical (the project location) and temporal (20 years) boundaries of the project are clearly defined.

3.2 Baseline

The project is a Renewable electricity generation for a grid project activity (Category I.D) as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities.

The emission reductions will be the kWh produced by the proposed project multiplied by the emission coefficient for other power stations connected to the grid of India, i.e. the weighted average of the current generation mix of the Northern Region Grid. The choice of this baseline methodology is applicable for the following reasons: The Northern Regional Grid is currently facing energy shortage to the extent of 5.5% and the demand in energy requirement is expected to rise by around 6.9% until 2017. While the planned capacity additions (primarily through fossil fuelled power and nuclear power generation) are not expected to meet this demand, renewable energy sources are expected to contribute to only about 2784 MW approximately by 2012.

Hence, it can be concluded that the grid system will remain carbon intensive during the ten-year crediting period. The emission coefficient has been determined based on actual power generated from all power generation sources in the northern regional grid and as monitored and published by the Central Electricity Authority for the period April 2003 to March 2004.

The Project Scenario is considered additional in comparison to the baseline scenario, and therefore eligible to receive Certified Emissions Reductions (CERs) under the CDM, based on an analysis, presented by the PDD, of investment, technological and other barriers, and prevailing practices.

- Higher investments cost and lower PLF: The project proponents were clearly aware that the wind energy potential is much lower in Rajashtan compared to other states in India. It was estimated to be around 18-20%. Also, investment cost (per Mw basis) in WEGs is higher than conventional coal or other fuel based power plants. Statistics for the past three years clearly demonstrate that the wind potential continues to be low in Rajashtan while investment in windmills has also not shown any substantial decrease this period.
- Inconsistent Power purchase policy – The project participants were aware that power purchase policy might remain to be inconsistent. The power purchase mechanism and tariffs have undergone several changes right from the time of its

implementation .The banking provisions have been revised thrice between 1999 and 2003. In the policy revision in February 2000,the provision of banking of energy was limited to a financial year and in case of nonutilisation of the banked energy, the investor has no option but to sell the balance energy at a reduced cost. During the period of installation of WEGs in 2003, the Rajashtan Government has increased the wheeling charges from 2% to 10% and further reduced the banking period to 'calender' year basis.This was another 'discouragement' since the project proponents had to absorb the revenue losses.

- The project proponents have also taken the risk of investing in wind farms in a remote desert terrain, which lacks basic infrastructure and resources. The project is also located close to the 'vulnerable' India-Pakistan border.

The sustainability of project activity and its dependence on securing the proposed carbon finance through sale of carbon credits has been demonstrated by providing relevant data.

The application of the baseline methodology is transparent and conservative.

The project complies with the baseline requirements.

3.3 Monitoring Plan

Approved baseline and monitoring methodology described in AMS-1.D. –Grid connected renewable electricity generation ((Latest amended Version 09 – 28th July 2006) is used. This methodology describes the requirements of metering the electricity generated. The selected monitoring methodology is in line with the monitoring methodologies provided for the relevant project category as listed in Appendix B of the Simplified Modalities and Procedures for Small Scale CDM project activities.

The application of the monitoring methodology is transparent.

The project does not envisage any leakage since any alternate fuel cannot be used to run the windmills for generating electricity. Hence no indicators have been defined regarding project emissions and leakage emissions.

Electricity generation is monitored jointly by the Rajasthan State Vidyut Prasadan Nigam (RSVPN) and staff of Senergy Global & SWSPL .

The data can be very accurately measured. The Trivectormeters installed in the sub-stations (grid interconnection point) are used to measure mentioned variables on a continuous basis. It can also be recorded continuously at the central monitoring station. Records are archived for crosschecking yearly figures. The meters at the sub station are two-way meters and are in the custody of State Electricity Utility (RSVPNL). RSVPNL officials verify the readings in these meters and the same reading is used to

determine the net power wheeled to the user and determine the extent of mitigation of GHG over a period of time.

The authority and responsibility of project management and registration monitoring measurement is clearly described. All indicators of importance for controlling and reporting of project performance are incorporated in the Monitoring Plan. The type, variable, unit, frequency, proportion, means and period of archiving of the data are sufficiently described.

The meters are sealed by RSVPNL and hence no monitoring data adjustments and uncertainties are possible.

Project performance reviews are conducted on a monthly basis.

Therefore the project complies with the requirements.

3.4 Calculation of GHG Emissions

As per the 'Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories' the baseline emission sources considered are fossil fuel fired power plants connected to the relevant electricity system (grid). The relevant grid considered for the calculation of baseline emissions is the Northern Regional Grid of India.
The emission factor of the Northern Region Grid is a fixed value over the projects crediting period and is calculated as the weighted average of the Operating Margin emission factor and the Build Margin emission factors.

Weighted factors of 75% and 25%, which are the Operating Margin and Build Margin emission factors respectively, have been considered in arriving at the emission factor. This is in accordance with the provision suggested in the Appendix B of the simplified modalities and procedures for small-scale CDM project activities (Version 09 dated 28th July 2006). The emission factor is estimated to be 0.86452 kg CO_2/kWh.

The methodologies for calculating emission reductions are transparently documented and comply with existing good practice.

Considering renewable energy project, indirect emissions are not likely. Emissions related to the project activities are considered zero.

3.5 Sustainable Development Impacts

No significant environmental impacts have been identified from the project activity.

The host country (India) legislation does not require an analysis of the environmental impacts of the project activity since this is not applicable to Small Scale Projects.

The Government of Rajasthan requires that all wind mills sites in the state to obtain clearances from the local authority (District Collector). Accordingly, the project proponents have obtained the necessary clearances.

The project activity has lead to an investment of about Rs 550 Million in a underdeveloped region which otherwise would not have happened in the absence of project activity. This includes improvement in the quality and availability of electricity fed into a deficit local grid and development of infrastructure such as road and transportation facilities. Being a renewable resource, using wind energy to generate electricity contributes to resource conservation.

The Jaisalmer district is a located in the heart of the Thar Desert. There are virtually no irrigation or industrial activities in the entire district. The wind farms are located in areas where there is no inhabitation.

The project has contributed to the social, economical, environmental and technological well being of the rural public by improving conditions of the roads and generating employment opportunities.

3.6 Comments by Local Stakeholders

The project is located in a desert where there is virtually no inhabitation. There are no villages or communities in the vicinity of the project sites. Therefore, the only stakeholders considered were the local housekeeping, catering and transportation contractors (providers of housekeeping, taxi and allied services).

These stakeholders support the project and no modifications to the project design were necessary. As the project is not expected to have considerable social and environmental impacts, the local stakeholder consultation process carried out for the project is deemed sufficient.

4 Comments by Parties, Stakeholders and NGOs

According to the modalities for the Validation of CDM projects, the validator shall make publicly available the project design document and receive, within 30 days; comments from Parties, stakeholders and UNFCCC accredited non-governmental organisations and make them publicly available.

BVQI published the project documents on the UNFCCC CDM website (http://cdm.unfccc.int) on 8th November 2005 and invited comments within 7th December 2005 by Parties, stakeholders and non-governmental organisations.

No Comments were received .

5 Validation opinion

BVQI has performed a validation of the 11.35 Mw grid connected Wind Energy Project in the state of Rajasthan in India. The validation was performed on the basis of UNFCCC criteria and host country criteria and also on the criteria given to provide for consistent project operations, monitoring and reporting.

The validation consisted of the following three phases: i) a desk review of the project design and the baseline and monitoring plan (September 2005); ii) follow-up interviews with project stakeholders (October 2005); iii) the resolution of outstanding issues and the issuance of the final validation report and opinion (July 2006).

By generating electricity from wind power, the project is likely to result in reductions of GHG emissions partially displacing electricity that would have otherwise been purchased from the grid. An analysis of the investment and technological barriers demonstrates that the proposed project activity is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity. Given that the project maintained as designed, the project is likely to achieve the estimated amount of emission reductions.

BVQI has received a confirmation by the host Party (India) that the project contributes to Sustainable Development in India.

The review of the project design documentation and the subsequent follow-up interviews has provided BVQI with sufficient evidence to determine the fulfillment of stated criteria. In our opinion, the project correctly applies and meets the relevant UNFCCC requirements for the CDM and the relevant host country criteria.
BVQI hence recommends the Senergy Global Private Limited's 11.35 mW Windmill Project for registration with the UNFCCC.

The validation is based on the information made available to us and the engagement conditions detailed in this report.

6 References

Category 1 Documents:
Documents provided by SENERGY GLOBAL PVT LIMITED that relate directly to the GHG components of the project.

1 Purchase Orders of all the Wind Turbine Generators

1. Purchase Orders:

Name of Company	Details
Vishal Exports Overseas Ltd.	Letter No. VEOL/SUZLON/2003-04/001 Dated May 24, 2003 5 * 1.25 MW = 6.25 MW

Vishal Plastomer Pvt. Ltd.	Letter No. VPPL/SUZLON/2003-04/001 Dated May 24, 2003 1 * 1.25 MW = 1.25 MW
Jaswant Mathur	Letter No. Nil Dated September 20, 2004 1 * 0.35 MW = 0.35 MW
Shrenik Marbles Pvt. Ltd.	Letter No. Nil Dated August 28, 2004 1 * 0.35 MW = 0.35 MW
Vijay Bhavnani	Letter No. Nil Dated February 15, 2005 1 * 0.35 MW = 0.35 MW
Prakash Bhavnani	Letter No. Nil Dated February 15, 2005 1 * 0.35 MW = 0.35 MW
Deepak Bhavnani	Letter No. Nil Dated February 15, 2005 1 * 0.35 MW = 0.35 MW
Rajni K. Bhavnani	Letter No. Nil Dated February 15, 2005 1 * 0.35 MW = 0.35 MW
Laxmi Spinning Mills	Letter No. Nil Dated August 10, 204 1 * 0.35 MW = 0.35 MW
Arora Textiles	Letter No. Nil Dated August 10, 2004 1 * 0.35 MW = 0.35 MW
Chirash Associates Pvt. Ltd.	Letter No. Nil Dated December 4, 2004 2 * 0.35 MW = 0.70 MW
Kanhalyalal Kalyanmal	Letter No. Nil Dated January 11, 2005 1 * 0.35 MW = 0.35 MW

2 Wind Power Project Commissioning Certificate of all the WTGs issued by RSVPL

Name of Company	**Details**
Vishal Exports Overseas Ltd.	Ref No. JVVNL/XEN/O&M/JSM/S: TECH/F: D. 1032 dated October 1, 2003 confirming commissioning of 5 * 1.25 MW on September 29, 2003.
Vishal Plastomer Pvt. Ltd.	Ref No. JVVNL/XEN/O&M/JSM/S: TECH/F: D. 1033 dated October 1, 2003 confirming commissioning of 5 * 1.25 MW on September 29, 2003.
Jaswant Mathur	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.07 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.
Shrenik Marbles Pvt. Ltd.	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.08 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.
Vijay Bhavnani	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.09 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.

Vijay Bhavnani	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.09 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.
Prakash Bhavnani	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.10 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.
Deepak Bhavnani	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.11 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.
Rajni K. Bhavnani	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.12 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.
Laxmi Spinning Mills	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.13 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.
Arora Textiles	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.14 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.
Chirash Associates Pvt. Ltd.	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.15 dated April 2, 2005 confirming commissioning of 2 * 0.35 MW on March 31, 2005.
Kanhalyalal Kalyanmal	Ref No. RRVPNL/XEN-III/TCC IV/BMR/D.16 dated April 2, 2005 confirming commissioning of 1 * 0.35 MW on March 31, 2005.

3 Permission granted by M/s Rajasthan Renewable Energy Corp. Ltd. for setting up of wind energy based power project of 11.35 MW capacity in Rajasthan to generate power under “Policy for Promotion of Electricity Generation from Wind, 2003” issued by Govt. of Rajasthan vide Energy Department.

Power Purchase Agreement

Name of Company	Details
Vishal Exports Overseas Ltd.	Executed on July 5, 2003 for a period of 20 years
Vishal Plastomer Pvt. Ltd.	Executed on July 5, 2003 for a period of 20 years
Jaswant Mathur	Executed on May 12, 2005 for a period of 20 years
Shrenik Marbles Pvt. Ltd.	Executed on May 21, 2005 for a period of 20 years
Vijay Bhavnani	Executed on May 12, 2005 for a period of 20 years
Prakash Bhavnani	Executed on May 12, 2005 for a period of 20 years
Deepak Bhavnani	Executed on May 12, 2005 for a period of 20 years
Rajni K. Bhavnani	Executed on May 12, 2005 for a period of 20 years
Laxmi Spinning Mills	Executed on May 12, 2005 for a period of 20 years
Arora Textiles	Executed on May 12, 2005 for a period of 20 years
Chirash Associates Pvt. Ltd.	Executed on July 15, 2005 for a period of 20 years
Kanhalyalal Kalyanmal	Executed on July 15, 2005 for a period of 20 years

4 Lease deeds executed between Rajasthan Government (District Collector, Jaisalmer) and Suzlon Energy Limited for purchase of land and setting up of

windmills at Pohra in Jaisalmer District.

5 Sub-Lease deed executed between Suzlon Energy Limited and THE PROJECT OWNERS Limited for setting up of windmills at Baramsar and Mada in Jaisalmer District.

6 Resolutions passed by the Board of Directors of Investor Companies where CDM has been considered prior to investment

Name of Company	Resolution passed on
Vishal Exports Overseas Ltd.	10/07/2000
Vishal Plastomer Pvt. Ltd.	09/12/2000
Jaswant Mathur	30/07/2004
Shrenik Marbles Pvt. Ltd.	08/08/2004
Vijay Bhavnani	10/03/2004
Prakash Bhavnani	10/08/2004
Deepak Bhavnani	10/08/2004
Rajni K. Bhavnani	10/08/2004
Laxmi Spinning Mills	25/07/2004
Arora Textiles	25/07/2004

7 Power Purchase Policy of Rajasthan Government for the years 2001 - 2002 to 2004-2005

Category 2 Documents:
Background documents related to the design and/or methodologies employed in the design or other reference documents.

1 Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories, (Latest amended Version 09 – 28th July 2006

2 Guidelines for completing CDM-SSC-PDD and F-CDM-SSC-Subm, Version 01

3 Kyoto Protocol to the United Nations Framework Convention on Climate Change, United Nations, Dec 1997.

Persons interviewed:
List persons interviewed during the validation, or persons that contributed with other information that are not included in the documents listed above.

Senergy Global Private Limited
Dr Ajay Mathur President and CEO- Senergy Global Pvt Limited
Dr Inderjeet Singh Manager CDM- Senergy Global Pvt Limited
Service Provider (Suzlon Wind Farm Services Pvt Ltd)
Sudhakar Pande Site Manager
Manoj Sharma Site Administration Manager
Local Stakeholders

Mr. Tripal Singh	House Keeping / Manpower Provider
Mr. Bheem Singh Rathore	Vehicle/Taxi Services
Mr. Ramesh Golakia	Electrical Work & Electrical Materials
Mr. Radheshyam Sharma	Canteen Services

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APPENDIX A -SMALL-SCALE CDM VALIDATION PROTOCOL – POHRA WINDENERGY PROJECT

Table 1 Mandatory Requirements for Small Scale Clean Development Mechanism (CDM) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/ Comment
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art. 12.2	See Table 2, Section A.3.3 & Table 3, CAR-1	Table 2, Section E.4.1
2. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof	Kyoto Protocol Art. 12.2, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	Project proponent has obtained the host country approval from Ministry of Environment & Forest (DNA, India) on 28.04.2006 vide letter no. F.No.4/22/2005-CCC	Table 2, Section A.3.3
3. The project shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC	Kyoto Protocol Art. 12.2.	See Table 2, Section A.3.3	Table 2, Section E.4.1
4. The project shall have written approval of voluntary participation from the designated national authorities of each party involved	Kyoto Protocol Art. 12.5a, Simplified Modalities and Procedures for Small Scale CDM Project Activities §23a	Project proponent has obtained the host country approval from Ministry of Environment & Forest (DNA, India) on 28.04.2006 2005 vide letter no. F.No.4/22/2005-CCC	-
5. The emission reductions should be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	See Table 2, Section E.4.1	Table 2, Section E.1 to E.4
6. Reduction in GHG emissions must be additional to any that would occur in absence of the project activity, i.e.	Kyoto Protocol Art. 12.5.c,	Yes	Table 2, Section B.2.1

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/ Comment
a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity	Simplified Modalities and Procedures for Small Scale CDM Project Activities §26	See Table 2, Section B.2.1	
7. Potential public funding for the project from Parties in Annex I shall not be a diversion of official development assistance	Marrakech Accords (Decision 17/CP.7)	The project will not receive any public funding from Parties included in Annex 1.	-
8. Parties participating in the CDM shall designate a national authority for the CDM	Marrakesh Accords (CDM modalities§ 29)	Ministry of Environment & Forest is the Host Party's (India) Designated National Authority for CDM	-
9. The host country shall be a Party to the Kyoto Protocol	Marrakesh Accords (CDM modalities§ 30)	Yes	-
10. The proposed project activity shall meet the eligibility criteria for small scale CDM project activities set out in § 6 (c) of the Marrakesh Accords and shall not be a debundled component of a larger project activity	Simplified Modalities and Procedures for Small Scale CDM Project Activities §12a,c	Yes See Table 2, Section A.1.1, A.1.2	Table 2, Section A.1
11. The project design document shall conform with the Small Scale CDM Project Design Document format	Simplified Modalities and Procedures for Small Scale CDM Project Activities, Appendix A	Yes. The project design document does conform with the Small Scale CDM Project Design Document format is currently valid	-
12. The proposed project activity shall confirm to one of the project categories defined for small scale CDM project activities and uses the simplified baseline and monitoring methodology for that project category	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22e	Yes Type 1, Category 1. D.	Table 2, Section A.1.3 and B.1
13. Comments by local stakeholders are invited, and a summary of these provided	Simplified Modalities and Procedures for Small	Yes	Table 2, Section G

REQUIREMENT	REFERENCE	CONCLUSION	Cross Reference/ Comment
	Scale CDM Project Activities §22b	See table 2, Section G.1.1	
14. If required by the host country, an analysis of the environmental impacts of the project activity is carried out and documented	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22c	Not required by the host country See table 2, Section F.1.1	Table 2, Section F
15. Parties, stakeholders and UNFCCC accredited NGOs have been invited to comment on the validation requirements and comments have been made publicly available	Simplified Modalities and Procedures for Small Scale CDM Project Activities §23b,c,d	PDD was made publicly available for 30 days from 08/11/2005 to 07/12/2005 on the UNFCCC website and public comments were invited.	

Table 2 Requirements Checklist

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A. Project Description The project design is assessed.					
A.1. **Small scale project activity** It is assess whether the project qualifies as small scale CDM project activity.					
A.1.1. Does the project qualify as a small scale CDM project activity as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?	1	DR	Yes, as per 17/CP.7 (ii). The capacity of project is 11.35 MW located at Pohra, Rajasthan.	OK	OK
A.1.2. The small-scale project activity is not a debundled component of a larger project activity?	1	DR I	The project proponent has not registered or applied for registration of any other wind project. Refer A.4.5 of PDD.	OK	OK
A.1.3. Does proposed project activity confirm to one of the project categories defined for small scale CDM project activities?	2	DR	Yes, Project Type I – Renewable energy project Category ID: Renewable electricity generation for a grid.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
A.2. **Project Design** Validation of project design focuses on the choice of technology and the design documentation of the project.					
A.2.1. Are the project's spatial (geographical) boundaries clearly defined?	1	DR I	The project site location is indicated in PDD as Badabagh in District Jaisalmer in the State of Rajasthan. .	OK	OK
A.2.2. Are the project's system (components and facilities used to mitigate GHG's) boundaries clearly defined?	1	DR	The project evacuates the power to the Northern Region Grid. This includes the Wind Energy Generators (WEG) installations, sub-station and sub-transmission systems.	OK	OK
A.2.3. Does the project design engineering reflect current good practices?	-	DR	The project activity leads to the promotion of 1.25 MW Wind Electric Generators. The generators are state of the art equipped with automatic control and monitoring arrangement	OK	OK
A.2.4. Will the project result in technology transfer to the host country?	-	DR	No, as indicated in PDD – Refer A.4.2. This is one of the early commercial projects to encourage use of Wind Energy in the state of Rajasthan.	OK	OK
A.2.5. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project	-	DR I	M/s Suzlon Wind Farm Services Ltd is carrying out the operation and maintenance. The staffs are competent and qualified. Infrastructure and system	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
period? Does the project make provisions for meeting training and maintenance needs?			are in place for up-keep and efficient operation.		
A.3. **Contribution to Sustainable Development** The project's contribution to sustainable development is assessed					
A.3.1. Will the project create other environmental or social benefits than GHG emission reductions?	1	DR I	Yes. • Direct / Indirect employment benefits accruing out of ancillary units of manufacturing lattice tower/ installation. • Local employment for the operation and maintenance of windmill. • Infrastructure like roads and public transports for the local population. Ancillary services such as security, taxi and catering services.	OK	OK
A.3.2. Is the project in line with sustainable development policies of the host country?	1	DR	Yes Refer A2,	OK	OK
A.3.3. Is the project in line with relevant legislation and plans in the host country?	-	DR I	Indian legislation allows windmill operations. The Indian and Rajasthan state government promotes wind power generation. The Rajasthan State Government has also released wind power generation policy in the year 2000 and 2003.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Referred to Policy No. F 20 (3) Energy/98/04/02/2000 and F 20 (3) Energy/98/Pt.III dated 30/04/2003.		
B. Project Baseline The validation of the project baseline establishes whether the selected baseline methodology is appropriate and whether the selected baseline represents a likely baseline scenario.					
B.1. **Baseline Methodology** It is assessed whether the project applies an appropriate baseline methodology.					
B.1.1. Is the selected baseline methodology in line with the baseline methodologies provided for the relevant project category?	1,2	DR	The approved methodology For Type I Cat. D has been considered in accordance with simplified baseline and monitoring methodologies for selected CDM projects- Appendix B.	OK	OK
B.1.2. Is the baseline methodology applicable to the project being considered?	1,2	DR	This methodology is applicable to Windmill, a renewable energy source.	OK	OK
B.2. **Baseline Determination** It is assessed whether the project activity itself is not a likely baseline scenario and whether the selected baseline represents a likely baseline scenario.					
B.2.1. Is it demonstrated that the project activity itself is not a likely baseline scenario due to the existence of one or	1	DR	Refer B.3 of PDD The explanation demonstrates the existence of technological investment, financial and other	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
more of the following barriers: investment barriers, technology barriers, barriers due to prevailing practice or other barriers?			technological investment, financial and other barriers adequately.		
B.2.2. Is the application of the baseline methodology and the discussion and determination of the chosen baseline transparent and conservative?	1	DR I	Refer B .5 of PDD. Average OM and Average BM has been calculated. However the basis of calculation (consistent with year of commissioning of the project) is not clearly explained in the PDD. Also It is not clear whether the chosen baseline is conservative. Low - Cost and Must – Run plants have not been identified.	CAR1	OK
B.2.3. Are relevant national and/or sectoral policies and circumstances taken into account?	-	DR	Yes as given A.3.3	OK	OK
B.2.4. Is the baseline selection compatible with the available data?	1	DR	Refer B 2.2	OK	OK
B.2.5. Does the selected baseline represent the most likely scenario describing what would have occurred in absence of the project activity?	1,2	DR	Yes Refer B.5 of PDD	OK	OK
C. Duration of the Project / Crediting Period It is assessed whether the temporary boundaries of the project are clearly defined.					
C.1.1. Are the project's starting date and	1	DR	Starting date is not as per format i.e. in	CAR 2	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
operational lifetime clearly defined?			DD/MM/YYYY Starting Date is indicated in PDD as August 2003.		
C.1.2. Is the crediting period clearly defined (seven years with two possible renewals or 10 years with no renewal)?	1	DR	Yes. It is indicated as 10 years. 'With no renewal is missing'	CAR 3	OK
D. Monitoring Plan The monitoring plan review aims to establish whether all relevant project aspects deemed necessary to monitor and report reliable emission reductions are properly addressed.					
D.1. **Monitoring Methodology** It is assessed whether the project applies an appropriate monitoring methodology.					
D.1.1. Is the selected monitoring methodology in line with the monitoring methodologies provided for the relevant project category?	1,2	DR	The monitoring methodology is as per "Metering the electricity generated" as indicated in Appendix B of simplified modalities and procedures for small-scale CDM projects.	OK	OK
D.1.2. Is the monitoring methodology applicable to the project being considered?	1,2	DR	The reasons for choosing this monitoring methodology are appropriately justified in the item D.2 of the PDD	OK	OK
D.1.3. Is the application of the monitoring methodology transparent?	1,2	DR	The data is being monitored by Rajasthan Vidyut Prasaran Nigam Limited (State Electricity Utility), which is transmitting the generated electricity. The electricity is metered at the grid inter-connection point against which the payment is to made on	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			monthly basis on the basis of joint meter reading carried out by RVPNL and PROJECT/SWFSL representatives.		
D.1.4. Will the monitoring methodology give opportunity for real measurements of achieved emission reductions?	1	DR	This methodology is reliable as long the energy meter provided by the state electricity utility is in un-interrupted operation. The monitoring includes three step metering and has appropriate back-up provision. Reliability is not explained	CAR 4	OK
D.2. **Monitoring of Project Emissions** It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.2.1. Are the choices of project emission indicators reasonable?	1	DR	Not applicable – No project emission in case of Wind mill project.	OK	OK
D.2.2. Will it be possible to monitor / measure the specified project emission indicators?	1	DR	Not applicable.	OK	OK
D.2.3. Do the measuring technique and frequency comply with good monitoring practices?	1	DR	Not applicable.	OK	OK
D.2.4. Are the provisions made for archiving project emission data sufficient to enable later verification?	1	DR	Not applicable.	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
D.3. **Monitoring of Leakage** It is assessed whether the monitoring plan provides for reliable and complete leakage data over time.					
D.3.1. If applicable, are the choices of leakage indicators reasonable?	1	DR	Not applicable.	OK	OK
D.3.2. If applicable, will it be possible to monitor / measure the specified leakage indicators?	1	DR	Not applicable.	OK	OK
D.3.3. If applicable, do the measuring technique and frequency comply with good monitoring practices?	1	DR	Not applicable.	OK	OK
D.3.4. If applicable, are the provisions made for archiving leakage data sufficient to enable later verification?	1	DR	Not applicable.	OK	OK
D.4. **Monitoring of Baseline Emissions** It is established whether the monitoring plan provides for reliable and complete project emission data over time.					
D.4.1. Is the choice of baseline indicators, in particular for baseline emissions, reasonable?	1	DR	Reasonable and as per approved monitoring plan in Appendix B.	OK	OK
D.4.2. Will it be possible to monitor / measure the specified baseline emission indicators?	1	DR	Yes. NRLDC and CEA data has been used to determine the base line and the same can be measured on the basis of annual performance	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			report of the plants operating in Northern grid and are contributing towards total grid generation in particular year.		
D.4.3. Do the measuring technique and frequency comply with good monitoring practices?	1	DR I	Energy meters are logged on to the to Central Monitoring System through SCADA. The measuring technique and frequency comply with good manufacturing practices. Refer D.5.9.	CAR 5	OK
D.4.4. Are the provisions made for archiving baseline emission data sufficient to enable later verification?	1	DR	Data is being collected in electronic and paper. Archiving provision is put in place and the data will be preserved for period of minimum two years beyond end of crediting period. Refer D.3 Monitoring table.	OK	OK
D.5. **Project Management Planning** It is checked that project implementation is properly prepared for and that critical arrangements are addressed.					
D.5.1. Is the authority and responsibility of project management clearly described?	1	DR		CAR 6	OK
D.5.2. Is the authority and responsibility for monitoring measurement and reporting clearly described?	1	DR I	The structure of management and monitoring is not defined.	OK	OK
D.5.3. Are procedures identified for training of monitoring personnel?	1	DR I	Procedures for training of monitoring personnel are identified. They are a part of the certified quality and environmental management systems of M/s	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			Suzlon Windfarm Services Pvt Ltd.		
D.5.4. Are procedures identified for emergency preparedness for cases where emergencies can cause unintended emissions?	1	DR I	The procedures for emergency preparedness for cases have been identified.	OK	OK
D.5.5. Are procedures identified for calibration of monitoring equipment?	1	DR I	State Electricity Utility is doing the calibration of monitoring equipment and there is evidence of this being done at regular basis.	OK	OK
D.5.6. Are procedures identified for maintenance of monitoring equipment and installations?	1	DR I	Procedures for maintenance of monitoring equipment and installations are identified. They are a part of the certified quality and environmental management systems of M/s Suzlon Wind Farm Services Ltd.	OK	OK
D.5.7. Are procedures identified for monitoring, measurements and reporting?	1	DR I	Net electricity output is being monitored by the RVPNL.	OK	OK
D.5.8. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	1	DR I	Data logging through Central Monitoring system is in place.	OK	OK
D.5.9. Are procedures identified for dealing with possible monitoring data adjustments and uncertainties?	1	DR I	The payment of electricity is made against the electricity meter at Grid Interconnection point. RVPNL makes payment against lowest meter reading among the two check meters. In case if the Grid Interconnection Meter records higher generation against the check meter, the Grid Interconnection Meter is replaced by RVPNL. Possible monitoring data adjustments and	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			uncertainties and collection of data during failure of energy meter is not defined in PDD		
D.5.10. Are procedures identified for internal audits of GHG project compliance with operational requirements as applicable?	1	DR I	Yes, M/s Suzlon Wind Farm Services Ltd follows ISO 9001 certified Quality management System and ISO 14001 Environmental management system.	OK	OK
D.5.11. Are procedures identified for project performance reviews?	1	DR I	Monthly performance reporting to SENERGY GLOBAL PVT LIMITED is in place. Daily performance report is available through internet at Suzlon web site.	OK	OK
D.5.12. Are procedures identified for corrective actions?	1	DR I	Yes, M/s Suzlon Wind Farm Services Ltd follows ISO 9001 certified Quality management System and ISO 14001 Environmental management system	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E. Calculation of GHG emission It is assessed whether all material GHG emission sources are addressed and how sensitivities and data uncertainties have been addressed to arrive at conservative estimates of projected emission reductions.					
E.1. **Project GHG Emissions** The validation of predicted project GHG emissions focuses on transparency and completeness of calculations.					
E.1.1. Are all aspects related to direct and indirect project emissions captured in the project design?	1	DR	Not applicable	OK	OK
E.1.2. Have all relevant greenhouse gases and sources been evaluated?	1	DR	Not applicable	OK	OK
E.1.3. Do the methodologies for calculating project emissions comply with existing good practice?	1	DR	Not applicable	OK	OK
E.1.4. Are the calculations documented in a complete and transparent manner?	1	DR	Not applicable	OK	OK
E.1.5. Have conservative assumptions been used?	1	DR	Not applicable	OK	OK
E.1.6. Are uncertainties in the project emissions estimates properly addressed?	1	DR	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.2. **Leakage** It is assessed whether there leakage effects, i.e. change of emissions which occurs outside the project boundary and which are measurable and attributable to the project, have been properly assessed.					
E.2.1. Are leakage calculation required for the selected project category and if yes, are the relevant leakage effects assessed?	1	DR	Not applicable	OK	OK
E.2.2. Are potential leakage effects properly accounted for in the calculations (if applicable)?	1	DR	Not applicable	OK	OK
E.2.3. Do the methodologies for calculating leakage comply with existing good practice (if applicable)?	1	DR	Not applicable	OK	OK
E.2.4. Are the calculations documented in a complete and transparent manner and (if applicable)?	1	DR	Not applicable	OK	OK
E.2.5. Have conservative assumptions been used (if applicable)?	1	DR	Not applicable	OK	OK
E.2.6. Are uncertainties in the leakage estimates properly addressed (if applicable)?	1	DR	Not applicable	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.3. **Baseline GHG Emissions** The validation of predicted baseline GHG emissions focuses on transparency and completeness of calculations.					
E.3.1. Are the baseline emission boundaries clearly defined and do they sufficiently cover sources for baseline emissions?	1	DR	Yes refer B.4 of PDD	OK	OK
E.3.2. Are all aspects related to direct and indirect baseline emissions captured in the project design?	1	DR	Yes	OK	OK
E.3.3. Have all relevant greenhouse gases and sources been evaluated?	1	DR	Yes.	OK	OK
E.3.4. Do the methodologies for calculating baseline emissions comply with existing good practice?	1	DR	Yes. BE_y (tCO_2/yr) = EG_y **X** Efy. BE_y (tCO_2/yr) = Baseline emissions in year y EG_y **X** Efy. = Electricity Generated by project in Year Y X Emission factor for year Y.	OK	OK
E.3.5. Are the calculations documented in a complete and transparent manner?	1	DR	Yes. The PDD has used base line emission factors for the current year whereas the project was implemented in year 2003. The basis of such a consideration is not clear.	CL 1	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
E.3.6. Have conservative assumptions been used?	1	DR	The PDD envisages use of gross generation instead of net generations and use of operating heat rate instead of design heat rate. Additionally the data incorporated for base line determination is country specific and not IPCC default values. Both criteria described above indicate conservative assumptions. Refer B.2.2 of PDD	Ref CAR1	OK
E.3.7. Are uncertainties in the baseline emissions estimates properly addressed?	1	DR	Uncertainties in the baseline emissions estimates have not been appropriately addressed	CAR 7	OK
E.4. **Emission Reductions** Validation of baseline GHG emissions will focus on methodology transparency and completeness in emission estimations.					
E.4.1. Will the project result in fewer GHG emissions than the baseline case?	1	DR	Yes .	OK	OK
F. Environmental Impacts It is assessed whether environmental impacts of the project are sufficiently addressed.					
F.1.1. Does host country legislation require an analysis of the environmental impacts of the project activity?	1	DR I	Not required. Refer F.1.	OK	OK
F.1.2. Does the project comply with environmental legislation in the host	1	DR	Not required. The proposed project doesn't fall under the list of activities requiring EIA as it will	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
country?		I	under the list of activities requiring EIA as it will not involve any negative environmental impacts, because the WEGs installed for generation of power use wind (cleanest possible source of renewable energy). Clearance from following departments are have been obtained: 1-For Land: Revenue Department, Government of Rajasthan 2- For Power Evacuation: RVPNL. 3- For Operating Windfarm: Air Force, Ministry of Defence, Govt. of India.		
F.1.3. Will the project create any adverse environmental effects?	1	DR	No.	OK	OK
F.1.4. Have environmental impacts been identified and addressed in the PDD?	1	DR	Not required. Refer F.1.	OK	OK
G. Comments by Local Stakeholder Validation of the local stakeholder consultation process.					
G.1.1. Have relevant stakeholders been consulted?	1	DR I	The project site is located in a desert. . There is no habitation in the approximately five Kilometre radius. The land is declared to be as barren land and is not utilised for any other purpose prior to implementation of wind farm. Ownership of the land lies with State Revenue	OK	OK

CHECKLIST QUESTION	Ref.	MoV*	COMMENTS	Draft Concl.	Final Concl.
			department and the necessary lease of land for specific purpose of wind farming has been obtained. There is remote possibility of any other economic activity as well as human settlement in the area. The villagers in the near vicinity were contacted before the implementation of the proposed project activity and were apprised about the execution of wind farm project. The local stakeholders raised no issues, thus no action were required. There is however no documentation regarding interaction with local state holders. Refer G.1. and G.2. of PDD.		
G.1.2. Have local stakeholders used appropriate media to invite comments?	1	DR	As above.	OK	OK
G.1.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1	DR	Not required.	OK	OK
G.1.4. Is a summary of the comments received provided?	1	DR	As per G.1.1	OK	OK
G.1.5. Has due account been taken of any comments received?	1	DR	As per G.1.1.	OK	OK

Table 3 Resolutions of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2	Summary of project owner response	Validation team conclusion
CAR.1 Average OM and Average BM has been calculated. However the basis of calculation (consistent with year of commissioning of the project) is not provided in PDD. Also It is not clear whether the chosen baseline is conservative. Low - Cost and Must – Run plants have also not been identified.	B.2.2. & E 3.6	Please refer to section B5 of the PDD. The baseline has been established using the three-year average of the operating margin & build margin. The baseline has been essentially estimated using the ACM 002 (thus it is most conservative) The calculations have been elaborated in the PDD.	The information given is considered sufficient and the corrective action request is closed The calculations were checked and found okay
CAR 2 Date of starting not in the format DD/MM/YYYY refer B.5 of PDD	C 1.4	The starting date of the project activity has been corrected as per the desired format of UNFCCC. The correction is reproduced below: 29/09/2003	The information given is considered sufficient and the corrective action request is closed
CAR 3 10 years. However “with no renewal” word is missing.	C 1.2	The corrected version is reproduced below: 10 years with no renewal.	The information given is considered sufficient and the corrective action request is closed

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2	Summary of project owner response	Validation team conclusion
CAR 4 This monitoring methodology is reliable as long the energy meter provided by the state electricity board is in un-interrupted operation. The methodology does not include back-up provision and its reliability.	D.1.4	1. There are two energy meters are installed for each wind turbine, which are sealed and managed by the state electricity utility (RVPNL). The generation of electricity (for billing purpose) is measured on monthly bases and the recorded meter readings are signed by the representatives of both the buyer (RVPNL) and the seller (Project proponent). 2. The main meter forms the bases of generation of the machines and the back up meter is used as a fail safe measure for meeting exigencies pertaining to fault in thee main meter. There is an additional meter provided within the machine controller as a secondary back up. 3. The meters installed at the site are two way meters confirming to class 0.2 (Exceeding specification of	The information given is considered sufficient and the corrective action request is closed

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2	Summary of project owner response	Validation team conclusion
		IS 13779 / IEC 1036). The meter confirms CT Ratio of 5A and a PT Ratio of $33kV/\sqrt{3}/110V/\sqrt{3}$. The meters are used extensively in Industries and generation units and have been performing in a reliable fashion. Additionally, the state electricity utility (RVPNL) is responsible for calibrating and sealing the meters. This information is included in the PDD.	
CAR 5 Energy meters can be logged on to the central computers thro ' SCADA' This is not defined in PDD'	D 4.3	The secondary monitoring, which will provide a backup (fail-safe measure) in case the primary monitoring is not carried out, would be done at the individual WEGs. Each WEG is equipped with an integrated electronic meter. These meters are connected to the Central Monitoring Station (CMS) of the entire wind farm through a wireless Radio Frequency (RF) network. The generation data of individual	The information given is considered sufficient and the corrective action request is closed

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2	Summary of project owner response	Validation team conclusion
		machine can be monitored as a real-time entity at CMS. The snapshot of generation on the last day of every calendar month will be kept as a record both in electronic as well as printed (paper) form.	
CAR 6 The management structure is not defined in the PDD. Refer D.5 of PDD	D 5.1 & D 5.2	Management structure has now been defined. The complete monitoring plan has been rewritten and all necessary details have been inducted	The information given is considered sufficient and the corrective action request is closed
CAR 7 Uncertainties in the baseline emissions estimates have not been appropriately addressed	E 3.7	The baseline has been calculated on the basis of the formula provided in ACM 002. The data pertaining to GHG emissions has been obtained from regional load dispatch centres and central electricity authority. Additionally gross generation from thermal power stations has been used instead of net generation. The operating margin of the northern grid has been calculated on the basis of 3 year average (as	The information given is considered sufficient and the corrective action request is closed

Draft report clarifications and corrective action requests by validation team	Ref. to checklist question in table 2	Summary of project owner response	Validation team conclusion
		submitted against CAR 1), thus the established baseline is most conservative in all respects and there is no likelihood of uncertainties in the baseline.	
CL1 The PDD has used base line emission factors for the current year whereas the project was implemented in year 2001. The basis of such a consideration is not clear.	E 3.5	This has been clarified by UNFCCC that the baseline of the year of project validation would be considered for estimation of CERs and not the baseline of the year of commissioning. This clarification has been given for all the prompt start projects claiming retroactive CERs	The information given is considered sufficient and the CLARIFICATION request is closed