



Validation Report

Project Title Wind Energy Project in Gujarat by Enn Enn Corp Limited

**URS VERIFICATION PRIVATE LIMITED**

URS Project Report No. CCMS/000067

# VALIDATION REPORT

**WIND ENERGY PROJECT IN GUJARAT BY ENN ENN CORP  
LIMITED**

IN  
INDIA

Report No CCMS/000067

Report Version No 04

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## 0.1 ABBREVIATIONS

ABT	Availability Based Tariff
BM	Build Margin
BSE	Bombay Stock Exchange
CAPM	Capital Asset Pricing Model
CAR	Corrective action request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CEA	Central Electricity Authority
CER	Certified emission reduction
CL	Clarification request
CM	Combined Margin
CMP	Conference of Parties serving as the Meeting of Parties
CP	Conference of Parties
DNA	Designated national authority
DOE	Designated operational entity
EB	Executive Board
EECL	Enn Enn Corp Limited
EIA	Environmental Impact Assessment
FAR	Forward action request
GEDA	Gujarat Energy Development Agency
GERC	Gujarat Electricity Regulatory Commission
GHG	Greenhouse gas(es)
GUVNL	Gujarat Urja Vikas Nigam Limited
HCA	Host Country Approval
INR	Indian Rupee
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
GHC	Global Stakeholder Consultation
LoA	Letter of Approval
MoC	Modalities of Communication
MoEF	Ministry of Environment & Forests
MP	Monitoring Plan
NCDMA	National CDM Authority
NEWNE	The Integrated Northern, Eastern, Western, and North-Eastern regional grids
NGO	Non Governmental Organization
O&M	Operations & Maintenance
OM	Operating Margin
PDD	Project Design Document
PLF	Plant Load Factor
PP	Project Participant
PPA	Power Purchase Agreement
RBI	Reserve Bank of India
SEA	State Energy Account
UNFCCC	United Nations Framework Convention on Climate Change
VVM	Validation and Verification Manual
VVS	Validation and Verification Standard
WTG	Wind Turbine Generator



**0.2 EXECUTIVE SUMMARY AND CONCLUSION:**

<b>Project Title:</b>		<b>Country:</b>		<b>Estimated CERs</b> (tCO <sub>2</sub> e): (annual average)
Wind Energy Project in Gujarat by Enn Enn Corp Limited.		India		21,085 t CO <sub>2</sub> e
<b>Client Name:</b>		<b>Client Contact:</b>		
Enn Enn Corp Limited		Mr. Abhishek N. Shah		
<b>URS Project Report No.:</b>		<b>Version:</b>		
CCMS/000067		04		
<b>Date of this Report:</b>		<b>Date of Approval:</b>		
15/11/2014		29/11/2014		
<b>Methodology:</b>				
<b>Number:</b>	<b>Version:</b>	<b>Scale:</b>	<b>SS(s) and TA:</b>	<b>Validation Opinion</b>
AMS I. D.	17 dated 03/06/2011	Small Scale	SS1, TA1.2	Positive
<p>Enn Enn Corp Limited has commissioned URS to perform the validation of the project 'Wind Energy Project in Gujarat by Enn Enn Corp Limited' in India.</p> <p>The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study, monitoring plan and other relevant documents. The information in these documents is reviewed against CDM Validation and Verification Standard (Version 7.0), Kyoto Protocol requirements, CDM Executive Board/ UNFCCC rules.</p> <p>URS is of the opinion that the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited.", in "India" as per PDD version 13 dated 05/11/2014 meets all relevant requirements for CDM activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology. Therefore, it is requested that the project may be registered as CDM Project Activity</p>				
<b>Work carried out by:</b> (Team Composition)		<b>Name</b>	<b>Role</b>	
		Rakesh Chouhan	Lead Assessor & Technical Area Expert (TA 1.2) (till 08/08/2014)	
		Manoj K. Srivastava	Lead Assessor and Technical Area Expert (TA 1.2)	
		Rajeev Singhal	Financial Expert	
<b>Independent Technical Review by:</b> (Internal Quality Control)		<i>Naresh Badhwar</i>		
		Naresh Badhwar	17/11/2014	
<b>Final Report Verified by:</b> (Scheme Manager)		<i>Mukesh Singhal</i>		
		Mukesh Singhal	29/11/2014	
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## 1. INTRODUCTION

URS Verification Private Limited has been commissioned by Enn Enn Corp Limited., Kadampali Society, Opp. Jeevan Bharti School, Nanpura, Abhishek House, Surat, Gujarat to carry out CDM validation of the project entitled “Wind Energy Project in Gujarat by Enn Enn Corp Limited.” in the India.

This report summarizes the finding of validation including opinion on outcome of validation of the project “Wind Energy Project in Gujarat by Enn Enn Corp Limited.” performed on the basis of criteria as laid down by UNFCCC for CDM as well as criteria given to provide for consistent project operations, monitoring and reporting.

### 1.1 Objective

The objective of validation is to have an independent assessment and evaluation of project design by third party. This includes assessment and evaluation of project baseline, monitoring plan and project’s compliance with relevant UNFCCC and host party applicable criteria are validated in order to confirm that project design, as documented, is sound and reasonable and meets the applicable identified criteria. Validation is requirement for all CDM projects and seen as necessary to provide assurance to stakeholders about the quality of project and its intended generation of certified emission reductions (CERs).

### 1.2 Scope

The validation scope is to have an independent and objective review of the project design document against the criteria as stated in article 12 of Kyoto Protocol, the CDM modalities and procedures as agreed in Marrakech accord, Validation and Verification Standard version 7.0 (VVS), the simplified modalities and procedure for small scale CDM project activities and relevant decision by CDM EB including the baseline monitoring methodology AMS I. D. version 17.

Validation is not meant to provide any consultancy towards project participants. However, request for clarifications and/or corrective actions may have provided input for improvement of the project design.

### 1.3 Project Description

The proposed 12.6 MW CDM project activity is a Green Field wind power project activity comprising of 6 Suzlon Make (S-88) 2.1 MW WTGs. The location of the project activity is as below:

1. 2 WTGs of 2.1 MW each in the village of Dahisara, Jasdan, Rajkot,
2. 1 WTG of 2.1 MW in the village of Barvada, Jasdan, Rajkot,
3. 1 WTG of 2.1 MW in the village of Khadvavdi, Jasdan, Rajkot and
4. 2 WTGs of 2.1 MW each in the village of Pipaliya dhoro, Chotila

The wind power project activity is renewable energy based power project. The electricity generated by the project activity is supplied to the NEWNE Grid (northern Grid) of India. Thus the project aims at reducing GHG emissions by replacing the same amount of electricity from the NEWNE grid which would otherwise be generated by a fossil fuel based power plant.

### 1.4 Validation Team

The validation team consists of following personnel:



Name of Validation Team Members	Role
Rakesh Chouhan	Lead Assessor and Technical Area Expert (TA 1.2) (till 08/08/2014)
Manoj K. Srivastava	Lead Assessor and Technical Area Expert (TA 1.2)
Rajeev Singhal	Financial expert

## 2. METHODOLOGY

The validation was conducted using URS procedures in line with requirements as specified in CDM M&P, applicable version 7.0 of VVS and relevant decision of COP/MOP and the CDM EB by applying standard auditing techniques:

The validation consists of following three phases:

- Desk review of project design including baseline and monitoring plan.
- Follow up interviews with project stakeholder(s).
- The resolution of outstanding issues and the issuance of the final validation report and opinion on validation.

In order to ensure transparency and consistency a validation protocol was customized for the project according to latest version 7.0 of VVS. The protocol shows in transparent manner the criteria/requirements, means of verification and the results from validating the identified criteria.

The validation protocol serves the following purposes:

- Organizes the details and clarifies the requirements which are expected to be met by CDM project.
- Ensures a transparent validation process where validator will document how a particular requirement has been validated and result of validation

Following sections outlines each step in more details:

### 2.1 Document Review

Project Design Document (PDD) version 01 dated 05/12/2011 and the subsequent version 2 dated 21/05/2012, version 03 dated 18/06/2012, version 04 dated 14/07/2012, version 05 dated 21/07/2012, version 06 dated 17/08/2012, version 07 dated 28/08/2012, version 08 dated 14/09/2012, version 09 dated 03/11/2012, version 10 dated 01/12/2012 version 11 dated 05/05/2014, version 12 dated 09/08/2014 and version 13 dated 05/11/2014 (final version) have been reviewed. The document review in particular includes applicability of selected methodology, the baseline determination, the additionality of project activity, the monitoring plan, the emission reduction calculations provided in the form of excel spread sheet, etc;

The following documents were assessed or referenced as part of validation:

Sr. No.	List of the Documents
/01/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." in India, version 01 of 05/12/2011.
/02/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." in India, version 02 of 21/05/2012.
/03/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." in India, version 03 of 18/06/2012.



Sr. No.	List of the Documents
/04/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." in India, version 04 of 14/07/2012.
/05/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." in India, version 05 of 21/07/2012.
/06/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." version 06 of 17/08/2012.
/07/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." version 07 of 28/08/2012.
/08/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." Version 08 of 14/09/2012
/09/	Enn Enn Corp Limited; IRR calculation spreadsheet (without REC Revenue) of the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited", dated 18/10/2012 Enn Enn Corp Limited; IRR calculation spreadsheet (without REC Revenue) of the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited", dated 05/05/2014. Enn Enn Corp Limited; IRR calculation spreadsheet (with REC Revenue) of the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited", dated 05/05/2014 Enn Enn Corp Limited; IRR calculation spreadsheet (without REC Revenue) of the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited", dated 09/08/2014. Enn Enn Corp Limited; IRR calculation spreadsheet (with REC Revenue) of the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited", dated 09/08/2014 Enn Enn Corp Limited; IRR calculation spreadsheet (without REC Revenue) of the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited", dated 05/11/2014. Enn Enn Corp Limited; IRR calculation spreadsheet (with REC Revenue) of the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited", dated 05/11/2014
/10/	Ministry of Environment & Forests, Government of India, DNA; Host country approval letter no 4/6/2012-CCC dated 14/09/2012 and Revised dated 30/10/2012
/11/	Enn Enn Corp Limited; Modalities of Communication provided by Enn Enn Corp Limited dated of 13/07/2012
/12/	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard, Version 7.0 dated 01/06/2014
/14/	CDM Executive Board: Simplified baseline and monitoring methodology "AMS-I.D", "Grid connected renewable electricity generation", Version 17 of 03/06/2011,
/15/	CDM Executive Board: Tool for the demonstration and assessment of additionality, version 07.0.0, Annex 08 of EB 70.
/16/	CDM Executive Board: "Tool to calculate the emission factor for an electricity system" version 4.0, Annex 15 of EB 75 dated 04/10/2013
/17/	CDM Executive Board: "General guidelines to SSC CDM methodologies", version 20, Annex 11 of EB 76 dated 08/11/2013.
/18/	Directorate of Service Tax, Government of India; The service Composition Scheme for Payment of Services Act <a href="http://www.servicetax.gov.in/st-profiles/works-contract.pdf">http://www.servicetax.gov.in/st-profiles/works-contract.pdf</a>
/19/	Enn Enn Corp Limited; Power Purchase Agreement with GUVNL for the two WTGs at Dahisara, Rajkot dated 28/09/2011
/20/	Enn Enn Corp Limited; Power Purchase Agreement with GUVNL for the two WTGs at Pipaliya dhoro, Surendranagar and one WTG at Khadvavdi, Rajkot dated 28/09/2011



Sr. No.	List of the Documents
/21/	Enn Enn Corp Limited; Power Purchase Agreement with GUVNL for the one WTG at Barvada, Rajkot dated 29/03/2012
/22/	Gujarat Energy Development Agency (GEDA); Commission certificate for the two WTGs at Pipaliya dhoro, Surendranagar and one WTG at Khadvavdi, Rajkot dated 08/12/2011
/23/	Gujarat Energy Development Agency (GEDA); Commission certificate for two WTGs at Dahisara, Rajkot dated 19/10/2011
/24/	Gujarat Energy Development Agency (GEDA); Commission certificate for the one WTG at Barvada, Rajkot dated 17/04/2012
/25/	Enn Enn Corp Limited; Purchase order issued to Suzlon Energy Limited for 6 Nos. Of S-88 2100 kW WTGs dated 20/04/2011
/26/	Enn Enn Corp Limited; Purchase order issued to Suzlon Towers & Structures Limited for 6 Nos. Of Tubular Tower dated 20/04/2011
/27/	Enn Enn Corp Limited; Purchase order issued to Suzlon Gujarat Wind Park Ltd. for acquiring freehold/ lease/ sub lease rights of land and rights of suitable access of surroundings for 6 Nos. Of WTGs dated 20/04/2011
/28/	Enn Enn Corp Limited; Copy 'Sub Lease – DEED' made with Suzlon Gujarat Wind Park Ltd. for the development of wind farm for installation of the WTGs dated 08/11/2011
/29/	Enn Enn Corp Limited; Purchase order issued to Suzlon Infrastructure Services Limited for civil work for WTG including foundation and other civil work allied to installation of WTGs dated 20/04/2011
/30/	Enn Enn Corp Limited; Purchase order issued to Suzlon Infrastructure Services Limited for 6 Nos. Of Distribution transformers dated 20/04/2011
/31/	Enn Enn Corp Limited; Purchase order issued to Suzlon Infrastructure Services Limited for erection, installation and commissioning of the 6 nos. of Wind Turbine Generator (WTG) dated 20/04/2011
/32/	Enn Enn Corp Limited; Purchase order issued to Suzlon Infrastructure Services Limited for electrical works including supply and installation of DP yard and electrical lines dated 20/04/2011
/33/	CDM Executive Board: Clean Development Mechanism Project Standard, version 7.0 dated 01/06/2014.
/34/	Enn Enn Corp Limited; Purchase order issued to Suzlon Energy Ltd. for Rotor Blades dated 20/04/2011
/35/	Enn Enn Corp Limited; Purchase order issued to Suzlon Power Infrastructure Ltd. For contribution towards for power evacuation infrastructure dated 20/04/2011
/36/	Enn Enn Corp Limited; Undertaking confirming that the project activity has not used any public funding dated 18/05/2011
/37/	Central electricity Authority, Government of India; CEA database version 7 (Ministry of Power, Government of India) <a href="http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm">http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm</a>
/38/	Suzlon Towers & Structures Limited; Offer Letter No. STSL/2011-2012/ 5008008 issued by Suzlon Towers & Structures Limited dated 11/04/2011 for the supply of the tubular tower component of the WTGs
/39/	Suzlon Gujarat Wind Park Limited; Offer Letter No. SGWPL/2011-2012/ 5008013 issued by Suzlon Gujarat Wind Park Limited dated 11/04/2011 for sale / grant of free hold / lease/ sub lease rights of land and rights of suitable access of surroundings for the WTGs
/40/	Suzlon Infrastructure Services Limited: Offer Letter No. SISL/2011-2012/ 5008011 issued by Suzlon Infrastructure Services Limited dated 11/04/2011 for civil work including the foundation & other civil work allied in respect of installation of the WTGs



Sr. No.	List of the Documents
/41/	Suzlon Infrastructure Services Limited; Offer Letter No. SISL/2011-2012/ 5008009 issued by Suzlon Infrastructure Services Limited dated 11/04/2011 offer for supply transformers, component of renewable energy / device/ wind turbine generators
/42/	Suzlon Power Infrastructure Limited: Offer Letter No. SPIL/2011-2012/ 5008007 issued by Suzlon Power Infrastructure Ltd. Dated 11/04/2011 for the installation of power evacuation infrastructures
/43/	Suzlon Infrastructure Services Limited; Offer Letter No. SISL/2011-2012/ 5008010 issued by Suzlon Infrastructures Services Limited dated 11/04/2011 for erection, installation and commissioning of the WTGs
/44/	Suzlon Infrastructure Services Limited; Offer Letter No. SISL/2011-2012/ 5008012 issued by Suzlon Infrastructures Services Limited dated 11/04/2011 for electrical works including supply and installation of DP Yard and electrical line items
/45/	Suzlon Infrastructure Services Limited; Offer letter no. SISL/2011-2012/ 5008014 issued by issued by Suzlon Infrastructures Services Limited dated 11/04/2011 for the operation and maintenance of the WTGs from 2 <sup>nd</sup> year to 5 year operation of the WTGs
/46/	Gujarat Electricity Regulatory Commission; GERC Tariff Order dated 30/01/2010 <a href="http://www.gercin.org/renewablepdf/en_1303211765.pdf">http://www.gercin.org/renewablepdf/en_1303211765.pdf</a>
/47/	Enn Enn Corp Limited; Letter sent to Gujarat Energy Development Agency by the PP regarding the intention to implement the wind power project activity in the state of Gujarat dated 10/11/2011
/48/	Vijayant Consultants, Management & project Consultants; Copy of the PLF report determined by the third party 'Vijayant Consultants, Management & project Consultants contracted by the PP dated April, 2011
/49/	IREDA; IREDA financing Guidelines for wind energy projects (w.e.f. 25/05/2009).
/50/	Ministry of Environment & Forest's Notification S. O 1533 dated 14 <sup>th</sup> September, 2006 <a href="http://envfor.nic.in/legis/eia/so1533.pdf">http://envfor.nic.in/legis/eia/so1533.pdf</a>
/51/	Ministry of Environment and Forests (MoEF), Government of India notification dated December, 1, 2009 <a href="http://moef.nic.in/downloads/rules-and-regulations/3067.pdf">http://moef.nic.in/downloads/rules-and-regulations/3067.pdf</a>
/52/	Enn Enn Corp Limited; Local newspaper advertisement to invite the local stakeholders for the stake holder meeting for the project activity dated 19/10/2011
/53/	Enn Enn Corp Limited; Copy of the invitation letter for the local stakeholder consultation meeting dated 14/10/2011
/54/	Enn Enn Corp Limited; Minutes of Stakeholder meeting held at Rajpara substation, Surendranagar dated 24/10/2011
/55/	Enn Enn Corp Limited; Attendance sheet of the local stakeholders for the meeting held at Rajpara substation, Surendranagar dated 24/10/2011
/56/	CDM Executive Board: "Simplified modalities and procedures for small-scale clean development mechanism project activities" Annex II of Report of the Conference of the Parties serving as the meeting of the Parties to the Kyoto Protocol dated 30/03/2006
/57/	Enn Enn Corp Limited; Email sent to National CDM DNA for prior consideration of CDM for the project activity dated 11/10/2011
/58/	Enn Enn Corp Limited; E-mail sent to UNFCCC for securing CDM status by the PP dated 05/10/2011
/59/	Suzlon Energy Limited; Technical specifications of the WTG (model no. S- 88 2.1 MW) provided by Suzlon Energy Limited dated 03/10/2008
/60/	Tariff Advisory Committee; General Rules and Regulation, tariff advisory committee, Mumbai dated 31/03/2001 <a href="http://iib.gov.in/IRDA/tac/tariffs/AIFT2001.pdf">http://iib.gov.in/IRDA/tac/tariffs/AIFT2001.pdf</a>
/61/	CDM Executive Board: Glossary of CDM Terms, Version 07.0 Annex 07 of EB 70 dated



Sr. No.	List of the Documents
	23/11/2012
/62/	CDM Executive Board: Non-binding best practice examples to demonstrate additionality for SSC project activities, EB35, Annex 34
/63/	CDM Executive Board: Guidelines for objective demonstration and assessment of barriers, EB 50, Annex 13
/64/	CDM Executive Board: Guidelines on the assessment of investment analysis, EB62, Annex 5
/65/	Enn Enn Corp Limited; Copies of the extracts from board meeting of the company, Enn Enn Corp Limited dated 18/04/2011 (Investment Decision)
/66/	India Renewable Energy Development Agency (IREDA); Combined Summary of CERC & SERCs regulations / Tariff Orders of States procurement of power from Wind Electric Generators <a href="http://www.cwet.tn.nic.in/Docu/Tariff_SERC_23_08_2010.pdf">http://www.cwet.tn.nic.in/Docu/Tariff_SERC_23_08_2010.pdf</a>
/67/	Ministry of Finance, Government of India, Income Tax Act 1961, <a href="http://law.incometaxindia.gov.in/DIT/Income-tax-acts">http://law.incometaxindia.gov.in/DIT/Income-tax-acts</a> .
/68/	CDM Executive Board: Guidelines on the demonstration of additionality of small scale project activities, version 9.0, Annex 27 of EB 68 dated 20/07/2012.
/69/	Reserve Bank of India, Government of India; Term lending rate of Reserve Bank of India <a href="http://www.rbi.org.in/scripts/WSSView.aspx?id=15862">http://www.rbi.org.in/scripts/WSSView.aspx?id=15862</a>
/70/	Enn Enn Corp Limited; F-CDM Prior Consideration Form dated 04/10/2011
/71/	Gujarat Energy Transmission Corporation Limited; Revised Estimate for erection of 66 KV transmission network for evacuation to Suzlon Power Infrastructure Pvt Ltd dated 16/11/2010.
/72/	Reserve Bank of India, Government of India; Survey of Professional Forecasters : Results of the Fourteenth Round (Q3:2010-11), Reserve bank of India dated 02/02/2011 <a href="http://rbi.org.in/scripts/PublicationsView.aspx?id=13050">http://rbi.org.in/scripts/PublicationsView.aspx?id=13050</a>
/73/	CDM Executive Board: CDM-SSC-PDD form version 03 dated 22/12/2006 CDM Executive Board: F-CDM-SSC-PDD form version 4.1 dated 11/04/2012 CDM Executive Board: CDM-PDD-SCC-FORM form version 5.0
/74/	CDM Executive Board; Guidelines for completing the simplified Project Design Document (CDM-SSC-PDD) and the form for proposed new small scale methodologies (CDM-SSC-PDD) (version 07), dated 02/08/2008, Annex 12 of EB 41.
/75/	CDM Executive Board: "Guidelines for the reporting and validation of plant load factors" version 01 annex 11 of EB 48 dated 17/07/ 2009.
/76/	Damodaran, Aswath; Corporate Finance, Theory and Practice (2 <sup>nd</sup> Edition, 2009) by, John Wiley & Sons Ltd, UK (Authorized Reprint by Wiley India (P) Ltd).
/77/	Karvy Stock Broking Limited; Fuel Security is the theme, <a href="http://breport.myiris.com/ksbl/NATTHEPC_20110701.pdf">http://breport.myiris.com/ksbl/NATTHEPC_20110701.pdf</a>
/78/	Central Electricity Regulatory Commission: Tariff order, dated 26/04/2010
/79/	K. Kiran & Co; CA certificate for actual project cost dated 03/11/2012.
/80/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." In India, version 09 of 03/11/2012.
/81/	M.Y. Khan and P.K. Jain: Financial Management Book written by M.Y. Khan and P.K. Jain published by Tata McGraw Hill Publishing Company Limited
/82/	Yahoo Finance: for data of companies for calculating beta and BSE sensex <a href="http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=CESC.BO%2C+&amp;ql=1">http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=CESC.BO%2C+&amp;ql=1</a> <a href="http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=NTPC.BO%2C+&amp;ql=1">http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=NTPC.BO%2C+&amp;ql=1</a> <a href="http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=RELINFRA.BO%2C+&amp;ql=1">http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=RELINFRA.BO%2C+&amp;ql=1</a> <a href="http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=TATAPOWER.BO%2C+&amp;ql=1">http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=TATAPOWER.BO%2C+&amp;ql=1</a> <a href="http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=JPPPOWER.BO%2C+&amp;ql=1">http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=JPPPOWER.BO%2C+&amp;ql=1</a> <a href="http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=NEYVELLILIG.BO%2C+&amp;ql=1">http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=NEYVELLILIG.BO%2C+&amp;ql=1</a> <a href="http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=GIPCL.BO%2C+&amp;ql=1">http://finance.yahoo.com/q/hp?a=03&amp;b=1&amp;c=2006&amp;d=02&amp;e=31&amp;f=2011&amp;g=m&amp;s=GIPCL.BO%2C+&amp;ql=1</a>
/83/	Moneycontrol.com; Website for accessing data of companies for converting equity beta to asset



Sr. No.	List of the Documents
	beta <a href="http://www.moneycontrol.com/financials/ntpc/balance-sheet/NTP#NTP">http://www.moneycontrol.com/financials/ntpc/balance-sheet/NTP#NTP</a> <a href="http://www.moneycontrol.com/financials/relianceinfrastructure/balance-sheet/RI38#RI38">http://www.moneycontrol.com/financials/relianceinfrastructure/balance-sheet/RI38#RI38</a> <a href="http://www.moneycontrol.com/financials/tatapowercompany/balance-sheet/TPC#TPC">http://www.moneycontrol.com/financials/tatapowercompany/balance-sheet/TPC#TPC</a> <a href="http://www.moneycontrol.com/financials/jaiprakashpowerventures/balance-sheet/JHP01#JHP01">http://www.moneycontrol.com/financials/jaiprakashpowerventures/balance-sheet/JHP01#JHP01</a> <a href="http://www.moneycontrol.com/financials/neyvelilignitecorporation/balance-sheet/NLC#NLC">http://www.moneycontrol.com/financials/neyvelilignitecorporation/balance-sheet/NLC#NLC</a> <a href="http://www.moneycontrol.com/financials/gujaratindustriespowerco/balance-sheet/GIP#GIP">http://www.moneycontrol.com/financials/gujaratindustriespowerco/balance-sheet/GIP#GIP</a>
/84/	Reserve Bank of India, Government of India, Yield to Maturity of Central Government Securities <a href="http://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/26CT_CTSM0311.pdf">http://rbidocs.rbi.org.in/rdocs/Bulletin/PDFs/26CT_CTSM0311.pdf</a>
/85/	Suzlon Energy Limited; Offer Letter No. SEL/2011-2012/5008006 issued by Suzlon Energy Limited dated 11/04/2011 for the supply of 2.1 MW Wind Turbine Generators
/86/	State Bank of India, Loan sanction letter dated 21/09/2011
/87/	Enn Enn Corp Limited; Email dated 11/10/2011 sent to DNA to India regarding prior consideration of CDM
/88/	Enn Enn Corp Limited; Email sent to UNFCCC dated 05/10/2011 sent to UNFCCC regarding prior consideration of CDM
/89/	Ministry of Finance, Government of India; Income Tax Rules, 1962
/90/	Suzlon: Letter regarding geo coordinates dated 20/08/2012.
/91/	Enn Enn Corp Limited: Modalities of communication statement dated 20/05/2014
/92/	Central Electricity Regulatory Commission: Determination of Fee and Charges payable under Regulation 11 of the Central Electricity Regulatory Commission (Terms and Conditions for Recognition and Issuance of Renewable Energy Certificate for Renewable Energy Generation) Regulations, 2010 <a href="https://www.recregistryindia.nic.in/pdf/REC_Regulation/fees_and_charges_of_REC.pdf">https://www.recregistryindia.nic.in/pdf/REC_Regulation/fees_and_charges_of_REC.pdf</a>
/93/	Manikaran Power Limited: Proposal for REC trading dated 12/04/2011
/94/	Enn Enn Corp Limited: Memorandum of Understanding between Manikaran Power Limited & Enn Enn Corp Limited regarding the professional services for REC benefits
/95/	Enn Enn Corp Limited: Copies of O & M Agreements (Maintenance & Services) and Maintenance with parts and/consumables agreement signed between the PP & Suzlon dated 03/12/2013 for all the three phases of the project activity
/96/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." Version 10 of 01/12/2012
/97/	Enn Enn Corp Limited; Confirmation letter dated 29/04/2012 regarding the validity and accuracy of the specimen signatures of the authorised signatories in the MoC
/98/	Gujarat Energy Transmission Corporation Limited: Energy Injection Reports of the project activity for the period from April, 2012 to March, 2014
/99/	Central Electricity Regulatory Commission: CERC Tariff Order dated 01/06/2010 <a href="https://www.recregistryindia.nic.in/pdf/REC_Regulation/Final_Order_on_Forbearance_and_Floor_Price_for_REC.pdf">https://www.recregistryindia.nic.in/pdf/REC_Regulation/Final_Order_on_Forbearance_and_Floor_Price_for_REC.pdf</a>
/100/	Indian Energy Exchange (IEX) Power Exchange India Limited: Traded price of REC for Aug to Oct 2014 <a href="http://www.iexindia.com/marketdata/recdata.aspx">http://www.iexindia.com/marketdata/recdata.aspx</a>
/101/	Renewable Energy Certificate Registry of India: List of accredited projects in India under REC scheme ( <a href="https://www.recregistryindia.nic.in/index.php/general/publics/accredited_regens">https://www.recregistryindia.nic.in/index.php/general/publics/accredited_regens</a> )
/102/	CDM Executive Board: Clean Development Mechanism Validation and Verification Manual
/103/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." In India, version 11 of 05/05/2014



Sr. No.	List of the Documents
/104/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." Version 12 of 09/08/2014
/105/	Enn Enn Corp Limited; PDD for project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." Version 13 of 05/11/2014
/106/	CERC Announces Final Regulations for Terms and Conditions for Electricity Tariff for the Five – Year period beginning April 1, 2004 ( <a href="http://www.cercind.gov.in/28122004/CERC%20new%20terms%20&amp;%20conditions%20of%20tariff%20_2004-09_.pdf">http://www.cercind.gov.in/28122004/CERC%20new%20terms%20&amp;%20conditions%20of%20tariff%20_2004-09_.pdf</a> ) dated 28/03/2004 used for source for loan repayment period
/107/	Suzlon: Receipt of payment for windmill project dated 15/06/2011 and 29/04/2011
/108/	CERC Tariff Order for Determination of Forbearance and Floor Price for the REC framework dated 23/08/2011 <a href="http://www.cercind.gov.in/2011/August/Order_on_Forbearance_&amp;_Floor_Price_23-8-2011.pdf">http://www.cercind.gov.in/2011/August/Order_on_Forbearance_&amp;_Floor_Price_23-8-2011.pdf</a> CERC order for extension of validity of REC <a href="http://www.cercind.gov.in/2013/orders/SO266.pdf">http://www.cercind.gov.in/2013/orders/SO266.pdf</a>
/109/	CERC tariff order dated 21/09/2010 for determination of fees and charges for REC. <a href="https://www.recregistryindia.nic.in/pdf/REC_Regulation/fees_and_charges_of_REC.pdf">https://www.recregistryindia.nic.in/pdf/REC_Regulation/fees_and_charges_of_REC.pdf</a>
/110/	Global Wind Energy Council: "India Wind Energy Outlook, 2012" published by Global Wind Energy Council, World Institute of Sustainable energy and Indian Wind Turbine Manufacturing Association ( <a href="http://www.gwec.net/wp-content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf">http://www.gwec.net/wp-content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf</a> )
/111/	Directorate of Service Tax, Department of Revenue, Ministry of Finance, Government of India (for service tax)

## 2.2 Follow-up Actions

On 27/04/2012, Rakesh Chouhan, Lead Assessor and Technical Expert (TA 1.2) and Manoj K. Srivastava, Assessor visited the project site at Rajkot and Surendranagar district in the state of Gujarat to resolve question and issues identified during offsite review of documents and performed interviews with relevant local stakeholders.

The personnel met during visit are summarized in the table below:

	Date	Name and Role	Organization	Topic
/a/	27/04/2012	Praveen Chandra, Partner	Prozeal Consulting	Project Implementation, Baseline Scenario, Additionality, Monitoring Plan, Environmental Impacts, Local Stakeholder Consultation Process
/b/	27/04/2012	Nilesh Gajera, Operation, Engineer	Suzlon Energy Ltd.	Monitoring Plan and Monitoring System, Quality Assurance/Quality Control
/c/	27/04/2012	Hari Krishnan, Assistant Manager	Suzlon Energy Ltd.	Monitoring Plan and Monitoring System, Quality Assurance/Quality Control
/d/	27/04/2012	Rambhai Local stakeholder	Villager	Project Impact on local and surrounding, Local Stakeholder
/e/	27/04/2012	Uday Dodia, Local stakeholder	Villager	Project Impact on local and surrounding, Local Stakeholder consultation



/f/	27/04/2012	Paras Sendhav local stakeholder.	Villager	Local Consultation	Stakeholder
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The validation team performed on-site interviews with the relevant stakeholders and cross-checked information provided by interviewed personnel to ensure that no relevant information has been omitted from the validation.

### 2.3 Resolution of Outstanding Issues

The objective of this phase of validation is to resolve any outstanding issues which needed to be corrected and clarified to URS for URS's positive conclusion on project design. As an outcome of the validation process, the team can raise different types of findings as indicated below:

Corrective Action Request (CAR) is raised if one of following occurs:

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

A Clarification Request (CL) is raised if information is insufficient or not clear enough to determine whether applicable CDM requirement has been met.

A Forward Action Request (FAR) raised to highlight issues related to project implementation that requires review during first verification of the project activity. FAR shall not relate to CDM requirement for registration. CAR/CL/FAR identified are included in the validation protocol as Appendix-1 to this report.

This validation protocol consists of tables; the different columns in these tables are described as in below tables:

#### Description of Validation Protocol tables:

**Table 1 –Validation Requirements for Clean Development Mechanism (CDM) Project Activities (CDM VVS and relevant paragraphs of CDM PCP):**

Requirements	Ref.	Validation Assessment	Conclusion
The Requirement checklist in table 1 are based on section E to J of CDM VVS and relevant paragraph of CDM PCP and is linked to the requirements the CDM project is expected to meet.	Refers to the documents where the answer to the Requirements checklist is found	The discussion on how the conclusion was arrived at and conclusion on compliance with Requirements	This is either acceptable based on evidence provided (ok), or Corrective Action Request (CAR) if requirement is not met. A clarification request is used when the validation team has identified need for further clarification.



**Table 2 –Validation Requirements for Clean Development Mechanism (CDM) Project Activities (CDM VVS and relevant paragraphs of CDM PS):**

Checklist Questions	Ref.	MoV	Validation Assessment	Conclusion	
				Draft	Final
The Requirement checklist in table 2 are based on section K to N including section VIII of CDM VVS and relevant paragraph of CDM PS and is linked to the requirements the CDM project is expected to meet.	Refers to the documents where the answer to the Requirements checklist is found	Explain how conformance with Requirement is investigated. Examples are document review (DR), interview or follow up actions, cross checking with publicly available or other authentic document.	The discussion on how the conclusion was arrived at and conclusion on compliance with Requirements		For CAR, CL, FAR see definitions above. In the event of adequate information/evidence Ok is used to demonstrated compliance with CDM Requirements.

**Table 3 - Resolution of Corrective Action Requests and Clarification:**

Summary of Findings		CAR	CL	FAR	
		Total Number of CARs	Total Number of CLs	Total Number of FARs	
<b>Date:</b>	DD/MM/YYYY	<b>Raised by:</b>		Name of the assessment team member	
<b>Type of Finding</b>	CAR/ CL or FAR	<b>S. No. of Finding</b>	----	<b>Reference</b>	Reference of finding for example- page no of PDD.
<b>Details of the Finding:</b>					
Findings for not meeting the Requirements/Checklist questions as per table 1 or 2 as applicable.					
<b>Project Participant Response</b>			DD/MM/YYYY		
(Response provided by the PP Please mention changes made to PDD)					
<b>Documents/ information provided by the Project Participant:</b>					
(Evidences/ documents provided by Project participant)					
<b>Reasoning for acceptance or non-acceptance:</b>			DD/MM/YYYY		
(Reasoning provided by Lead Assessor/ Assessor for acceptance or non-acceptance of the response provided by the project participant. Lead Assessor/Assessor shall validate the changes made by project participant with justification to PDD or other documents such as IRR, benchmark, emission reduction spreadsheet (as applicable) and CAR/CL shall be closed only if changes made with justification is accepted by Lead Assessor /Assessor and only if they meet CDM requirements)					
<b>Close out by Lead Assessor</b>			DD/MM/YYYY		

**Table 4 - Forward Action Requests (if no FAR the table 4 is deleted):**

Forward Action Request	Reference to table 2	Response by project participants and validation opinion
The FAR is raised in table 2 is repeated here	Reference to checklist question	Response by project participant on how FAR will be addressed and opinion of validation team.

## 2.4 Internal Quality Control

The validation report and its respective versions are underwent an Internal Quality Control through an Independent Technical Review (ITR).

ITR is an independent process performed to examine that the process of validation has been carried out in conformance with the requirements of validation scheme as well as URS validation procedures and the conclusion is justified. The technical review is performed by designated competent person, Independent Technical Reviewer, in accordance with URS qualification scheme for CDM validation and verification.

### Technical Review Team

Name	Role
Naresh Badhwar	Technical Reviewer and Technical Area Expert TA 1.2

## 3. VALIDATION CONCLUSIONS

The findings of validations are listed in following sections. The validation criteria (requirements), the means of verification and the results from validating the identified criteria are documented in details in validation protocol in appendix - I.

The final validation findings relate to the project design as documented and described in the revised and resubmitted project design document “version 12 dated 09/08/2014”

### 3.1 Approval and Participation

The PP has submitted, to the DOE, the letter of approval/10/ issued by the Indian DNA, ‘The Ministry of Environment & Forests’ bearing Letter No. 4/6/2012-CCC dated 14<sup>th</sup> September, 2012. The name of the project activity and project participant in the HCA was verified against that in section A.1 and section A.3 of the PDD respectively and was found to be consistent and hence accepted.

The letter of approval confirms that:

- The Government of India has ratified the Kyoto Protocol on 26<sup>th</sup> August 2002 (<http://maindb.unfccc.int/public/country.pl?country=IN>) and hence is a Party to the Kyoto Protocol
- The HCA is an approval of voluntary participation in the proposed CDM project activity
- The project contributes to Sustainable Development in India
- The HCA refers to the precise proposed CDM project activity title – ‘Wind Energy Project in Gujarat by Enn Enn Corp Limited.’ – mentioned in the PDD being submitted for registration

The LoA is unconditional with respect to (a) to (d) mentioned above para 39 (a to d) of VVS..



The validation team confirms that the HCA submitted by the PP is in accordance to para 38 to 42 of the VVS version 7.0.

The host country for this project is India and has ratified the Kyoto Protocol on 26<sup>th</sup> August 2002. This was checked from the UNFCCC website <http://maindb.unfccc.int/public/country.pl?country=IN>. The project participant listed in section A.4 of the PDD is Enn Enn Corp Limited; the HCA /10/ from the Indian DNA approves the participation of the project participant mentioned above; therefore the project participant is approved by the Party to Kyoto Protocol. Also, the project participant listed in section A.4 of the PDD is consistent with the contact details provided in Appendix 1 of the PDD. The validation team also confirms that no entities other than those approved as project participants are included in section A.4 and Appendix-1 of the PDD. No Annex I Party has been identified in the PDD.

The DNA of India issued a Letter of Approval on 30/10/2012 /10/, approving participation of Enn Enn Corp Limited as a project participant. As per paragraphs 45 to 48 of the VVS version 7.0, the validation team is of the opinion that, the proposed CDM project activity meets all the relevant participation requirements. The Authenticity of the letter of approval /10/ has been confirmed by checking the original LoA issued by Ministry of Environment & Forests, Government of India, and the National CDM Authority, and validation team not found reason to doubt its authenticity. The letter of approval does not refer to any specific version of the validation report. By checking the original LoA /10/ validation team considers the LoA in accordance with paragraphs 39 to 42 of the VVS version 7.0 /12/ and hence validation team has no doubt on the authenticity of the LoA for the project activity. The proposed project does not involve any public funding from an Annex I Party, and the validation did not reveal any information that indicated that the project could be seen as a diversion of official development assistance (ODA) funding towards the host country. The project proponent has given a written declaration/36/ confirming that there is no usage of public funding in the project activity.

Project participants	Enn Enn Corp Limited
Parties involved	India
<b>APPROVAL</b>	
LoA received	Yes
Date of LoA	30/10/2012
LoA received from	Enn Enn Corp Limited
Validation of authenticity	Verified with Original LoA /10/.
Validity of LoA	Yes
<b>PARTICIPATION</b>	
Party is party to Kyoto Protocol	Yes
Voluntary participation	Yes
Project contribution to SD	Yes

### 3.2 Modalities of Communication

The PP has submitted the MoC/91/ letter dated 20/05/2014, which was verified against the project title and information mentioned in Appendix 1 of the PDD and found to be consistent and hence accepted. The MoC statement has been furnished in the latest applicable MOC form F-CDM-MOC version 2.1.

The corporate identity of the PP and focal points included in the MoC statement, as well the personal identities, the signatures and the related authorized signatures, and the employment status have been



cross-checked through the confirmation letter dated 29/04/2012 /97/ provided by the PP with whom URS is having the contractual agreement. Hence the same was accepted by the validation team. The validation team has checked the completed Modalities of the Communication form provided by the PP In line with para 53, 54 (c), and para 56 of VVS/12/ version 7.0.

Thus, validation team has performed due diligence on the MoC statement in accordance with the para 58 of VVS /12/ version 7.0 requirements established in the validation and verification standard version 7.0 and found that MOC is in line with the para 58 of VVS /12/ version 7.0.

In conclusion, validation team confirms that the MoC statement provided by the PP is in accordance with the requirements in para 53-55 as well it is in accordance with the requirements in para 60 of the CDM-VVS/12/. In line with para 60 of VVS/12/ version 7.0, validation team confirms that MoC statement has been furnished in the latest applicable MOC form F-CDM-MOC version 2.1. The information required as per the F-CDM-MOC, including its annex-1, is correctly completed. The project participant's authorized signatories signing the F-CDM-MOC correspond to the project participant's authorized signatories included in F-CDM-MOC, annex 1.

URS has performed due diligence on the MoC statement in accordance with the requirements established in para 58 of VVS/12/ ver. 7.0 and the MoC statement complies with all relevant forms and requirements as per para 61 of VVS/12/.

### 3.3 Project Design Document

The PDD for the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited.", in "India", version 01 dated 05/12/2011, version 2 dated 21/05/2012, version 03 dated 18/06/2012, version 04 dated 14/07/2012, version 05 dated 21/07/2012, version 06 dated 17/08/2012, version 07 dated 28/08/2012, version 08 dated 14/09/2012, version 09 dated 03/11/2012, version 10 dated 01/12/2012, version 11 dated 05/05/2014, ver 12 dated 09/08/2014 and ver 13 dated 05/11/2014 submitted by Enn Enn Corp Limited has been the basis for the validation process.

URS confirms that the above PDD version 13 dated 05/11/2014 is based on the currently valid PDD template "Clean Development Mechanism Project Design Document form (CDM-PDD-SCC-FORM)", version 5.0 /73/ and is completed in accordance with the applicable guidance document for SSC.

The main changes between the PDD version 01 of 11/07/2012 published for GSC and the PDD version 13 dated 05/11/2014 submitted for registration are the following:

Subject and section in the PDD	Main changes in the revised PDD
Section A: Description of project activity	<ol style="list-style-type: none"><li>1) Template of the CDM-PDD has been revised to ver 5.</li><li>2) The details of the physical location of the project activity has been revised as per commissioning certificates</li></ol>
Section B: Application of selected approved baseline and monitoring methodology	<ol style="list-style-type: none"><li>1) Justification of applicability conditions of the methodology have been revised in line with the methodology</li><li>2) Estimation of annual emission reductions in tonnes of CO<sub>2</sub> e have been revised as Emission factor has been revised. Latest CEA database available at the time of validation was not used in calculating emission factor in webhosted PDD. CEA database version 7 is used in revised PDD version 12 which is the latest version</li></ol>



Subject and section in the PDD	Main changes in the revised PDD
	<p>available at the time of validation</p> <p>3) Benchmark of the project activity has been revised and revised benchmark is applicable at the time of decision making. IRR has been revised. Further details are mentioned in section 3.5 below</p> <p>4) In the earlier submission additionality was demonstrated based on the preferential tariff only. However, the project is utilizing REC benefits. Thus, in this revised submission, PP has demonstrated the additionality of the project activity using the preferential tariff and also demonstrated additionality considering REC revenues which shows that project is still additional considering REC revenues also.</p> <p>5) Calculation of the grid emission factor for the project activity has been revised Latest CEA database available at the time of validation was not used in calculating emission factor in webhosted PDD. CEA database version 7 is used in revised PDD version 12 which is the latest version available at the time of validation</p> <p>6) Monitoring Plan has been revised as per monitoring being carried out at site. Monitoring parameters as per monitoring being carried out at site have been included which are detailed in section 3.7 below.</p>
Section C: Duration and crediting period	1) Start date of crediting period in section C.2.2 has been updated.

### 3.4 Description of Project Activity

The project activity is a Greenfield wind power project of 12.6 MW, situated in Rajkot and Surendranagar Districts of Gujarat State, which entails the installation of 6 WTGs of 2.1 MW each. URS team reviewed the purchase orders, commissioning certificates, power purchase agreements, and also conducted site visit for verifying the description of project activity. The details of the project activity are as follow:

Sr. No	Unique Identification Number of WTGs	Location No.	WTG Capacity (MW)	Site/Village	Date of Commissioning	Latitude	Longitude
1.	SEL/2100/11-12/2349	JSD-43	2.1	Dahisara	30/09/2011	22 <sup>0</sup> 11' 21.6" N	71 <sup>0</sup> 08' 49.7"E
2.	SEL/2100/11-12/2350	JSD-44	2.1	Dahisara	30/09/2011	22 <sup>0</sup> 11' 09.6" N	71 <sup>0</sup> 09' 01.7" E
3.	SEL/2100/11-12/2346	JSD-76	2.1	Pipaliya dhoro	30/11/2011	22 <sup>0</sup> 08' 17.2"N	71 <sup>0</sup> 04' 30.9"E
4.	SEL/2100/11-12/2426	JSD-51	2.1	Barvada	29/03/2012	22 <sup>0</sup> 08' 17.3" N	71 <sup>0</sup> 10' 55.8"E



5.	SEL/2100/11-12/2347	JSD-24	2.1	Pipaliya dhoro	30/11/2011	22 <sup>0</sup> 09' 27.8" N	71 <sup>0</sup> 09' 34.3"E
6.	SEL/2100/11-12/2348	JSD-25	2.1	Khadvavdi	18/11/2011	22 <sup>0</sup> 09' 52.2" N	71 <sup>0</sup> 09' 29.2"E

The power produced by the WTGs of Enn Enn Corp Limited will be sold to Gujarat Urja Vikas Nigam Limited (GUVNL). PP has opted for REC scheme and signed three power purchase agreements (PPAs) /19-21/ with Gujarat Urja Vikas Nigam Limited for the same with Average Power Purchase Cost. Commissioning dates were verified with the commissioning certificate /22-24/ issued by Gujarat Energy Development Agency (GEDA) and found to be correct. The grid connectivity was checked by PPA /19-21/. The project participant has provided a declaration from Suzlon the WTG supplier regarding geocoordinates for the WTGs of the project activity. The technical details of the project activity were verified from the purchase orders /25-27/,/29-32//34-35/, commissioning certificates/22-24/ and physical inspection by the validation team during the site visit. The description of the project mentioned by the PP in the PDD was found to be accurate and complete.

The project will achieve emission reductions by supplying electricity to the NEWNE grid, which is dominated by fossil fuel based thermal power plants. Therefore, the net generation of the project will displace same amount of electricity of the grid and a certain amount of GHG emissions will be consequently reduced as well. The annual emission reductions are expected to be 21,085 tCO<sub>2e</sub>.

According to simplified modalities and procedures for small-scale CDM project activities the type and category of the project activity has been correctly identified in the PDD.

URS confirms that the technology implemented reflects the current good practice in the host country. Implementation of the project activity doesn't involve any technology transfer from Annex-1 countries to host country. The technology given in the PDD is consistent with the actual planning and implementation of the project activity. The validation team confirmed the installation, the manufacturer, and capacities through personal inspection of the WTGs during the site visit and cross verifying with the purchase order, commissioning certificate /22-24/, power purchase agreement /19-21/ with the state utility. The annual energy generation of the project is estimated to be 22,130 MWh/year based on PLF of 20.05%. PLF is determined by third party contracted by PP, hence the validation team agrees with the PLF as it is in line with Annex 11 of EB 48 /75/.

The starting date of the project activity is 20/04/2011, the date when the PP has issued purchase order to Suzlon Energy Limited. It has been verified by URS that the starting date represents the earliest date on which the project participant has taken real actions towards the project activity as per the Glossary of CDM Term /61/.

The expected operational life time of the project activity is 20 and the same has been verified from the technical specification provided. Thus the lifetime of 20 years is acceptable to the validation team. A fixed crediting period of 10 years has been chosen for the project, starting from 01/12/2014 or the date of registration, whichever occurs later. The GHG emission reductions are estimated to be average 21,085 tCO<sub>2e</sub> per year and total estimated GHG emission reduction are 210,850 tCO<sub>2e</sub> over the 10-years crediting period.

URS has checked all the documented evidences listed above during the validation process and can confirm that the project description is complete and accurate; moreover URS confirms that the description of the proposed CDM project activity, as contained in the PDD version 10 sufficiently covers all relevant elements, is accurate and complete and that it provides the reader with a clear understanding of the nature of the proposed CDM project activity.



### 3.5 Selected Baseline and Monitoring Methodology

#### 3.5.1 Application of Selected Baseline and Monitoring Methodology

The proposed project activity is a 12.6 MW grid connected wind power project in State of Gujarat in India. The project uses the small scale methodology AMS I.D, version 17 (<http://cdm.unfccc.int/methodologies/DB/RSCTZ8SKT4F7N1CFDXCSA7BDQ7FU1X>). The project correctly applies the approved baseline and monitoring methodology “AMS-I.D”, “Grid connected renewable electricity generation”, version 17 of 03/06/2011 /14/.

The following steps have been undertaken for assessing the applicability conditions of the methodology:

Applicability of AMS I.D. Version 17 is illustrated as below:

**Para 1** *“This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass:*

*(a) Supplying electricity to a national or a regional grid; or*

*(b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling”*

The proposed CDM project activity is a wind energy power plant i.e. it is renewable energy generation unit, which is supplying the generated electricity to NEWNE grid. The grid connectivity of the project was verified through the PPA /19-21/. This has also been verified during the site visit and found to be correct. Hence, the project activity complies with the applicability criteria 1 of the baseline and monitoring methodology AMS I. D. Version 17.

**Para 2**, *“Illustration of respective situations under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2.”*

The project activity supplies electricity to the NEWNE grid of India, which is a regional grid of India. Thus, the project activity complies with the requirement of the methodology AMS I. D as per the illustration provided in the Table 2 of the applied baseline and monitoring methodology AMS I. D. version 17. The grid connectivity of the project was verified through the PPA /19-21/. This has also been verified during the site visit and found to be correct.

**Para 3**, *“This methodology is applicable to project activities that: (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) Involve a capacity addition; (c) Involve a retrofit of (an) existing plant(s); or (d) Involve a replacement of (an) existing plant(s).”*

The project involves the installation of a new wind power plant where there was no renewable energy power plant operating prior to the implementation of the project activity. The proposed CDM project activity is a Greenfield project activity which is evident from the purchase order /25-27/29-32//34-35/ and the commissioning certificates /22-24/. This has also been verified during the site visit. Hence, the project activity meets the applicability criteria.

**Para 4** – *“Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:*

*a) The project activity is implemented in an existing reservoir with no change in the volume of reservoir;*

*b) The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m<sup>2</sup>;*

*c) The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m<sup>2</sup>.”*



The project activity involves the use of wind energy for the generation of power. As it is not a hydro power plant, this criteria is not applicable to the project activity under consideration

**Para – 5,** *“If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.”*

The project activity envisages the use of renewable energy only i.e. wind energy. The total installed capacity of this wind power project is 12.6 MW which is less than the threshold capacity limit of 15 MW for a small scale project activity. The capacity of the project is verified from purchase orders and found to be correct.

**Para – 6,** *“Combined heat and power (co-generation) systems are not eligible under this category.”*

The project activity is a wind energy project. . The project activity is not a cogeneration system and this has been verified during the site visit.

**Para – 7,** *“In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.”*

The proposed CDM project activity is a Greenfield project activity which is evident from the purchase order /25-27/,/29-32/,/34-35/ and does not involve the addition of renewable energy generation units at an existing renewable power generation facility and it has also been verified during the site visit.

**Para – 8,** *“In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.”*

The project activity is a greenfield wind energy project and it does not involve retrofit and/or replacement to the existing equipment. The proposed CDM project activity is a Greenfield project activity which is evident from the purchase order /25-27/,/29-32/,/34-35/ During the site visit it is verified that no other wind mills that belongs to project activity/project participant are being implemented/constructed at the same site. Hence it can be concluded that proposed project is not a capacity addition.

Thus, all the applicability criteria of AMS I.D, version 17 have been duly addressed and justified. Hence, from the above discussion, it has been confirmed that the applicability of the selected methodology AMS I.D, version 17 to the proposed project activity was found to be reasonable and acceptable.

According to the “Guidelines on assessment of de-bundling for SSC project activities” the project activity is not a de-bundled component of a large project activity as there is no registered small-scale CDM project activity or an application to register another small-scale CDM project activity with the same project participants in the same project category and technology/measure within the previous two years whose project boundary is within 1 km of the project boundary of the proposed small-scale project activity at the closest point as stated in the revised PDD version 10, the same was verified during the site inspection of project and confirmed.

As stated above, the project capacity is 12.6 MW which is less than limit of 15 MW as specified in General Guidance to SSC CDM methodologies. The small scale methodology AMS-I.D version 17 /14/ is applied in conjunction with General Guidance to SSC CDM methodologies /17/.



Based on the document review and on-site visit, URS hereby confirms that the selected baseline and monitoring methodology has been previously approved by the CDM Executive Board, and is applicable to the Project, which complies with all the applicability conditions therein.

### 3.5.2 Project Boundary

The selected methodology AMS I.D, version 17 paragraph 9 states that “the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to”

The PP has described the project boundary in section B.3 of the PDD and has included the WTGs, sub-station and the NEWNE grid of India to which the proposed project activity evacuates power. This was verified during the site visit and through the commissioning certificates /22-24/, PPA /19-21/. The NEWNE grid of India has been correctly identified for calculation of electricity emission factor as the project displaces an equivalent amount of electrical energy from the NEWNE grid, as per the CEA database version 07 /37/ available at the time of PDD webhosting.

The energy generating equipment is new and they are not transferred from another activity. The same was verified during site visit and also verified from review of purchase orders and commissioning certificates. Hence in line with AMS-I.D version 17 there are no leakage emissions. The electricity imported by the project activity is accounted in the net electricity exported by the project activity, EG<sub>BLy</sub>. There are no other sources of project emissions. Hence, in line with the methodology, project participant has considered project emissions as zero for renewable wind power project.

The diagrammatic description of the project boundary delineated in section B.3 of the PDD/01/ correctly describes the project boundary.

	<b>GHGs involved</b>	<b>Description</b>	<b>Justification</b>
<b>Baseline emissions</b>	CO <sub>2</sub>	Net electricity delivered to the grid by the project activity where GHG emission occur due to fossil fuel based power plants	In the baseline scenario, equivalent amount of electricity would have been delivered by mainly fossil fuel power plants connected to NEWNE grid resulting in CO <sub>2</sub> emissions; hence the same is accepted by the validation team.
<b>Project emissions</b>	NA	No project emissions are envisaged in the project activity as per the methodology.	In line with methodology, there are no project emissions for wind energy projects; hence the same is accepted by validation team.
<b>Leakage</b>	NA	No Leakage,	There is no transfer of equipment. WTG are new as verified during site visit and also verified from review of purchase orders /19/. Hence there is no leakage.

There are no emission sources will be affected by the implementation of the proposed project activity and are not addressed by the applied methodology and which are expected to contribute more than 1% of the overall expected average annual emissions reduction. The project activity is a wind energy project and during site visit no other sources were observed which are not addressed by methodology.



During the site visit, the project boundary was physically verified and found to be correct and in line with methodology. Based on the document review and site visit, validation team confirms that the project boundary and emission sources described in the PDD/01/ are accurate and complete, and also that the selected sources and gases are justified for the proposed project activity validation team further confirms that identification of project boundary is in line with paragraph 83-85 of VVS version 7.0 and validation team confirms that identification of project boundary is in line with selected methodology AMS I.D version 17.0.

### 3.5.3 Baseline Scenario Identification

According to the para 10 of approved baseline and monitoring methodology “AMS-I.D”, Grid connected renewable energy generation, version 17 of 03/06/2011, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would be generated by the operation of grid-connected power plants and by the addition of new generation sources. Since the approved methodology applied prescribes the baseline scenario, no further analysis is required on the identification of alternative according to paragraph 115 of the VVS version 7.0.

URS was able to verify all the documented evidence such as CO2 Baseline Database for the Indian Power Sector user guide, version 07, applied methodology AMS I.D ver.17.0/14/, submitted PDD & emission reduction calculation spreadsheet /04/ during the validation process. URS confirms that all the assumptions and data used by the project participants are listed in the PDD including their references and sources, The small scale methodology “Grid connected renewable energy generation”, AMS I.D version 17.0 has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

According to Para 94 of VVS version 7.0, URS is able to verify all the documented evidence listed above during the validation process and is able to confirm that:

- a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD. Baseline is as prescribed by methodology.
- c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and deemed to be reasonable;
- d) The applied methodology AMS I.D has been correctly applied to identify the most reasonable baseline scenario as the electricity delivered to the grid by the project activity that otherwise would be generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid. The methodology prescribes baseline for new grid connected power plants and same is mentioned in PDD hence accepted.

### 3.5.4 Algorithms and/or formulae used to determine emission reductions

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

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

Where:

$BE_y$  Baseline Emissions in year y (t CO<sub>2</sub>)



EG <sub>BL, y</sub>	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)
EF <sub>CO2 grid, y</sub>	CO <sub>2</sub> emission factor of the grid in year y (t CO <sub>2</sub> /MWh)

The emission factor has been calculated as per paragraph 12 (a) of AMS I.D, version 17 as:

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

(a) A combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the Tool to calculate the Emission Factor for an electricity system.;

OR

(b) The weighted average emissions (in t CO<sub>2</sub>/MWh) of the current generation mix. The data of the year in which project generation occurs must be used

The proposed CDM project activity will generate and export the electricity to the NEWNE regional grid and the emission reductions achieved because of the project activity will be direct function of the net electricity fed to the grid and grid emission factor for the NEWNE regional grid as a combined margin, consisting of the combination of the operating margin and build margin according to the procedures prescribed in the methodological tool "Tool to calculate the emission factor for an electricity system" version 4.0.0. This is confirmed by interaction with the PP and as seen during the site visit, which is also in line with methodology applied to the project activity.

According to Para.99 of VVS ver. 7.0, URS hereby confirms that:

- All assumptions and data used by the project participants are listed in the PDD/01/, including their references and sources.
- All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD.
- All values used in the PDD/01/ are considered reasonable in the context of the proposed CDM project activity.
- The baseline methodology has been applied correctly to calculate baseline emissions and emission reductions.
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.

### **3.6 Additionality of Project Activity**

The additionality of the proposed CDM project activity has been demonstrated by applying the "Guidelines on the demonstration of additionality of small-scale project activities, EB 68, Annex 27". Additionality is demonstrated using investment barrier. In line with Non-binding best practice examples to demonstrate additionality for SSC project activities (EB 35, Annex 34) benchmark analysis is used under investment barrier. The benchmark analysis approach is appropriate, since the alternative to the project activity is the supply of electricity from the grid. This is inline with the requirement of paragraph 19 of EB 62 Annex 5 and thus acceptable to the validation team.

The above opinion of URS to the additionality of the proposed project is further explicitly explained in the following sections



### 3.6.1 Prior Consideration of the Clean Development Mechanism

The start date of the proposed CDM project activity has been mentioned in section C.1.1 of the PDD as 20/04/2011. The evidence for the same submitted by the PP is the purchase order /25-27//29-32//34-35/ issued to Suzlon Energy Ltd. for the supply of 6 WTGs. Validation team has accepted the start date since this is the earliest date at which the PP has taken real action towards the project activity as per the Glossary of CDM Terms /61/. The validation team has verified the same by cross checking the purchase order issued to Suzlon Energy Limited and confirms that the start date selected is appropriate.

The project start date (20/04/2011) is prior to 07/02/2012 when the PDD was published for global stakeholder consultation. PDD was webhosted for global stakeholder comments from 07/02/2012 to 07/03/2012. Hence as per the para 107 of VVS version 7.0 for project activity with a start date after 02/08/2008, project participant must inform the Host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status within 180 days of project start date.

It was noted that project participant had sent an email communication to Indian DNA on 11/10/2011, to convey the commencement of the project activity and their intention to seek CDM status, using the standardized form F-CDM-Prior Consideration. Project participant had also sent an email communication to UNFCCC on 05/10/2011, to convey the commencement of the project activity and their intention to seek CDM status, using the standardized form F-CDM-Prior Consideration. The project participant provided the e-mail communication dated 05/10/2011 sent to UNFCCC and email sent to DNA of India dated 11/10/2011 regarding prior consideration and F-CDM-Prior Consideration form dated 04/10/2011 to the validation team. Thus the project participant had informed UNFCCC (i.e. on 05/10/2011) and DNA (i.e. on 11/10/2011) within 180 days from the project start date (i.e. 20/04/2011). The validation team has also cross-checked prior consideration section on UNFCCC website and observed that the project is on UNFCCC website and date received is shown as 05/10/2011.

PP had informed to UNFCCC and DNA for prior consideration of project activity within 180 days time. The project participant provided copy of the e-mail communication dated 05/10/2011 sent to UNFCCC and email sent to DNA of India dated 11/10/2011 regarding prior consideration and F-CDM-Prior Consideration form to the validation team. The validation team hereby confirms that this intimation is made within 180 days of the project activity start date.

The assessment of the Prior CDM Consideration of the project activity "Wind Energy Project in Gujarat by Enn Enn Corp Limited." is conducted by reviewing documents submitted by project participant to UNFCCC and DNA of India and consulting the UNFCCC website, whereby the validation team confirms that the UNFCCC secretariat received the intimation sent by PP on 05/10/2011. The validation team hereby confirms that this intimation is made within 180 days of the project activity start date.

Based on the above assessment, the URS hereby confirms that the proposed CDM project activity complies with the requirements of para 107 of VVS version 7.0 regarding the prior CDM consideration of the project activity.

Based on the above assessment, the URS hereby confirms in line with the requirement of para 112 of VVS version 7.0 that project activity complies with the applicable requirements related to prior consideration of CDM. In conclusion, in accordance with the requirements of the section 7.12.9 of VVS version 7.0 URS can confirm that the CDM was considered necessary in the decision to implement the project activity and verified the start date of the project activity identified in the PDD is appropriate.



### 3.6.2 Identification of Alternatives

The proposed CDM project activity has demonstrated additionality by applying the “Guidelines on the demonstration of additionality of small-scale project activities, EB 68, Annex 27”. Additionality is demonstrated using investment barrier. In line with Non-binding best practice examples to demonstrate additionality for SSC project activities (EB 35, Annex 34) benchmark analysis is used under investment barrier.

As per the approved baseline and monitoring methodology “AMS-I.D”, “Grid connected renewable electricity generation”, version 17 of 03/06/2011, the baseline scenario is electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants. The baseline emissions are the product of electrical energy baseline  $EG_{BL,y}$  in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor of the NEWNE grid. The Project participant considered the project’s baseline scenario in line with what is prescribed by the applied methodology AMS-I.D version 17. Since the approved methodology that is applied prescribes the baseline scenario, no further analysis on alternative identification is required, according to paragraph 115 of the VVS version 7.0.

### 3.6.3 Investment Analysis

#### (a) Choice of Approach

The proposed CDM project activity has demonstrated additionality by applying the “Guidelines on the demonstration of additionality of small-scale project activities, EB 68, Annex 27”. Additionality is demonstrated using investment barrier. In line with Non-binding best practice examples to demonstrate additionality for SSC project activities (EB 35, Annex 34) benchmark analysis is used under investment barrier. The benchmark analysis approach is appropriate, since the alternative to the project activity is the supply of electricity from the grid. This is inline with paragraph 19 of Guidelines on the Assessment of Investment Analysis (EB 62 Annex 5).

Project participant has selected benchmark analysis to demonstrate the additionality of the CDM project activity and project participant has demonstrated that the project without CDM revenues is financially not feasible. The project generates financial benefits other than CDM revenue in the form of sale of electricity, project participant cannot apply simple cost analysis. The alternative to the project activity is supply of electricity from the grid, hence Investment comparison analysis is also not appropriate in accordance with “Guidelines on the assessment of Investment Analysis”, version 05 dated 15/07/2011, EB62, Annexure 5. Hence the project developer has chosen to apply the benchmark analysis method. Equity IRR has been chosen as financial/ economic indicator for demonstrating the additionality using benchmark analysis

The PP has chosen to apply the required/ expected returns on the equity as the benchmark which is appropriate benchmark for equity IRR as per para 12 of Guidelines on the assessment of investment analysis’ version 05, EB 62, Annex 5.

#### (b) Suitability of Benchmark

Para 121 (a) of VVS version 7.0 states that benchmark should be suitable to the type of financial indicator selected. In line with above, project participant has selected return on equity as the benchmark. Thus, the benchmark is suitable to the financial indicator presented and it meets requirements of para 121 (a) of VVS version 7.0.

Expected return on equity is calculated based on the CAPM (Capital Asset Pricing Model) using publicly available financial data. The required rate of return on equity is calculated as risk free rate plus beta times



risk premium where beta represents the risk involved in the project type. The benchmark is based on parameters that are standard in market as per para 15 of Guidelines on the assessment of Investment Analysis”, version 05 dated 15/07/2011, EB 62, Annexure 5 and hence the above approach for calculating benchmark was accepted.

Further, each of the parameters used in calculation of return on equity was checked for their appropriateness. Risk free rate has been sourced from Yield to Maturity of Central Government Securities for 20 years published by Reserve Bank of India, Government of India/84/. Average risk free rate works out to be 8.34% which is applicable at the time of decision making. Since this is an official source of data which is publicly available, it is accepted.

The market return is arrived at based on the BSE SENSEX considering more than 30 years of data which is a publicly available data and hence it is accepted. The market return works out to be 17.95%. Risk premium is calculated as the difference between the market return and risk free rate. The risk premium works out to be 9.61%. The decision date is 18/04/2011 and data from April 1979 to March 2011 has been considered in calculating market return which is acceptable.

The beta value for the project type was based on Beta values of power generating companies in India and listed on the stock exchange at the time of investment decision. The beta has been taken for 7 companies for 5 year period prior to decision making. Equity beta was calculated for a five year data and it was converted to asset beta /82-83/. Asset beta, by definition, reflects the beta of a company without debt. Using asset beta allows the evaluation of the volatility of a company's stock without this debt benefit and thus gives a better idea of the market risk of the stock. Since beta is of power generating companies were taken and hence was accepted.

The validation team verified the correctness and authenticity of the data used for the calculation of return on equity and found them to be correct and publicly available. This is also in line with the guidelines for benchmark selection stipulated in the Guidance on the Assessment of Investment Analysis, and hence the validation team has accepted the same. The return on equity (benchmark) in this method works out to be 16.42%.

The project participant has also compared the return of equity determined as per CAPM with the default return on equity given in Guidelines on the assessment of investment analysis version 05. The default value for the expected return on equity is 11.75% as given in Appendix A of the guidelines. It is clearly mentioned in Guidelines on the Assessment of Investment Analysis, version 05, that the values are expressed in real terms. The equity IRR calculated is nominal equity IRR as escalation is considered in O&M cost. Accordingly PP converted the default benchmark which is in real terms into nominal terms by using the following equation

$$\text{Nominal Benchmark} = (1 + \text{Benchmark real}) * (1 + \text{Inflation rate}) - 1$$

The validation team referred the book ‘Corporate Finance, Theory and Practice (2<sup>nd</sup> Edition, 2009) by Aswath Damodaran/76/. In Chapter 11 of the book titled ‘Investment Analysis with Inflation and Exchange Rate Risk on page 320, the same equation is mentioned for converting real into nominal values. Hence the validation team considers the above equation as appropriate for converting real benchmark into nominal benchmark.

The inflation rate considered by PP is the mean Wholesale Price Index (WPI) Inflation forecast of 5.4% for ten years as given by Reserve Bank of India, Government of India in document ‘Survey of Professional Forecasters: Results of the Fourteenth Round (Q3:2010-11) (<http://rbi.org.in/scripts/PublicationsView.aspx?id=13050>) dated 02/02/2011/72/. The inflation forecast is applicable at the time of decision making. The nominal benchmark considering inflation works out to be 17.78%. Thus PP converted real term values in to nominal values by adding the inflation forecast of the central bank of host country for the duration of the crediting period.



Reserve Bank of India (RBI), Government of India is Central Bank of host country (India) and it is India's monetary authority. The RBI is supervisor of financial system, issuer of currency and manages foreign exchange reserves of the country. Thus the inflation forecast by RBI can be considered as reliable and authentic. WPI inflation forecast is Wholesale Price Index inflation forecast. The Indian government has taken WPI as an indicator of the rate of inflation in the economy. Presently price levels for 435 commodities are being tracked through Wholesale Price Index in India. The commodities are grouped under Primary Articles; Fuel and Power and Manufactured Products. Since WPI inflation considers the wholesale price for power which would include power generated from all sources, this inflation forecast rate is most appropriate for the project activity. Thus the validation team considers that WPI inflation forecast as appropriate for the project activity.

The return on equity calculated using CAPM was 16.42% which is conservative as compared to default return on equity (after considering inflation) of 17.78%. Thus validation team accepted the benchmark as 16.42%.

The validation team has confirmed that all data used to arrive at the benchmark were derived from the sources available to the project participant at the time of the investment decision and hence the validation team accepted the same. Thus, the benchmark is in line with para 121 of VVS version 7.0.

### **(c) Validity and Applicability of the Input Parameters**

The validation team of URS validated the input values and assumptions in the investment analysis by checking the source documents as detailed in table below. It is noted that the values of the input values stated in the PDD are consistent with that of the financial calculation sheet. The lifetime of the WTGs are confirmed to be 20 years as per the technology supplier and the investment analysis is done for the period of 20 years and hence is justified as per the guidelines on assessment of investment analysis. Hence URS accepted the calculations.

The investment decision date of the project activity is 18/04/2011 as per the 'Extracts of Minutes of Meeting of the company dated 18/04/2011 /65/'. The input values are applicable at the time of investment decision as detailed in table below.

Also to determine the likelihood of the occurrence of a scenario other than the scenario presented for proposed project activity, a cross-check on the suitability of the assumptions used in the development of the investment analysis has been done. In this project activity, PP has considered REC revenue in electricity tariff in this project activity. Thus, the detailed analysis on the assessment of the input parameters with and without REC is discussed separately. The input parameter used in IRR calculation without REC has been provided in the following table:

#### **a) Assessment of Input Parameters for Equity IRR without REC revenues**

<b>Parameter</b>	<b>Unit</b>	<b>Value</b>	<b>Source</b>	<b>Validation Assessment</b>
Capacity of each WTG	MW	2.1	As per the offer letters /38-45/, /85/ of the project activity	The individual capacity of WTGs was verified from the offer letter /38-45/, /85/ which was applicable at the time of decision making and cross verified with the actual Purchase Order /25-27/,/29-32/,/34-35/. Further it was also confirmed from the commissioning certificates and the inspection WTGs during the site visit.
No. of WTGs	Nos.	6	Extract from Minutes of Board	The number of WTGs was verified from the Extract from Minutes of Board Meeting and cross verified with the actual Purchase Order /25-



Parameter	Unit	Value	Source	Validation Assessment						
			Meeting /65/	27/,/29-32//34-35/. Further it was also confirmed from the commissioning certificates and the inspection WTGs during the site visit						
Total capacity	MW	12.6	Extract from minutes of Board Meeting /65/	The total capacity of WTGs was verified from the Extract from Minutes of Board Meeting and cross verified with the actual Purchase Order /25-27/,/29-32//34-35/. Further it was also confirmed from the commissioning certificates and the inspection WTGs during the site visit						
Plant Load Factor	%	20.05	Third party PLF report /48/	<p>PLF considered in IRR is 20.05%. Project participant has provided PLF report prepared by third party M/s. Vijayant Consultants Management and Project Consultants. The PLF of the project activity i.e. 20.05% was verified with the PLF determination report provided by the third party. The PLF determination report provided by the third party were found to be appropriate and acceptable, thus the project activity conforms to the requirement of paragraph 3 (b) of EB 48, Annex 11.</p> <p>Validation team checked the electricity generation data for this project activity from April-2012 to March 2014 and found that from April-2012 to March-2013 and from April-2013 to March-2014, the project activity has exported 23547.92 MWh and 19000.53 MWh respectively. Thus, the actual PLFs are coming out 21.33% and 17.21% respectively.</p> <p>Thus, considering the same PLFs, equity IRR without REC revenue are mentioned below:</p> <table border="1" data-bbox="874 1447 1460 1697"> <thead> <tr> <th>Parameters</th> <th>Equity IRR without REC Revenue</th> </tr> </thead> <tbody> <tr> <td>Considering actual PLF for FY 2012-13 i.e. 21.33%</td> <td>7.77%</td> </tr> <tr> <td>Considering actual PLF for FY 2013-14 i.e. 17.21%</td> <td>1.29%</td> </tr> </tbody> </table> <p>Thus, from the above analysis, validation team found that equity IRR of the project is below the benchmark value considering the actual PLF achieved during April-2012 to March 2014.</p> <p>Further, validation team checked “India Wind Energy Outlook, 2012” published by Global Wind Energy Council, World Institute of Sustainable energy and Indian Wind Turbine Manufacturing Association (<a href="http://www.gwec.net/wp-">http://www.gwec.net/wp-</a></p>	Parameters	Equity IRR without REC Revenue	Considering actual PLF for FY 2012-13 i.e. 21.33%	7.77%	Considering actual PLF for FY 2013-14 i.e. 17.21%	1.29%
Parameters	Equity IRR without REC Revenue									
Considering actual PLF for FY 2012-13 i.e. 21.33%	7.77%									
Considering actual PLF for FY 2013-14 i.e. 17.21%	1.29%									



Parameter	Unit	Value	Source	Validation Assessment
				<p><a href="content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf">content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf</a>) to cross check the appropriateness of the PLF value considered in the project. In this regard, validation team found that PLF for Gujarat for the year 2009, 2010 and 2011 were 18.02%, 20.78% and 15.63% respectively as per India Wind Energy Outlook 2012 which are similar to the actual PLF values achieved during April-2012 to March 2014.</p> <p>Further the project participant has carried out sensitivity on <math>\pm 10\%</math> of PLF and IRR at +10% of tariff is less than the benchmark.</p>
Project Cost	Million INR	720	Offer letters /38-45/, /85/	<p>The project cost, has been taken from the offer letters dated 11/04/2011 /38-45//85/ of the project activity issued by the technology supplier M/s. Suzlon to the PP which is applicable at the time of decision making and hence it is in line with para 6 of EB 62 Annex 5.</p> <p>In line with para 127 (b) of VVS version 7.0, URS cross checked the project cost considered in IRR calculations with actual project cost. The actual project cost as per the purchase orders /25-27/, /29-32/,/34-35/ is INR 666 million. The project participant has also provided a CA certificate /79/ which also states project cost as INR 666 million. The actual project cost is 7.5 % lower than the cost considered at the time of decision making. The project participant has carried out sensitivity at -10% of the project cost which covers actual cost also. The IRR at -10% of the project cost is 8.60% which is less than the benchmark of 16.42%.</p>
Debt equity ratio	%	70:30	GERC tariff order /46/	<p>The debt equity ratio in the IRR calculations is taken as 70:30 as per GERC tariff order dated 30/01/2010 which is applicable at the time of decision making and hence it is in line with para 6 of EB 62 Annex 5.</p> <p>In line with para 127 (b) of VVS version 7.0, the validation team also checked actual debt equity ratio. The actual debt equity ratio is 71:29. The project participant calculated IRR at actual debt equity ratio which comes out 5.52% which is less than the benchmark. Hence the debt equity ratio is acceptable to the validation team.</p>
Interest Rate	%	9.50	Reserve Bank of India /69/	The interest rate of 9.50% has been considered as base interest rate of five major banks as



Parameter	Unit	Value	Source	Validation Assessment
				<p>published by Reserve bank of India, Government of India /69/. As the data is published by Reserve Bank of India which is Central Bank of host country (India) and it is India's monetary authority so its data can be considered as reliable and authentic. The interest rate is applicable at the time of decision making, hence it is in line with para 6 of EB 62 annex 5.</p> <p>Further the interest rate considered at the time of decision making is conservative as compared to actual interest rate. The actual interest rate is 13.5% as per loan sanction letter /86/. Considering the same equity IRR is coming out 2.92% which is less than the benchmark.</p>
Tariff	INR/kWh	3.56	GERC tariff order 2010/46/	<p>The tariff in the IRR calculations is taken as INR 3.56 per kWh which is considered from tariff order of Gujarat Electricity Regulatory Commission dated 30/01/2010 which is applicable at the time of decision making hence it is in line with para 6 of EB 62 Annex 5.</p> <p>Renewable Energy Certificate (REC) is scheme started by Government of India which gives comparative advantage to renewable energy generation technologies like wind, solar etc. For each MWh of energy generated using renewable technology, the generator gets a Renewable energy Certificate (REC) which can be traded in power exchange. REC is a E- policy as per EB 22 Annex 3 as it came into existence after 11 Nov 2001 and it gives comparative advantage to less emission intensive technologies. Further in the Information note on the implementation of E+/E- in the context of projects on the agenda of 53rd Meeting of the CDM EB ( EB 53, Annex 32), it is stated that the guidance on national and/or sectoral policies be applied in the determination and assessment of input values used in investment analysis. It is further stated in the note that in assessing the suitability of tariffs applied in the investment analysis of proposed CDM project activities which supply less carbon intensive electricity than the baseline, DOEs should assess whether the tariff has been affected by any national and/or sectoral policy and if so whether this policy/policies are E+ policies or E- policies. The project participant (as per EB 22 Annex 3) has considered a hypothetical scenario considering REC scheme not in existence. If</p>



Parameter	Unit	Value	Source	Validation Assessment
				<p>REC scheme was not in existence then PP would have signed PPA at preferential tariff i.e. INR 3.56/KWh. The validation team agrees that REC is a E- policy as it came into existence after 11 Nov 2001 and it gives comparative advantage in quantitative terms to renewable energy technologies and hypothetical scenario considering REC not in place may be considered. The coal and other fossil fuel based power generation does not get benefit of REC and thus REC in quantitative terms gives comparative advantage to less emission intensive technologies. Project participant has signed PPA at a non-preferential tariff of INR 2.64/KWh. However, in the investment analysis, PP has considered a tariff of INR 3.56/KWh which is a preferential tariff. The same is accepted by validation team as per EB 22, Annex 3, a hypothetical scenario considering REC scheme not in place has been considered. If PP would not have opted for REC then they would have signed PPA at preferential tariff of INR 3.56/KWh which is accepted by the validation team.</p> <p>Although PP has opted for REC scheme and as per this scheme, PP is signed at non-preferential tariff and PP has demonstrated additionality considering REC revenues as detailed in table below.</p> <p>Further, in line with para 127 (b) of VVS version 7.0, the validation team also checked registered project ref no 9924 in Gujarat and found that PP has also considered electricity tariff at the rate of INR 3.56 per kWh the wind projects which is the same value as considered by EEPL. Thus, validation team concludes that PP has appropriately considered the electricity tariff for IRR calculation without REC revenue.</p> <p>Further the project participant has carried out sensitivity on <math>\pm 10\%</math> of tariff and IRR at <math>+10\%</math> of tariff is less than the benchmark.</p>
Operation lifetime of WTGs	Years	20	Technical Specifications /59/	The expected technical life of WTGs is 20 years as per the technical specifications of the WTGs (Model: S-88 2100 kW) provided by the technology supplier M/s. Suzlon Energy Limited and accordingly the financial analysis of the project activity has been conducted for a period of 20 years, which is appropriate and acceptable.



Parameter	Unit	Value	Source	Validation Assessment
O & M cost	Million INR/ WTG	2.10	Offer letters /38-45/, /85/	<p>The O&amp;M cost is considered is INR 2.1 million per WTG and total O&amp;M cost for 6 WTGs works out to be INR 12.6 million. The O&amp;M cost has from the offer letters dated 11/04/2011 /38-45/, /85/ of the project activity issued by the technology supplier M/s. Suzlon to the PP which is applicable at the time of decision making and hence it is in line with para 6 of EB 62 Annex 5.</p> <p>In line with para 127 (b) of VVS version 7.0, validation team checked the O&amp;M cost against the actual O&amp;M agreement (Operation and management agreement (Services only) and maintenance with parts and/consumables agreement). The assessment team has verified the O &amp; M agreements for the WTGs /95/ and found that the actual cost of O&amp;M is INR 1.9 Million per WTG which is 9.52% lower than the values considered in the in the investment analysis. Thus, the actual cost of O &amp; M has already been covered in the sensitivity analysis of 10%. Further the project participant has carried out sensitivity on <math>\pm 10\%</math> of O&amp;M cost and IRR at -10 % of O&amp;M cost is less than the benchmark. Thus, validation team concludes that PP has appropriately considered the O&amp;M costs in this project activity.</p> <p>Thus, validation team concludes that PP has appropriately considered the O&amp;M costs in this project activity.</p>
Escalation on O & M Charges	%/ Annum	5	Offer letters /38-45/, /85/	<p>The escalation in O&amp;M cost is considered as 5% the offer letters dated 11/04/2011 /38-45/, /85/ of the project activity issued by the technology supplier M/s. Suzlon to the PP which is applicable at the time of decision making and hence it is in line with para 6 of EB 62 Annex 5.</p> <p>In line with para 127 (b) of VVS version 7.0, validation team checked the escalation of O&amp;M cost against the actual O&amp;M agreement (Operation and management agreement (Services only) and maintenance with parts and/consumables agreement). The assessment team has verified the escalation in O&amp;M cost as per actual O&amp;M agreements for the WTGs /95/ and found that the actual escalation of O &amp; M is 5% per annum. Further the project participant has carried out sensitivity on <math>\pm 10\%</math> of O&amp;M cost and IRR at -10 % of O&amp;M cost is less than the benchmark. Thus, validation team concludes</p>



Parameter	Unit	Value	Source	Validation Assessment
				that PP has appropriately considered the escalation of O&M costs in this project activity.
Tax depreciation	%	80	Income Tax Rules, /89/	The project participant has considered the tax depreciation as per the rates prescribed in New Appendix I of Income Tax Rules, 1962. The same has been checked by the validation team and found to be correct, hence accepted.
Book depreciation rate (SLM) on all assets	%	4.75	Company Act, 1956	The project participant has calculated the depreciation as per straight line method as per rates in Schedule XIV under the Companies Act, 1956. Validation team has cross checked the same and found to be correct and hence accepted.
Income Tax Rate	%	32.45	Income Tax Act, FY 11-12	The tax rates have been considered as per Income Tax Act for FY 2011- 12 As the tax rates are as per Income Tax Act for FY 2011-12, the same is accepted by the validation team.
Minimum Alternative Tax (MAT)	%	20.01	Income tax Act, FY 11-12	The MAT tax rates have been considered as per Income Tax Act for FY 2011-12 As the MAT tax rates are as per Income Tax Act for FY 2011-12, the same is accepted by the validation team.
Salvage Value	%	10%	CERC tariff order /78/	The salvage value is calculated as per the CERC order dated 26/04/2010 which mentions that the salvage value of the asset shall be considered as 10% and also it is applicable at the time of decision making. Hence the same is accepted by the validation team.

The assessment team confirms that all input values considered in the investment analysis are valid and were available at the time of investment decision making.

In the earlier submission to UNFCCC, PP has considered the capital cost of the project in year-1 in cash flow statement while calculating equity IRR. However, in the revised submission PP has considered the same in 0<sup>th</sup> Year in cash flow statement. A CAR 20 was raised on the same. PP has provided a declaration that capital cost was considered in year 0 only at decision making and inadvertently it was considered in year 1 in earlier submission. PP has also provided details of chapter on “Capital Budgeting I: Principles and Techniques” of Financial Management Book written by M.Y. Khan and P.K. Jain (pg no 10.7) and wherein it is mentioned that conventional cash flow consist of initial cash outlay in year 0 followed by series of cash inflows. The validation team has checked the chapter on “Capital Budgeting I: Principles and Techniques” of Financial Management Book written by M.Y. Khan and P.K. Jain (pg no 10.7) and observed that in conventional cash flow patterns, initial cash outflow is considered in year 0 only. Further PP has provided the payment receipts from WTG supplier dated 15/06/2011 and 29/04/2011 which are made in year 0 i.e. prior to commissioning of WTGs. Thus in actual practice also capital cost is disbursed in year 0. Thus the same was accepted by the validation team.

The provided input values are found to be consistent in the IRR calculation sheet and the PDD. Thus, the project activity conforms with the requirement of para 6 of EB 62, Annex 5. Loan tenure and moratorium have been taken from IREDA Financing Guidelines for wind energy projects (w.e.f. 25/05/2009) and same is checked by validation team and found to be correct.



The PP has submitted all versions of the excel spreadsheets used for the investment analysis. The sheets have been checked by the financial expert. All the assumptions, links and formulae used in the sheet are readable and all cells are viewable and unprotected. The analysis has been presented in a transparent manner in the excel spreadsheet and is reproducible. Thus, it satisfies the requirements of paragraph 8 of EB 62 Annex 5.

The lifetime of the project activity is 20 years. The financial analysis has been carried out in the excel spreadsheet considering the entire period of 20 years. Thus, the assessment period has been appropriately considered as per paragraph 3 of EB 62 Annex 5.

The fair value of the project activity assets at the end of the assessment period has been included as a cash inflow in the final year in the IRR calculation sheet in line with paragraph 4 of EB 62 Annex 5.

The depreciation value has been deducted for calculating the gross profit and has been added back to the net profit for the purpose of calculating the Equity IRR. Thus, it satisfies the requirement of paragraph 5 of EB 62 Annex 5.

In the calculation of equity IRR only the portion of investment cost which is financed by equity has been considered as the net cash outflow and this has been verified in the IRR excel sheet. Thus, it satisfies the requirements of paragraph 10 of EB 62 Annex 5.

The validation team further assessed the correctness of computations and documentation carried out by the project participants. The assessment involves checking the data input taken from offer letter/publicly available sources, adoption of correct accounting principle and arithmetical accuracy. The validation team has checked the documents and ensured that right input has been taken in the project cost and projections. The accounting principles adopted with respect to computation of depreciation and tax computation are found to be in order. The arithmetical accuracy is also found to be correct.

The equity IRR calculations and the benchmark analysis calculations were provided in excel spreadsheet and verified. The assumptions used in the calculations were verified by URS. The calculated equity IRR of the project activity without CDM revenue is 5.53% considering the preferential tariff of Rs. 3.56/ kWh which confirms that the proposed project activity in absence of CDM benefits as compared to benchmark of 16.42% is not financially attractive.

#### **(d) Sensitivity Analysis**

The variables, that constitute more than 20% of either total project costs or total project revenues has been subjected to variation of  $\pm 10\%$  and the results of this variation is presented in the PDD and can be reproduced in the associated IRR spreadsheet. Validation team confirms that this variation  $\pm 10\%$  is reasonable and appropriate in the context of the proposed project activity circumstances.

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

1. Power Generation
2. Project Cost
3. Tariff rate
4. O & M Cost

The results of the sensitivity analysis have been presented in the PDD. The results have also been presented in the excel spreadsheet /9/ in a reproducible manner. Thus, it satisfies the requirements of paragraph 20 of EB 62 Annex 5.

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



<b>Sensitivity Analysis – Post tax Equity IRR</b>		
<b>Parameter</b>	<b>-10%</b>	<b>10%</b>
Power Generation	2.50%	9.09%
O & M Cost	6.21%	4.84%
Project Cost	8.60%	3.39%
Tariff rate	2.50%	9.09%

Thus, validation team checked the variation of equity IRR with actual scenario of the project. The results for the same are listed below:

**a) Project Cost:**

The actual project cost as per the purchase orders /25-27/29-32/34-35/ is INR 666 million. The actual project cost is 7.5 % lower than the cost considered at the time of decision making. The project participant has carried out sensitivity at -10% of the project cost which covers actual cost also. The IRR at -10% of the project cost less than the benchmark. Validation team found that the equity IRR would cross the benchmark if the project cost decreased by -26.44%. As actual project cost has already been incurred, the cost cannot go any further down.

**b) O&M Cost:**

Validation team checked the O&M cost against the actual O&M agreement. The assessment team has verified the O & M agreements (Operation and management agreement (Services only) and maintenance with parts and/consumables agreement) for the WTGs /95/ and found that the actual cost of O&M is INR 1.9 Million per WTG which is 9.52% lower than the values considered in the investment analysis. Thus, the actual cost of O & M has already been covered in the sensitivity analysis of 10%. Further the project participant has carried out sensitivity on  $\pm 10\%$  of O&M cost and IRR at -10 % of O&M cost is less than the benchmark. Further, validation team found that the equity IRR would cross the benchmark if the O&M cost decreased by -154.90% which is not a realistic scenario.

**c) PLF:**

PLF considered in IRR calculations is 20.05% which is taken from PLF report prepared by third party Vijayant Consultants contracted by the PP. As per the PLF report, the PLF determined for the WTG is 20.05%. The PLF determination report provided by the third party were found to be appropriate and acceptable as same was available at the time of decision making and it is in line with the requirements of 3 (b) of Annex 11, EB 48.

The project activity has been commissioned and validation team checked the electricity generation data for this project activity from April-2012 to March 2014 and found that from April-2012 to March-2013 and from April-2013 to March-2014, the project activity has exported 23547.92 MWh and 19000.53 MWh respectively. Thus, the PLFs are coming out 21.33% and 17.21% respectively. Thus, considering the same PLFs, equity IRR without REC revenue are 7.77% (Considering actual PLF for FY 2012-13 i.e. 21.33%) and 1.29% (Considering actual PLF for FY 2013-14 i.e. 17.21%). Thus, from the above analysis, validation team found that equity IRR of the project is below the benchmark value considering the actual PLF achieved during April-2012 to March 2014.

Further, validation team checked “India Wind Energy Outlook, 2012” published by Global Wind Energy Council, World Institute of Sustainable energy and Indian Wind Turbine Manufacturing Association (<http://www.gwec.net/wp-content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf>) to cross check the appropriateness of the PLF value considered in the project. In this regard, validation team found that PLF for Gujarat for the year 2009, 2010 and 2011 were 18.02%, 20.78% and 15.63% respectively as per



India Wind Energy Outlook 2012 which are similar to the actual PLF values achieved during April-2012 to March 2014. Thus PLF considered at the time of decision making is appropriate and increase of 29.12% is not realistic.

**d) Tariff:**

The tariff in the IRR calculations is taken as INR 3.56 per kWh which is considered from tariff order of Gujarat Electricity Regulatory Commission dated 30/01/2010 which is applicable at the time of decision making. Considering  $\pm 10\%$  sensitivity analysis, validation team found that equity IRRs are less than the benchmark.

The validation team also checked registered project ref no 9924 and found that PP has also considered electricity tariff at the rate of INR 3.56 per kWh the wind projects which is the same value as considered by EEPL. Thus, validation team concludes that PP has appropriately considered the electricity tariff for IRR calculation and increase of 29.12% is not realistic.

**b) Assessment of Input Parameters for Equity IRR with REC revenues**

Parameter	Unit	Value	Source	Validation Assessment
Capacity of each WTG	MW	2.1	As per the offer letters /38-45/, /85/ of the project activity	The individual capacity of WTGs was verified from the offer letter /38-45/, /85/ which was applicable at the time of decision making and cross verified with the actual Purchase Order /25-27/,/29-32/,/34-35/. Further it was also confirmed from the commissioning certificates and the inspection WTGs during the site visit.
No. of WTGs	Nos.	6	Extract from Minutes of Board Meeting /65/	The number of WTGs was verified from the Extract from Minutes of Board Meeting and cross verified with the actual Purchase Order /25-27/,/29-32//34-35/. Further it was also confirmed from the commissioning certificates and the inspection WTGs during the site visit
Total capacity	MW	12.6	Extract from minutes of Board Meeting /65/	The total capacity of WTGs was verified from the Extract from Minutes of Board Meeting and cross verified with the actual Purchase Order /25-27/,/29-32//34-35/. Further it was also confirmed from the commissioning certificates and the inspection WTGs during the site visit
Plant Load Factor	%	20.05	Third party PLF report /48/	PLF considered in IRR is 20.05%. Project participant has provided PLF report prepared by third party M/s. Vijayant Consultants Management and Project Consultants. The PLF of the project activity i.e. 20.05% was verified with the PLF determination report provided by the third party. The PLF determination report provided by the third party were found to be appropriate and acceptable, thus the project activity conforms to the requirement of



Parameter	Unit	Value	Source	Validation Assessment						
				<p>paragraph 3 (b) of EB 48, Annex 11.</p> <p>Validation team checked the actual electricity generation data for the project from April-2012 to March 2014 and found that from April-2012 to March-2013 and from April-2013 to March-2014, the project activity has exported 23547.92 MWh and 19000.53 MWh respectively. Thus, the PLFs are coming out 21.33% and 17.21% respectively.</p> <p>Thus, considering the same PLFs, equity IRR with REC revenue are mentioned below:</p> <table border="1"> <thead> <tr> <th>Parameters</th> <th>Equity IRR with REC Revenue</th> </tr> </thead> <tbody> <tr> <td>Considering actual PLF for FY 2012-13 i.e. 21.33%</td> <td>14.59%</td> </tr> <tr> <td>Considering actual PLF for FY 2013-14 i.e. 17.21%</td> <td>5.53%</td> </tr> </tbody> </table> <p>Thus, from the above analysis, validation team found that equity IRR of the project is below the benchmark value considering the actual PLF achieved during April-2012 to March 2014.</p> <p>Further, validation team checked "India Wind Energy Outlook, 2012" published by Global Wind Energy Council, World Institute of Sustainable energy and Indian Wind Turbine Manufacturing Association (<a href="http://www.gwec.net/wp-content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf">http://www.gwec.net/wp-content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf</a>) to cross check the appropriateness of the PLF value considered in the project. In this regard, validation team found that PLF for Gujarat for the year 2009, 2010 and 2011 were 18.02%, 20.78% and 15.63% respectively as per India Wind Energy Outlook 2012 which are similar to the actual PLF values achieved during April-2012 to March 2014</p> <p>Further the project participant has carried out sensitivity on <math>\pm 10\%</math> of PLF and IRR at <math>+10\%</math> of tariff is less than the benchmark. Thus, validation team concludes that PP has appropriately considered the PLF for this project activity.</p>	Parameters	Equity IRR with REC Revenue	Considering actual PLF for FY 2012-13 i.e. 21.33%	14.59%	Considering actual PLF for FY 2013-14 i.e. 17.21%	5.53%
Parameters	Equity IRR with REC Revenue									
Considering actual PLF for FY 2012-13 i.e. 21.33%	14.59%									
Considering actual PLF for FY 2013-14 i.e. 17.21%	5.53%									
Project Cost	Million INR	720	Offer letters /38-45/, /85/	The project cost, has been taken from the offer letters dated 11/04/2011 /38-45/, /85/ of the project activity issued by the technology						



Parameter	Unit	Value	Source	Validation Assessment
				<p>supplier M/s. Suzlon to the PP which is applicable at the time of decision making and hence it is in line with para 6 of EB 62 Annex 5.</p> <p>In line with para 127 (b) of VVS version 7.0, URS cross checked the project cost considered in equity IRR calculations with actual project cost. The actual project cost as per the purchase orders /25-27/, /29-32/,/34-35/ is INR 666 million. The project participant has also provided a CA certificate /79/ which also states project cost as INR 666 million. The actual project cost is 7.5 % lower than the cost considered at the time of decision making. The project participant has carried out sensitivity at -10% of the project cost which covers actual cost also. The IRR at -10% of the project cost is 15.96% which is less than the benchmark of 16.42%.</p>
Debt equity ratio	%	70:30	GERC tariff order /46/	<p>The debt equity ratio in the IRR calculations is taken as 70:30 as per GERC tariff order dated 30/01/2010 which is applicable at the time of decision making and hence it is in line with para 6 of EB 62 Annex 5.</p> <p>In line with para 127 (b) of VVS version 7.0, the validation team also checked actual debt equity ratio. The actual debt equity ratio is 71:29. The project participant calculated IRR at actual debt equity ratio which comes out 11.87% which is less than the benchmark. Hence the debt equity ratio is acceptable to the validation team.</p>
Interest Rate	%	9.50	Reserve Bank of India /69/	<p>The interest rate of 9.50% has been considered as base interest rate of five major banks as published by Reserve bank of India, Government of India /69/. As the data is published by Reserve Bank of India which is Central Bank of host country (India) and it is India's monetary authority so its data can be considered as reliable and authentic. The interest rate is applicable at the time of decision making, hence it is in line with para 6 of EB 62 annex 5.</p> <p>Further the interest rate considered at the time of decision making is conservative as compared to actual interest rate. The actual interest rate is 13.5% as per loan sanction letter /86/. Considering the same equity IRR is coming out 7.76% which is less than the benchmark.</p>



Parameter	Unit	Value	Source	Validation Assessment
Tariff	INR/ kWh	4.325 (2.1 +2.225)	CERC order dated 01/06/2010 /99/ + average of trading price of REC at PXIL/100/	<p>The tariff in the IRR calculations is taken as sum of APPC tariff and REC price. Average Power Purchase Cost (APPC) tariff as per CERC order dated 01/06/2011 is INR 2.1/kWh which was applicable at the time of decision making. The project is under Renewable Energy Certificate (REC) scheme and REC trading price at the time of decision making was INR 2.225/kWh which is the prevailing trading price of REC at Power Exchange India Limited (PXIL) for March 2011 /100/. Thus the total tariff considered in IRR is INR 4.325/kWh. As the APPC tariff as per CERC order dated 01/06/2010 and REC trading prices from PXIL were applicable at the time of decision making hence it is in line with para 6 of EB 62 Annex 5.</p> <p>Validation team checked the Power Purchase Agreements of the project and found that PP has signed three PPA with Gujarat Vikas Urja Nigam Limited for 6.3 MW, 4.2 MW and 2.1 MW and all the projects are listed in Renewable Energy Certificate Registry of India. Same was also checked from the Renewable Energy Certificate Registry of India and found correct. Validation team checked the PPA and found that PP has signed the PPA with APPC price of INR 2.64 per kWh.</p> <p>In line with para 127(b) of VVS ver 7.0, the validation team checked the tariff as per PPA/53/. PPA is signed at non-preferential tariff for REC projects. Project participant has signed PPA /53/ at a non-preferential tariff (APPC tariff) of INR 2.64/kWh. The validation team also checked the price of actual REC traded by PP. The actual REC traded price by PP in various trading sessions from 26/12/2012 to 30/10/2013 at power exchange was INR 1.5/ kWh. and the price of REC is continuously at the floor price. Thus REC price considered at the time of decision making is conservative than the actual REC traded price of PP. The actual tariff (non preferential tariff as per PPA and actual REC price) works out to be INR 4.14 /KWh which is less than the tariff considered at the time of decision making. The equity IRR at actual tariff of INR 4.14 per KWh (APPC tariff of INR 2.64/kWh + actual REC traded price of INR 1.5/kWh) comes to be 9.78%, which is less than the benchmark.</p>



Parameter	Unit	Value	Source	Validation Assessment
				Further the project participant has carried out sensitivity on $\pm 10\%$ of tariff and IRR at $+10\%$ of tariff (including REC revenue) is 16.29% which is less than the benchmark.
Processing Fee & Accreditation Charges per account (State agency )	Million INR	0.035 (0.005+ 0.03)	CERC Order dated 21/09/2010 /92/	<p>The processing fee &amp; the accreditation charge for availing the REC benefits which are to be paid to the state agency (State Load Dispatch Centre) are INR 0.035 million as per the CERC Order dated 21/09/2010 /92/. These fee include Processing fee and Accreditation charges at the rate of INR 0.005 Million and INR 0.03 Million respectively. As, the above CERC order was published by Govt. of India which stands authentic and hence there is no need for further cross verifying the values in it.</p> <p>It has been further noted that the PP has three REC accounts with the Indian Energy Exchange (IEX). Thus, the total Processing Fee &amp; Accreditation Charges will be three times i.e. INR 0.105 Million. The same (the number of the REC accounts with SLDC) has been verified with the REC Trade reports issued by the IEX. Thus, validation team has checked the same and found correct.</p>
Annual Accreditation Charges per account (state agency )	Million INR/ annum	0.010	CERC Order dated 21/09/2010 /92/	<p>The annual accreditation charges for availing the REC benefits which are to be paid to the State Load Dispatch Centre (SLDC) are INR 0.010 million as per the CERC Order dated 21/09/2010 /92/. As, the above CERC order was published by Govt. of India which stands authentic and hence there is no need for further cross verifying the values in it.</p> <p>It has been further noted that the PP has three REC accounts with the Indian Energy Exchange (IEX). Thus, the total Annual Accreditation Charges will be three times i.e. INR 0.03 Million. The same (the number of the REC accounts with SLDC) has been verified with the REC Trade reports issued by the IEX. Thus, validation team has checked the same and found correct.</p>
Revalidation Charges/ extension of validity per	Million INR for every five	0.015	CERC Order dated 21/09/2010 /92/	The revalidation charges for availing the REC benefits which are to be paid at the end of every five years to the State Load Dispatch Centre (SLDC) are INR 0.015 million as per the CERC



Parameter	Unit	Value	Source	Validation Assessment
account (State agency)	year			<p>Order dated 21/09/2010 /92/. As, the above CERC order is a Govt. of India document, which stands authentic and hence there is no need for further cross verifying the values in it.</p> <p>It has been further noted that the PP has three REC accounts with the Indian Energy Exchange (IEX). Thus, the total Revalidation Charges - Accreditation will be three times i.e. INR 0.045 million. The same (the number of the REC accounts with SLDC) has been verified with the REC Trade reports issued by the IEX.</p>
Processing fee and Registration charges per account (Central agency)	Million INR	0.006 (0.001 + 0.005)	CERC Order dated 21/09/2010 /92/	<p>The processing fee &amp; the accreditation charge for availing the REC benefits which are to be paid to the Central agency (National Load Dispatch Centre) are INR 0.006 million as per the CERC Order dated 21/09/2010 /92/. As, the above CERC order is a Govt. of India document, which stands authentic and hence there is no need for further cross verifying the values in it.</p> <p>It has been further noted that the PP has three REC accounts with the Indian Energy Exchange (IEX). Thus, the total Processing Fee &amp; Accreditation Charges will be three times i.e. INR 0.018 million. The same (the number of the REC accounts with NLDC) has been verified with the REC Trade reports issued by the IEX.</p>
Annual Registration Charges per account (central agency)	Million INR/ annum	0.001	CERC Order dated 21/09/2010 /92/	<p>The annual registration charges for availing the REC benefits which are to be paid to the National Load Dispatch Centre (NLDC) are INR 0.001 million as per the CERC Order dated 21/09/2010 /92/. As, the above CERC order is a Govt. of India document, which stands authentic and hence there is no need for further cross verifying the values in it.</p> <p>It has been further noted that the PP has three REC accounts with the Indian Energy Exchange (IEX). Thus, the total Annual Accreditation Charges will be three times i.e. INR 0.003 million. The same (the number of the REC accounts with NLDC) has been verified with the REC Trade reports issued by the IEX.</p>
Revalidation Charges/extension of validity –	Million INR/ every	0.005	CERC Order dated 21/09/2010	<p>The revalidation charges (accreditation) charges for availing the REC benefits which are to be paid at the end of every five years to the</p>



Parameter	Unit	Value	Source	Validation Assessment
(central agency)	five years		/92/	<p>National Load Dispatch Centre are INR 0.005 million as per the CERC Order dated 21/09/2010 /92/. As, the above CERC order is a Govt. of India document, which stands authentic and hence there is no need for further cross verifying the values in it.</p> <p>It has been further noted that the PP has three REC accounts with the Indian Energy Exchange (IEX). Thus, the total Revalidation Charges - Accreditation will be three times i.e. INR 0.015 million. The same (the number of the REC accounts with SLDC) has been verified with the REC Trade reports issued by the IEX.</p>
REC Issuance Charges (central agency)	INR/ REC	10	CERC Order dated 21/09/2010 /92/	<p>The REC issuance charges for availing the REC benefits which are to be paid to the National Load Dispatch Centre (NLDC) are INR 10/ REC as per the CERC Order dated 21/09/2010 /92/. As, the above CERC order is a Govt. of India document, which stands authentic and hence there is no need for further cross verifying the values in it.</p>
Fees for Registration on Power Exchange	Million INR/ Annum	0.10	Proposal for REC Trading /93/	<p>The REC trading is done through the members of the Energy Exchange. The fees for registration on exchange have been taken from a proposal dated 12/04/2011 received from Manikaran Power Limited (a professional member of Energy Exchange) /93/. The fees for registration on exchange has been further cross verified with the memorandum of understanding /94/ signed between the PP and Manikaran Power Limited and found that the values are consistent. Thus, the same values applied in the investment analysis are appropriate and hence accepted.</p> <p>It has been further noted that the PP has three REC accounts with the Energy Exchange. Thus, the total Fees for Registration on Exchange will have to be paid for three accounts and total amount to be paid will be INR 0.30 million per annum.</p>
Power Exchange Charges	Rs./ REC	20	Proposal for REC Trading /93/	<p>The transaction fee per REC has been taken from the proposal dated 12/04/2011 received from Manikaran Power Limited (a professional member of Indian Energy Exchange) /93/. The transaction fee has been further cross verified</p>



Parameter	Unit	Value	Source	Validation Assessment
				with the memorandum of understanding /94/ signed between the PP and Manikaran Power Limited and found that the values are consistent. Thus, the same values applied in the investment analysis are appropriate and hence accepted.
Facilitation Charges (Brokerage) for trading on power exchange	%	5	Proposal for REC Trading /93/	The facilitation charges for trading of RECs on power exchange has been taken from the proposal dated 12/04/2011 received from Manikaran Power Limited (a professional member of Indian Energy Exchange) /93/. The Facilitation Charges (Brokerage) has been further cross verified with the memorandum of understanding /94/ signed between the PP and Manikaran Power Limited and found that the values are consistent. Thus, the same values applied in the investment analysis are appropriate and hence accepted.
Operation lifetime of WTGs	Years	20	Technical Specifications /59/	The expected technical life of WTGs is 20 years as per the technical specifications of the WTGs (Model: S-88 2100 kW) provided by the technology supplier M/s. Suzlon Energy Limited and accordingly the financial analysis of the project activity has been conducted for a period of 20 years, which is appropriate and acceptable.
O & M cost	Million INR/ WTG	2.10	Offer letters /38-45/, /85/	<p>The O&amp;M cost is considered is INR 2.1 million per WTG and total O&amp;M cost for 6 WTGs works out to be INR 12.6 million. The O&amp;M cost has from the offer letters dated 11/04/2011 /38-45/, /85/ of the project activity issued by the technology supplier M/s. Suzlon to the PP which is applicable at the time of decision making and hence it is in line with para 6 of EB 62 Annex 5.</p> <p>In line with para 127 (b) of VVS version 7.0, validation team checked the O&amp;M cost against the actual O&amp;M agreement (Operation and management agreement (Services only) and maintenance with parts and/consumables agreement). The assessment team has verified the O &amp; M agreements for the WTGs /95/ and found that the actual cost of O&amp;M is INR 1.9 Million per WTG which is 9.52% lower than the values considered in the in the investment analysis. Thus, the actual cost of O &amp; M has already been covered in the sensitivity analysis of 10%. Further the project participant has</p>



Parameter	Unit	Value	Source	Validation Assessment
				<p>carried out sensitivity on <math>\pm 10\%</math> of O&amp;M cost and IRR at <math>-10\%</math> of O&amp;M cost is less than the benchmark. Thus, validation team concludes that PP has appropriately considered the O&amp;M costs in this project activity.</p> <p>Thus, validation team concludes that PP has appropriately considered the O&amp;M costs in this project activity.</p>
Escalation on O & M Charges	%/ Annum	5	Offer letters /38-45/, /85/	<p>The escalation in O&amp;M cost is considered as 5% the offer letters dated 11/04/2011 /38-45/, /85/ of the project activity issued by the technology supplier M/s. Suzlon to the PP which is applicable at the time of decision making and hence it is in line with para 6 of EB 62 Annex 5.</p> <p>In line with para 127 (b) of VVS version 7.0, validation team checked the escalation of O&amp;M cost against the actual O&amp;M agreement (Operation and management agreement (Services only) and maintenance with parts and/consumables agreement). The assessment team has verified the escalation in O&amp;M cost from actual O&amp;M agreements for the WTGs and found that the actual escalation of O &amp; M is 5% per annum. Further the project participant has carried out sensitivity on <math>\pm 10\%</math> of O&amp;M cost and IRR at <math>-10\%</math> of O&amp;M cost is less than the benchmark. Thus, validation team concludes that PP has appropriately considered the escalation of O&amp;M costs in this project activity.</p>
Tax depreciation	%	80	Income Tax Rules, /89/	The project participant has considered the tax depreciation as per the rates prescribed in New Appendix I of Income Tax Rules, 1962. The same has been checked by the validation team and found to be correct, hence accepted.
Book depreciation rate (SLM) on all assets	%	4.75	Company Act, 1956	The project participant has calculated the depreciation as per straight line method as per rates in Schedule XIV under the Companies Act, 1956. Validation team has cross checked the same and found to be correct and hence accepted.
Income Tax Rate	%	32.45	Income Tax Act, FY 11-12	The tax rates have been considered as per Income Tax Act for FY 2011- 12 As the tax rates are as per Income Tax Act for FY 2011-12, the same is accepted by the validation team.



Parameter	Unit	Value	Source	Validation Assessment
Minimum Alternative Tax (MAT)	%	20.01	Income tax Act, FY 11-12	The MAT tax rates have been considered as per Income Tax Act for FY 2011-12 As the MAT tax rates are as per Income Tax Act for FY 2011-12, the same is accepted by the validation team.
Salvage Value	%	10%	CERC tariff order /78/	The salvage value is calculated as per the CERC order dated 26/04/2010 which mentions that the salvage value of the asset shall be considered as 10% and also it is applicable at the time of decision making. Hence the same is accepted by the validation team.
Service tax	%	10.3	Directorate of service tax	The validation team has verified the service tax with the Directorate of Service Tax, Department of Revenue, Ministry of Finance and found that project participant has computed service tax of 10.3% correctly and the same is acceptable to the validation team. As the rate of service tax is considered from the Directorate of service tax, which is official source of Govt. of India and it is authentic source and hence accepted.

The assessment team confirms that all input values considered in the investment analysis are valid and were available at the time of investment decision making.

In the earlier submission to UNFCCC, PP has considered the capital cost of the project in year-1 in cash flow statement while calculating equity IRR. However, in the revised submission PP has considered the same in 0<sup>th</sup> Year in cash flow statement. A CAR 20 was raised on the same. PP has provided a declaration that capital cost was considered in year 0 only at decision making and inadvertently it was considered in year 1 in earlier submission. PP has also provided details of chapter on “Capital Budgeting I: Principles and Techniques” of Financial Management Book written by M.Y. Khan and P.K. Jain (pg no 10.7) and wherein it is mentioned that conventional cash flow consist of initial cash outlay in year 0 followed by series of cash inflows. The validation team has checked the chapter on “Capital Budgeting I: Principles and Techniques” of Financial Management Book written by M.Y. Khan and P.K. Jain (pg no 10.7) and observed that in conventional cash flow patterns, initial cash outflow is considered in year 0 only. Further PP has provided the payment receipts from WTG supplier dated 15/06/2011 and 29/04/2011 which are made in year 0 i.e. prior to commissioning of WTGs. Thus in actual practice also capital cost is disbursed in year 0. Thus the same was accepted by the validation team.

As compared to equity IRR without REC benefits, PP has considered additional cost associated with REC. These additional cost are as specified in CERC order dated 21/09/2010 to be paid to state and central agency and there are cost for registering and trading on power exchange. The assessment of all these cost are provided in table above.

The provided input values are found to be consistent in the IRR calculation sheet and the PDD. Thus, the project activity conforms with the requirement of para 6 of EB 62, Annex 5. Loan tenure and moratorium have been taken from IREDA Financing Guidelines for wind energy projects (w.e.f. 25/05/2009) and same is checked by validation team and found to be correct.

The PP has submitted all versions of the excel spreadsheets used for the investment analysis. The sheets have been checked by the financial expert. All the assumptions, links and formulae used in the sheet are



readable and all cells are viewable and unprotected. The analysis has been presented in a transparent manner in the excel spreadsheet and is reproducible. Thus, it satisfies the requirements of paragraph 8 of EB 62 Annex 5.

The lifetime of the project activity is 20 years. The financial analysis has been carried out in the excel spreadsheet considering the entire period of 20 years. Thus, the assessment period has been appropriately considered as per paragraph 3 of EB 62 Annex 5. The fair value of the project activity assets at the end of the assessment period has been included as a cash inflow in the final year in the IRR calculation sheet in line with paragraph 4 of EB 62 Annex 5.

The depreciation value has been deducted for calculating the gross profit and has been added back to the net profit for the purpose of calculating the Equity IRR. Thus, it satisfies the requirement of paragraph 5 of EB 62. Annex 5.

In the calculation of equity IRR only the portion of investment cost which is financed by equity has been considered as the net cash outflow and this has been verified in the IRR excel sheet. Thus, it satisfies the requirements of paragraph 10 of EB 62 Annex 5.

The validation team further assessed the correctness of computations and documentation carried out by the project participants. The assessment involves checking the data input taken from offer letter/publically available sources, adoption of correct accounting principle and arithmetical accuracy. The validation team has checked the documents and ensured that right input has been taken in the project cost and projections. The accounting principles adopted with respect to computation of depreciation and tax computation are found to be in order. The arithmetical accuracy is also found to be correct.

The equity IRR calculations and the benchmark analysis calculations were provided in excel spreadsheet and verified. The assumptions used in the calculations were verified by URS. The calculated equity IRR of the project activity without CDM revenue is 11.74% by considering the electricity tariff including REC revenue of Rs. 4.325/ kWh which confirms that the proposed project activity in absence of CDM benefits as compared to benchmark of 16.42% is not financially attractive.

#### **(d) Sensitivity Analysis**

The variables, that constitute more than 20% of either total project costs or total project revenues has been subjected to variation of  $\pm 10\%$  and the results of this variation is presented in the PDD and can be reproduced in the associated IRR spreadsheet. Validation team confirms that this variation  $\pm 10\%$  is reasonable and appropriate in the context of the proposed project activity circumstances.

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

5. Power Generation
6. Project Cost
7. Tariff rate
8. O & M Cost

The results of the sensitivity analysis have been presented in the PDD. The results have also been presented in the excel spreadsheet /9/ in a reproducible manner. Thus, it satisfies the requirements of paragraph 20 of EB 62 Annex 5.

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

<b>Sensitivity Analysis – Post Tax Equity IRR</b>		
<b>Parameter</b>	<b>-10%</b>	<b>10%</b>
Power Generation	7.30%	16.26%
O & M Cost	12.53%	10.91%
Project Cost	15.96%	8.43%
Tariff rate	7.27%	16.29%



Thus, validation team checked the variation of equity IRR with actual scenario of the project. The results for the same are listed below:

**a) Project Cost:**

The actual project cost as per the purchase orders /25-27/29-32/34-35/ is INR 666 million. The actual project cost is 7.5 % lower than the cost considered at the time of decision making. The project participant has carried out sensitivity at -10% of the project cost which covers actual cost also. The IRR at -10% of the project cost less than the benchmark. Validation team found that the equity IRR would cross the benchmark if the project cost decreased by -11.06%. As actual project cost has already been incurred, the cost cannot go any further down.

**b) O&M Cost:**

Validation team checked the O&M cost against the actual O&M agreement (Operation and management agreement (Services only) and maintenance with parts and/consumables agreement). The assessment team has verified the O & M agreements for the WTGs /95/ and found that the actual cost of O&M is INR 1.9 Million per WTG which is 9.52% lower than the values considered in the in the investment analysis. Thus, the actual cost of O & M has already been covered in the sensitivity analysis of 10%. Further the project participant has carried out sensitivity on  $\pm 10\%$  of O&M cost and IRR at -10 % of O&M cost is less than the benchmark. Thus the O&M cost considered at the time of decision making is appropriate and decrease of -64.50% is not realistic.

**c) PLF:**

PLF considered in IRR calculations is 20.05% which is taken from PLF report prepared by third party Vijayant Consultants contracted by the PP. As per the PLF report, the PLF determined for the WTG is 20.05%. The PLF determination report provided by the third party were found to be appropriate and acceptable as same was available at the time of decision making and it is in line with the requirements of 3 (b) of Annex 11, EB 48.

The project activity has been commissioned and validation team checked the electricity generation data for this project activity form April-2012 to March 2014 and found that from April-2012 to March-2013 and from April-2013 to March-2014, the project activity has exported 23547.92 MWh and 19000.53 MWh respectively. Thus, the PLFs are coming out 21.33% and 17.21% respectively. Thus, considering the same PLFs, equity IRR without REC revenue are 14.59% (Considering actual PLF for FY 2012-13 i.e. 21.33%) and 5.63% (Considering actual PLF for FY 2013-14 i.e. 17.21%). Thus, from the above analysis, validation team found that equity IRR of the project is below the benchmark value considering the actual PLF achieved during April-2012 to March 2014.

Further, validation team checked "India Wind Energy Outlook, 2012" published by Global Wind Energy Council, World Institute of Sustainable energy and Indian Wind Turbine Manufacturing Association (<http://www.gwec.net/wp-content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf>) to cross check the appropriateness of the PLF value considered in the project. In this regard, validation team found that PLF for Gujarat for the year 2009, 2010 and 2011 were 18.02%, 20.78% and 15.63% respectively as per India Wind Energy Outlook 2012 which are similar to the actual PLF values achieved during April-2012 to March 2014. Thus PLF considered at the time of decision making is appropriate and increase of 10.39% is not realistic.

**d) Electricity Tariff:**

Renewable Energy Certificate (REC) Mechanism is a policy mechanism prescribed in National Action Plan for Climate Change (NAPCC) which were announced by the Hon. Prime Minister of India.

At the time of decision making, the PP envisaged to develop the project activity under the REC scheme. Since, the REC scheme gives comparative advantages to less emission intensive technologies as compared with other technologies generating electricity using fossil fuels, this REC scheme is classified as an E- policy in accordance with paragraph 6 (b) of EB 22 Annex 3. Therefore, in accordance with paragraph 7 (b), of EB 22 Annex 3, the REC scheme need not be taken into account in developing a baseline scenario.

'Information note on the implementation of E+/E- in the context of projects on the agenda of the fifty-third meeting of the CDM Executive Board, version 01.1 (EB 53 Annex 32), states, that this guidance on national and sectoral policies be applied in the determination and assessment of input values used in the investment analysis.

PP had considered tariff in investment analysis as INR 3.56/KWh which is preferential tariff as per Gujarat Electricity Regulatory Commission dated 30/01/2010 which is applicable at the time of decision making.

Subsequently PP also demonstrated in PDD that IRR considering REC benefits in tariff is also less than the benchmark.

The REC scheme only affects the tariff rate, which consists of two components (i) Average Pooled cost of power purchase rate and (ii) cost of REC.

**(i) Average Pooled cost of power purchase rate:**

The pooled cost of power purchase is considered from CERC order dated 01/06/2010 is INR 2.10/KWh which is most recent order available at the time of investment decision making.

**(ii) Price of REC:**

The state distribution companies can implement renewable energy projects or buy Renewable Energy Certificates, which are granted to renewable energy projects developed under REC. The REC component can be sold on approved power exchanges and is driven by the market. For each MWh of energy generated using renewable technology, the generator gets a Renewable Energy Certificate (REC). REC price was considered on the basis of data of the market clearing price of power exchange available at the time of decision making which is INR 2.225/KWh and the same was checked by the validation team and found to be correct.

Thus the total tariff considered in IRR calculations works out to be INR 4.325 /KWh ( = INR 2.10/KWh (APPC tariff) + INR 2.225/KWh (REC price applicable at the time of decision making) which is in line with para 6 of EB 62 Annex 5.

In line with para 127 (b) of VVS ver 7.0, the validation team also checked actual REC traded price and actual APPC tariff. Project participant has signed PPA at APPC tariff of INR 2.64/KWh. The actual REC traded price by PP in various trading sessions from 26/12/2012 to 30/10/2013 at power exchange was INR 1.5/ kWh. The actual tariff (non preferential tariff as per PPA and actual REC price) works out to be INR 4.14 /KWh which is less than the tariff considered at the time of decision making.

REC market in itself is associated with a high risk of uncertainty due to the following reasons :

a) REC scheme is a newly introduced market mechanism and it involves lot of uncertainty. It is unlike the fixed preferential tariff rate scheme where the tariff is fixed for a 20 year period. There is no strict penalty levied on the distribution companies for non compliance, hence, there is a high risk for developing the project under REC scheme.

b) The RECs were valid for 365 days but market data showed that RECs were not being sold. Subsequently CERC extended the validity of REC to 730 days vide its order dated 11/02/2013. The CERC



order was reviewed by validation team and the same was found to be correct. REC validity was extended due to sluggish REC demand and lapsing of Renewable Energy Certificates (RECs) apparently due to reluctance/apathy of the distribution licensees to purchase the RECs to meet their Renewable Purchase Obligations(RPO).

c) The forbearance price and floor price was specified as INR 3.9/kWh and INR 1.5/kWh by CERC vide order dated 01/06/2010. These prices were fixed for a control period upto FY 2012. Subsequently CERC revised the forebearance price for non-solar REC to INR 3.3/KWh and floor price was kept same at INR 1.5/KWh vide its order dated 23/08/2011. The revised forebearance price is applicable till 2016-17 and beyond which there is uncertainty regarding the pricing of RECs.

d) Trading history on the power exchange indicates that the percentage of RECs actually being cleared fluctuated widely. PP has provided the actual REC trading details for various trading sessions from 26/12/2012 to 30/10/2013. The validation team observed that REC trading has taken place at minimum floor price of INR 1.5/KWh from 26/12/2012 to 30/10/2013 and on an average only 7% of RECs put up for sale were actually sold by PP. Hence, there could be no assurance on what proportion of the RECs put up for sale by a Project participant would actually get sold on the exchange. This increases the risk for renewable power producers who would depend on REC based tariff as the revenue for their projects. Hence, generating RECs never guarantees the sale of all of them. Also they have an expiration period if not sold. Thus considering all the above mentioned uncertainties, it is very clear that forbearance price cannot be applied as it will be completely unrealistic scenario. Moreover, there is no certainty of REC scheme after 2017 but the project participant has applied tariff from REC Mechanism for 20 years which in itself is conservative. The validation team has also checked latest REC trading data at IEX from August to October 2014 /100/ and observed that REC clearing price from August to October 2014 was INR 1.5/KWh. During August only 0.4% of the non-solar REC were sold and during September only 0.2% of the non solar REC were sold. Also during October 2014 only 0.8% of the REC were sold at the exchange.

The PP is not able to sell all the RECs even at a price of INR 1.50/kWh which is the minimum floor price. Thus the REC price of INR 2.225/kWh considered by the PP at the time of investment decision making is reasonable.

Hence, the validation team is of the opinion that even if the REC is considered at a minimum price of INR 1.50/kWh, the PP is still at risk as not all RECs are being sold at the minimum price which can be confirmed from the actual traded data. In addition, the 730 days limited validity of REC puts up an additional risk as the RECs would expire if not sold within 730 days from issue. Thus considering forbearance price is unrealistic and REC price considered in the investment analysis is reasonable and hence accepted and increase of 10.30% in tariff is not realistic.

As shown above, the PP has carried out a fairly exhaustive sensitivity analysis to prove that the IRRs do not exceed the benchmark under any circumstances. Equity IRR considering REC revenues is also less than the benchmark. The project continues to remain additional even with reduced project costs and increased tariffs. In conclusion, the result of the IRR investment and sensitivity analysis have shown that without the income from the CERs sale, the project activity is not financially viable. As the CER prices are market driven, the extent to which they reduce viability gap also varies. As the IRR without CDM revenues for project activity are less than the benchmark, the project activity without CDM revenues is not financially viable.

### 3.6.4 Barrier Analysis

Barrier analysis has not been carried out for the demonstration of the additionality of this project activity. Project participant has demonstrated additionality as per "Guidelines on the demonstration of additionality of small-scale project activities, EB 68, Annex 27". as described in sections above.



### 3.6.5 Common Practice Analysis

This is small scale project activity, so the common practice analysis is not required to be conducted for this project activity. Project participant has demonstrated additionality as per “Guidelines on the demonstration of additionality of small-scale project activities, EB 68, Annex 27”. as described in sections above.

### 3.6.6 Conclusion

URS is able to confirm that all data, rationales, assumptions, justifications and documentation provided by the project participants to support demonstration of additionality are credible and reliable.

By assessing the evidences presented and cross-checking the information contained in, URS considers the reasoning for the proposed project additionality demonstration is credible and reasonable i.e. the proposed project has the ability to reduce anthropogenic emissions of greenhouse gases by sources below those that would have occurred in the absence of the registered CDM project activity. Thus URS confirms that the above discussion and analysis establishes that the project activity without CDM benefits is financially not viable.

### 3.7 Monitoring Plan

The project activity uses the simplified baseline and monitoring methodology AMS I.D version 17. The applicability conditions of the methodology have been discussed above.

The monitoring plan is in accordance with the monitoring methodology. The monitoring plan will give opportunity for real measurement of achieved emission reductions. URS has checked all the parameters presented in the monitoring plan against the requirements of the methodology and no deviations relevant to the project activity have been found in the monitoring plan.

URS confirms that the monitoring arrangements described in the monitoring plan are feasible within the project design, and the means of implementation of the monitoring plan are sufficient to ensure the emission reductions resulting from the proposed CDM project activity can be reported ex post and verified.

#### a) Parameters determined ex-ante

Baseline emission factor for NEWNE regional grid is established ex-ante based on the approved methodology AMS I.D version 17.0, and tools to calculate emission factor for an electricity system, version 4.0.0 /16/.

	Data/parameter	Unit	Value applied	Assessment
1	EF <sub>grid, OM,y</sub>	tCO <sub>2</sub> /MWh	0.9842	Project participant has used the official published data on operating and build margin emission factors. The version of the data used is latest version as available on the date of webhosting of the PDD for global stakeholder comments (viz start of validation). This data is published by Central Electricity Authority, CEA (version 7.0) who is the sole authority for the publication of such data in India. CEA has published a database of carbon dioxide emission factors for the power sector in India based on detailed authenticated information obtained from CEA on all operating power
2	EF <sub>grid, BM,y</sub>	tCO <sub>2</sub> /MWh	0.8588	
3	EF <sub>grid, CM,y</sub>	tCO <sub>2</sub> /MWh	0.9528	



				<p>stations in the country. Project participant has applied weight factors for the OM and BM [75% &amp; 25% respectively] as specified in the tool to arrive at the emission factor for the combined margin. Detailed justifications are provided in section 3.8 below.</p> <p>Validation team has checked the emission factor calculations from CEA database version 7.0 and the values of <math>EF_{grid, CM, y}</math>, <math>EF_{grid, OM, y}</math> and <math>EF_{grid, BM, y}</math> are found to be correct. The validation team agrees to this emission factor since it is based on the official background data published by CEA .</p>
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URS confirms that the database is an official publication of Ministry of Power, Government of India. The calculation and assumptions were verified by the validation team and found to be correct and appropriate.

**b) Parameters monitored ex-post**

The monitoring of the electrical energy exported to the NEWNE grid will be conducted in accordance with para 24 of AMS I.D. Version 17. The table under para 24 of AMS I.D. requires to monitor the ‘Quantity of net electricity supplied to the grid in year y’. The monitoring plan under para 24 of AMS I.D., further stipulates that continuous monitoring, hourly measurement and at least monthly recording is required and the measurement results shall be cross-checked with records of the sold electricity. In line with this, the described monitoring procedure for the net electricity export to the grid has been described in section B.7.1 and B.7.2 of the PDD:

The ex-post parameters that are mentioned in the methodology are included in the PDD/01/ and are provided in compliance with the methodology, and they will be monitored during the crediting period:

	Parameter	Description/Assessment
1	$EG_y$	<p>Net electricity supplied to the NEWNE grid by Project activity in year y in MWh.</p> <p>The net electricity exported to the grid by project activity WTG will be calculated by SLDC (State Load Dispatch Centre) on the basis of ABT (availability based tariff) meter reading at substation (includes generation from project and non project WTGs) and meter readings at various transformer yard meters (near WTGs).</p> <p>The net electricity supplied by the project activity is taken directly from the share certificate issued by SLDC on monthly basis and will be directly used to estimate the emission reduction. The net electricity supplied to grid will also be cross checked with the invoice.</p>
2	$EG_{SS, Export}$	<p>Electricity export to the grid by the Project Activity and the other PPs connected to the same sub-station.</p> <p>The reading of meter at sub-station is taken by state utility along with representative of Suzlon every month and JMR is issued. The State Utility will use this value for the apportionment calculation however, the PP does not have any role in the calculation. The JMR shows electricity exported by all WTGs connected to the sub-station which includes WTG of project activity and WTGs of other owners. <math>EG_{SS, Export}</math> is taken from JMR. It is continuously monitored, hourly</p>



	Parameter	Description/Assessment
		measured and recorded once a month.
3	EG <sub>SS, Import</sub>	Electricity Import from the grid by the Project Activity and the other PPs connected to the same sub-station. The reading of meter at sub-station is taken by state utility along with representative of Suzlon every month and JMR is issued. The State Utility will use this value for the apportionment calculation however, the PP does not have any role in the calculation. The JMR shows electricity imported from grid by all WTGs connected to the sub-station which includes WTGs of project activity and WTGs of other owners. EG <sub>SS, Import</sub> is taken from JMR. It is continuously monitored, hourly measured and recorded once a month
4	EG <sub>yard,y</sub>	The electricity generated by wind mills of project activity, recorded by the yard meters near the wind mill. The reading of yard meter is taken by representative of Suzlon every month and is used for apportioning purpose. The apportioning of the electricity exported by the project activity is being carried out based on reading of ABT meters at substation and yard meter at each WTG. Apportioning is not under the control of PP and apportioning data is not shared with PP. This is the generation data of the WTG pertaining to the PP . It is continuously monitored, hourly measured and recorded once a month

The ex-post monitoring requires net quantity of electricity (EG<sub>y</sub>) supplied to the grid by the project activity to be monitored. WTG of project activity are connected to yard meter. Meter reading of yard meter is taken by Suzlon every month. The reading of meter at sub-station is taken by state utility along with representative of Suzlon every month and JMR is issued. The JMR shows electricity exported to grid and electricity imported from grid by all WTGs connected to the sub-station which includes WTG of project activity and WTGs of other owners. EG<sub>SS,Export</sub> and EG<sub>SS,Import</sub> are taken from JMR. There is an ABT meter and one main meter and check meter at sub-station which is further connected to state utility sub-station.

Based on meter reading at yard meter and meter reading at sub-station, apportioning is carried out by state utility and a certificate of share of electricity is issued by SLDC. This certificate of share of electricity provides net electricity supplied by WTG of project activity and this forms basis of emission reduction calculations. The apportioning is not under the control of PP and nor the data of apportioning is shared with PP. The PP has provided the equations used for apportioning net electricity supplied in PDD. The equations were checked by the validation team and found to be correct. The data of EG<sub>SS,Export</sub>, EG<sub>SS,Import</sub> and EG<sub>yard,y</sub> which are used in apportioning are available with PP and these parameters have been included in the list of monitoring parameters. Data of other parameters used in apportioning is not available with PP and as a result they are not included in list of monitoring parameters. In order to calculate electricity exported by WTGs of project activity, EG<sub>SS,Export</sub> is multiplied by a ratio of yard meter readings of WTG of project activity and yard meter readings of all WTGs connected to sub-station. In order to calculate electricity imported by WTGs of project activity, EG<sub>SS,Import</sub> is multiplied by a ratio of yard meter readings of WTG of project activity and yard meter readings of all WTGs connected to sub-station. Thus net electricity exported by WTG of project activity is then calculated by subtracting electricity imported by WTGs of project activity from electricity exported by WTG of project activity as explained in PDD/01/ and same is found to be correct.

Continuous monitoring, hourly measurement and monthly recording will be carried out at yard metering point and meters at sub-station as per the requirement of the applied methodology AMS I.D version 17.0. Validation team had confirmed the same during site visit.



As per the applied methodology AMS I.D version 17.0, quantity of net electricity supplied to the grid in year  $EG_y$  is required to be monitored, which is then directly used for emission reduction calculation. Furthermore, as cross checked during site visit, in case of the state of Gujarat, India  $EG_y$  is the only parameter used for the emission reduction calculation and it is directly sourced from the Share certificate. This share certificate is a document provided by SLDC. The net electricity supplied to grid will be cross-checked with the sales invoice. The same approach is in consistence with the monitoring requirements of applied methodology AMS I.D version 17.0.

### **Management system and quality assurance**

The monitored data will be archived for two years beyond crediting period of last issuance whichever is later. The ABT meter, main and check meters are of accuracy class 0.2s. The yard meters are also of accuracy class 0.2s. The ABT, main and check meter at sub-station and yard meters will be calibrated once in three years. All the meters are under the custody of GETCO and GETCO will be responsible for the calibration of the energy meters as per the industry standards. PP has proposed calibration of meter once in three year. Further, the national standard available to the project participant i.e. CEA notification 2006 allows the calibration to be done once in a five year for the interface meters ([http://www.cea.nic.in/reports/regulation/meter\\_reg.pdf](http://www.cea.nic.in/reports/regulation/meter_reg.pdf)). Thus applying a conservative approach PP will conduct calibration once in a three year which is acceptable to the assessment team as per the requirement of para 64 (f) of the project standard. The representatives of the O&M team of Suzlon were interviewed to verify the correctness of the procedure mentioned in the PDD. The validation team confirms that the description in the PDD correctly represents the metering system available at the project activity site and that the defined monitoring plan can be implemented in the context of the project activity. The operational and management structure along with detailed responsibilities are mentioned in PDD/01/. The responsibilities and authorities of project management, data handling and recording and measurement methods procedure have been systematically described and the same was verified during the site visit.

URS confirms that the monitoring plan mentioned in the latest PDD/01/ is in accordance with the requirements mentioned in the monitoring methodology and the local regulatory requirements of the state utility. The monitoring arrangements described in the monitoring plan are feasible within the project design. URS is of the opinion that the monitoring plan will give opportunity for real measurement of achieved emissions reductions. Suzlon the O&M service provider has an experience in monitoring and managing the O&M of numerous other wind farm CDM projects. The validation team therefore is of the opinion that the project participant through the O&M agency is capable of implementing the monitoring plan in the context of the project activity.

### **3.8 Estimation of GHG Emissions**

The project activity uses the simplified baseline and monitoring methodology AMS I.D version 17. The applicability conditions of the methodology have been discussed in section 3.5.1 above. The PP has correctly identified the baseline as paragraph 11 of the methodology. This has been described in section 3.4.3 above.

The calculation and formulae as addressed in the approved baseline and monitoring methodology AMS-I.D, version 17, dated 03/06/2011 have been applied.

$$ER_y = BE_y - PE_y - LE_y$$

The emission reductions  $ER_y$  by the project activity during the crediting period is the difference between the baseline emissions  $BE_y$ , project emissions  $PE_y$  and emissions due to leakage  $LE_y$ , as following.

#### **Baseline emissions –**

The baseline emissions for the project activity have been calculated as the product of the net electricity supplied to NEWNE grid by the project activity and combined margin emission factor of the NEWNE grid.



The combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM), has calculated to be 0.9528 tCO<sub>2</sub>/MWh, which has been sourced from the Central Electricity Authority (CEA) CO<sub>2</sub> Baseline database version 7.0, in line with the “Tool to calculate the emission factor for an electricity system”.

PLF considered in IRR is 20.05% as per PLF report prepared by third party M/s. Vijayant Consultants. The validation team agrees with the PLF as it is in line with Annex 11 of EB 48.

**Consideration about  $EF_{grid,OM,y}$ :**

The simple OM emission factor have been calculated using the Simple OM method as the low-cost/must run resources constitute less than 50% (for year , 2008-09, 2009-10 and 2010-11). The ex-ante vintage data has been used for the OM calculation of the project. The PDD was web-hosted on 07/02/2012 and the latest version of CEA database available was version 7.  $EF_{grid,OM,y}$  is calculated as the most recent three years full generation weighted average of the emission factors, consequently the Operating Margin Emission Factor is determined to be 0.9842 tCO<sub>2</sub>/MWh. The  $EF_{grid,OM,y}$  is calculated fixed ex-ante.

**Consideration about  $EF_{grid,BM,y}$ :**

BM emission factor is calculated ex- ante based on the most recent information available at the time of submission of PP and is fixed for the entire crediting period i.e. year 2010-2011. Consequently the Build Margin emission factor is determined to be 0.8588 tCO<sub>2</sub>/MWh.

The baseline emission factor is calculated as the average of the operating margin emission factor and the build margin emission factor where the weights  $W_{OM}$  and  $W_{BM}$ , by default, are 75%  $W_{OM}$  and 25%  $W_{BM}$  . The combined margin emission factor for NEWNE India has been calculated to be 0.9528 tCO<sub>2</sub>/MWh, which is fixed ex-ante for the entire crediting period.

The PP has used official data for OM and BM published by Central Electricity Authority (CEA) CO<sub>2</sub> Baseline database version 7. CEA, (which is an official source of Ministry of Power, Government of India). The validation team accepted the same as this is the latest version of the database available to the project participant at the time of submission of PDD for validation dated 28/09/2011.

**Project emissions:**

As per the methodology AMS-I.D, the project activity involves grid connected energy generation from renewable power plant. Therefore, there are no project emissions. Also as per methodology AMS-I.D, version 17, there are no project emissions for wind energy projects.

**Leakage emissions:**

It was verified that the WTGs are new, which was cross checked with the Purchase orders. URS confirms that there is no transfer of equipment from other project activity. Hence, no leakage has been considered for this project activity.

Based on the above consideration, the emissions reductions from the project activity have been determined to be 21,085 tCO<sub>2e</sub> per year over the selected 10 years fixed crediting period, based on the ex-ante fixed baseline emission factor of 0.9528 tCO<sub>2</sub>/MWh /12/.

Based on the above assessment, the validation team hereby confirms that:

- a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;
- b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;



- c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;
- d) The baseline methodology has been applied correctly to calculate baseline emissions and emission reductions;
- e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD

URS confirms that the estimates provided in the revised PDD version 12 are reasonable and the project participant has correctly applied the methodology; the calculations are complete and transparent and the data accuracy has been verified.

### **3.9 Sustainable Development**

The LoA of the host party i.e. India clearly presents a statement that the proposed CDM project contributes to sustainable development in India. The copy of LoA was made available to validation team and the same was found correct. The proposed project is considered to contribute to sustainable development in India by utilizing renewable wind resources available in the project region, eliminating the environmental pollution caused by operation of fossil fuel-fired power plants and to achieve various social and economic benefits, such as the employment of the local people. Thus, in line with para 52 of VVS ver 7.0, the validation team confirm that DNA of India has confirmed the contribution of the project to the sustainable development in India.

### **3.10 Environmental Impacts**

No significant adverse environmental impact is expected due to project activity, since the project is a renewable energy (wind energy) project with no project emissions. Furthermore, there is no mandatory legal requirement for carrying out EIA for wind energy projects in India, which was verified by the EIA notification of MoEF, dated 14/09/2006 /50/ and amendment notification 01/12/2009 /51/.

According to this notification wind power projects do not require a prior environmental clearance and hence an EIA need not be carried out for this project activity. URS has verified all statutory clearances, including the commissioning certificate and URS confirms that all the clearances obtained are in accordance with the procedures required by the host party.

### **3.11 Local Stakeholders Consultation**

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

The PP has identified the local villagers residing around the proposed project activity site and other, the representatives of the village governing body as described in PDD as the stakeholders. Based on the observations of the validation team during the site visit and as per the definition of 'stakeholder' in the Glossary of CDM terms version 7, the identification of stakeholders for consultation was found to be appropriate. Thus, the validation team is of the opinion that the relevant stakeholders have been consulted.

The project participant, Enn Enn Corp Limited, of the proposed wind power project has conducted stakeholder consultation meetings for the project activity on 24/10/2011 at Rajpara substation, Surendranagar. The Public Notices for the local stakeholder consultation meetings had been published in the local news paper on 19/10/2011 and special invitations were also sent.

The minutes of meeting, attendance sheet and copy of newspaper advertisement, personal invitations were provided to validation team for the stakeholder meeting. During the site visit, validation team conducted interviews with local stakeholders. The local stakeholders appreciated the Project activity. The



project has given employment to local people and the local villager viewed the project as contributing to local environmental benefits and social-economy. There were no negative comments from the stakeholders regarding the project activity.

It is also confirmed that local stakeholders were invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website. The validation team hereby confirms that the process of local stakeholder consultation is observed to be adequate. URS can confirm that the process is adequate and credible for local stakeholder consultation. Hence, URS confirms that the information in PDD is in accordance with paragraphs 138-140 of VVS Version 7.0.

### **3.12 Comments by Parties, Stakeholders and NGOs**

The PDD version 01 of 05/12/2011 /01/ was made publicly available on the CDM UNFCCC website and parties, stakeholders and NGOs through the CDM website (<http://cdm.unfccc.int/Projects/Validation/DB/D9VHAXX2I81YFHIR2XBPF45SIYGLJ5/view.html>) invited to provide comments during a 30 days period from 07/02/2012 to 07/03/2012.

No public comments were received for this project activity during the webhosting period.



#### 4. VALIDATION OPINION

URS verification private limited (URS) has performed validation of the project activity “Wind Energy Project in Gujarat by Enn Enn Corp Limited.” in India, with regard to the relevant requirements for CDM.

The review of the project design document and the subsequent follow-up interviews have provided URS with sufficient evidence to determine the fulfillment of the stated criteria.

The host Party is India, which fulfill the participation criteria / requirement and have approved the project and authorized the project participant Enn Enn Corp Limited. The DNA from India confirmed that the project contributes towards achieving sustainable development of the host country.

The project correctly applies the approved baseline and monitoring methodology AMS I. D. version 17 “Grid connected renewable electricity generation”, Version 17 of 03/06/2011.

By implementation of the 12.6 MW wind power project activity the project results in reduction of CO<sub>2</sub> emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the “Wind Energy Project in Gujarat by Enn Enn Corp Limited.” are estimated to be on an average 21,085 t CO<sub>2</sub>e per year over the selected 10 years fixed crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.

The monitoring plan provides for the monitoring of the project’s emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design and it is URS’s opinion that the project participants are able to implement the monitoring plan.

In conclusion, URS is of the opinion that the project activity “Wind Energy Project in Gujarat by Enn Enn Corp Limited.” in India, as described in the PDD, version 13 of 05/11/2014, meets all relevant applicable UNFCCC requirements for the CDM and all relevant host Party criteria and correctly applies the baseline and monitoring methodology AMS I. D. version 17 “Grid connected renewable electricity generation”, Version 17 of 03/06/2011

URS thus requests registration of the project as a CDM project activity.



## APPENDIX – 1

### VALIDATION PROTOCOL FOR CDM PROJECT ACTIVITIES (SSC)

**Project Title:** Wind Energy Project in Gujarat by Enn Enn Corp Limited



**Table 1 –Validation Requirements for Clean Development Mechanism (CDM) Project Activities (CDM VVS and relevant paragraphs of CDM PCP)**

Requirement(s)	Ref	Validation Assessment	Conclusion																									
			Draft	Final																								
Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for a minimum of 30 days (45 days for A/R large scale projects), and PDD and comments have been made publicly available through a dedicated interface on the UNFCCC web site.	Para 13, 20, 21 of PCP  Para 34, 35, 36 of VVS (Section E of VVS)	<p>Following CAR#01 was raised:</p> <p>PP is requested to submit a copy of the letter of approval by the host country.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> <th>MoV</th> </tr> </thead> <tbody> <tr> <td>The letter(s) of approval has been received directly from respective DNA</td> <td>No (Please refer CAR 01)</td> <td>/DR/</td> </tr> <tr> <td>The authenticity of letter(s) of approval verified with DNA</td> <td>No</td> <td>/DR/</td> </tr> <tr> <td>The letter(s) of approval is valid for PA under validation</td> <td>No</td> <td>/DR/</td> </tr> </tbody> </table> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> <th>MoV</th> </tr> </thead> <tbody> <tr> <td>The Party is a Party to the Kyoto Protocol</td> <td>No (Please refer CAR 01)</td> <td>/DR/</td> </tr> <tr> <td>Participation is voluntary</td> <td>No</td> <td>/DR/</td> </tr> <tr> <td>In case of host Party, the proposed PA contributes to the sustainable development of country</td> <td>No</td> <td>/DR/</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	MoV	The letter(s) of approval has been received directly from respective DNA	No (Please refer CAR 01)	/DR/	The authenticity of letter(s) of approval verified with DNA	No	/DR/	The letter(s) of approval is valid for PA under validation	No	/DR/	Validation Criteria	Yes/No	MoV	The Party is a Party to the Kyoto Protocol	No (Please refer CAR 01)	/DR/	Participation is voluntary	No	/DR/	In case of host Party, the proposed PA contributes to the sustainable development of country	No	/DR/	CAR#01	OK
Validation Criteria	Yes/No	MoV																										
The letter(s) of approval has been received directly from respective DNA	No (Please refer CAR 01)	/DR/																										
The authenticity of letter(s) of approval verified with DNA	No	/DR/																										
The letter(s) of approval is valid for PA under validation	No	/DR/																										
Validation Criteria	Yes/No	MoV																										
The Party is a Party to the Kyoto Protocol	No (Please refer CAR 01)	/DR/																										
Participation is voluntary	No	/DR/																										
In case of host Party, the proposed PA contributes to the sustainable development of country	No	/DR/																										
Whether part or complete project has been webhosted earlier?. If yes, whether any Global Stakeholder comments were received during earlier webhosting?	Para 13, 20, 21 of PCP  Para 34, 35, 36 of VVS	The project activity is a Greenfield grid connected wind power project. The energy generating machines included in this project activity are not webhosted previously as a sub-bundled of any CDM project activity. Thus, this clause is not applicable to this project activity.	OK																									
Approval 2.1 Has the DNA of each Party involved in the proposed CDM project	Para 38 of VVS	<p>Following CAR#01 was raised:</p> <p>PP is requested to submit a copy of the letter of approval by the host country.</p>	CAR#01	OK																								



Requirement(s)	Ref	Validation Assessment			Conclusion	
		Validation Criteria	Yes/No	MoV	Draft	Final
activity in section A.4 of the PDD provided a written letter of approval, which confirms The Party is a Party to the Kyoto Protocol Participation is Voluntary In case of host Party, confirming that the proposed CDM project activity contributes to sustainable development of the country It refers to the precise proposed CDM project activity title in the PDD being submitted for registration Whether the letter(s) of approval is unconditional with respect to (a)-(d) above? The letter(s) of approval has been issued by respective Party's DNA and is valid for the project PA under validation	Para 39 of VVS  Para 40 of VVS Para 41 of VVS (Section F of VVS)	<b>Validation Criteria</b>	<b>Yes/No</b>	<b>MoV</b>		
		The Party is a Party to the Kyoto Protocol	No (Please refer CAR 01)	/DR/		
		Participation is voluntary	No (Please refer CAR 01)	/DR/		
		In case of host Party, the proposed PA contributes to the sustainable development of country	No (Please refer CAR 01)	/DR/		
		It refers to the precise proposed CDM project activity title in the PDD being submitted for registration	No (Please refer CAR 01)	/DR/		
		<b>Validation Criteria</b>	<b>Yes/No</b>	<b>MoV</b>		
		The letter(s) of approval has been received directly from respective DNA	No (Please refer CAR 01)	/DR/		
		The authenticity of letter(s) of approval verified with DNA	No (Please refer CAR 01)	/DR/		
		The letter(s) of approval is valid for PA under validation	No (Please refer CAR 01)	/DR/		
		Whether each project participant has been authorized by at least one Party involved in a letter of approval.	Para 45 of VVS (Section G of VVS)	Following CAR#01 was raised:  PP is requested to submit a copy of the letter of approval by the host country.		
<b>Validation Criteria</b>	<b>Yes/No</b>			<b>MoV</b>		
The PPs are listed in tabular form in the PDD and information is consistent with Appendix 1 of PDD	Yes			/DR/		
No entities other than those authorized as PPs are included in A.4 & Appendix 1 of the PDD.	Yes			/DR/		



Requirement(s)	Ref	Validation Assessment			Conclusion	
					Draft	Final
		The approval of participation has been issued from the relevant DNA	No (Please refer CAR 01)	N/A		
The DNA has considered whether the proposed CDM project activity assists the host Party in achieving sustainable development	Para 50 of VVS (Section H of VVS)	Following CAR01 was raised: PP is requested to submit a copy of the letter of approval by the host country.				CAR-01 OK
		Validation Criteria	Yes/No	MoV		
		The LoA (host Party) confirms the same	No (Please refer CAR 01)	DR		
Modalities of communications Validation the corporate identity of all project participants and focal points included in the Modalities of Communication (MoC) statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories. Validation that the MoC statement has been correctly completed and duly authorized.	Para 53 of VVS (Section I of VVS)  Para 59 of VVS	Following CAR02 was raised: PP is requested to provide the modalities of the communication for the proposed CDM project activity as per EB 45, Annex 59.				CAR-02 OK
		Validation Criteria	Yes/No	MoV		
		Directly checked the evidence for corporate, personal identity and other relevant documentation	No (Please refer CAR 01)	DR		
		Notarized documentation; or	No (Please refer CAR 01)	DR		
		Written confirmation from PP/CME that submits to it the MoC statement that all corporate and personal details, including specimen signature, are valid and accurate	No (Please refer CAR 01)	DR		
		MoC is received from PP/CME (except in the case of Notarized)	No (Please refer CAR 01)	DR		
		The authorized capacity(ies) of personnel submitting the MoC or written confirmation is checked	No (Please refer CAR 01)	DR		
		Validation Criteria	Yes/No	MoV		



Requirement(s)	Ref	Validation Assessment			Conclusion	
					Draft	Final
		Latest version of the form 'F-CDM-MOC' is used	No (Please refer CAR 01)	DR		
		The information required as per F-CDM-MOC, including its Annex 1, is correctly filled	No (Please refer CAR 01)	DR		
		The signatory in F-CDM-MOC and Annex 1 are same/consistent	No (Please refer CAR 01)	DR		
Whether the PDD was completed using the latest version of the PDD form appropriate to the type of project activity.	Para 62 of VVS (Section J of VVS)	Yes, the PDD has been completed using the latest version 04.1 of the CDM form for the small scale projects.				OK
State the project participants listed in the PDD and check with which of these project participants does URS has a contract for the projects validation.	Para 15 of PCP	URS has a contract with the Enn Enn Corp Limited. Same PP has identified in the web hosted PDD.				OK
		Name of the PPs appears in the PDD (GSP) with which URS has validation contract	Yes/No	MoV		
		Enn Enn Corp Limited	Yes	/DR/		
If the project participant(s) listed in the PDD published at international stakeholder consultation are not included in the PDD submitted with request for registration, a letter should be obtained from the withdrawn project participant(s) confirming its voluntary withdrawal from the	Para 15 of PCP	The PP listed in the PDD published at GSC is having signed contract with URS which is legally binding. PDD which is being submit with request for registration is same. There is no PP listed in PDD with RFR which was not there in web hosted PDD.				OK
		Name of the PPs in the PDD (RFR) with which URS has validation contract is consistent with the one in PDD (GSP)	Yes/No	MoV		
		Is there any PP removed between PDD (GSP) and PDD (RFR)	No	/DR/		
		If yes, has such voluntary withdrawal is confirmed in	N/A	/DR/		



Requirement(s)	Ref	Validation Assessment				Conclusion	
						Draft	Final
proposed project activity.		writing from the PP.					
Confirm while submitting a request for registration – all of the project participants with a contractual relationship are still listed in the PDD.	Para 15 of PCP	It is here by confirmed that URS has contractual agreement with PP listed in the web hosted PDD and the same PP is still listed in the revised final PDD version 12 of 09/08/2014.				OK	
Project participants who are listed in the PDD (submitted for global stakeholder consultation) but who do not have a contractual relationship with URS for the purposes of the validation activity may be removed from the PDD which is submitted for registration	Para 15 of PCP	Only one PP is involved in this project activity and same is appropriately mentioned in the webhosted PDD. Therefore, no other PP name was mentioned/ removed.				OK	
URS may restart the validation activity through the new or revised contract with a different set of project participants by; Indicating that the first validation contract has been terminated and; Republishing the PDD or revised PDD for global stakeholder consultation.	Para 16 of PCP	There is no change in PP and PP in webhosted PDD is same as PP in final PDD. Thus, this clause is not applicable.				OK	



**Table 2 –Validation Requirements for Clean Development Mechanism (CDM) Project Activities (CDM VVS and relevant paragraphs of CDM PS)**

Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion																
<b>SECTION A. Description of Project Activity</b>																					
<b>A.0. Cover page of PDD</b>																					
A.0.1 Is the cover page of the PDD is correctly and completely filled?	PDD Page 5	PDD	/DR/	As per section A.1 of the webhosted PDD version 01 the cover page of the PDD is correctly and completely filled.  <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>Title of the project activity</td> <td>Yes</td> </tr> <tr> <td>Version number of the PDD</td> <td>Yes</td> </tr> <tr> <td>Completion date of the PDD</td> <td>Yes</td> </tr> <tr> <td>Project participant(s)</td> <td>Yes</td> </tr> <tr> <td>Host Party(ies)</td> <td>Yes</td> </tr> <tr> <td>Sectoral scope and selected methodology(ies)</td> <td>Yes</td> </tr> <tr> <td>Estimated amount of annual average GHG emission reductions</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	Title of the project activity	Yes	Version number of the PDD	Yes	Completion date of the PDD	Yes	Project participant(s)	Yes	Host Party(ies)	Yes	Sectoral scope and selected methodology(ies)	Yes	Estimated amount of annual average GHG emission reductions	Yes	OK
Validation Criteria	Yes/No																				
Title of the project activity	Yes																				
Version number of the PDD	Yes																				
Completion date of the PDD	Yes																				
Project participant(s)	Yes																				
Host Party(ies)	Yes																				
Sectoral scope and selected methodology(ies)	Yes																				
Estimated amount of annual average GHG emission reductions	Yes																				
<b>A.1. Purpose and general description of the project activity</b>																					
A.1.1 Does the Section A.1 of PDD contains information as required by CDM PS?	Para 31 of PS	PDD	/DR/	Section A.1 of the PDD contains the adequate information in line CDM PS.  <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>Describe the purpose of the project activity, including a summary of the scope of activities/measures that are to be implemented within the project activity</td> <td>Yes</td> </tr> <tr> <td>Explain how the project activity will reduce GHG emissions or increase GHG removals</td> <td>Yes</td> </tr> <tr> <td>Indicate the sectoral scope(s) and type of the project activity</td> <td>Yes</td> </tr> <tr> <td>Explain the contribution of the project activity to sustainable development</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	Describe the purpose of the project activity, including a summary of the scope of activities/measures that are to be implemented within the project activity	Yes	Explain how the project activity will reduce GHG emissions or increase GHG removals	Yes	Indicate the sectoral scope(s) and type of the project activity	Yes	Explain the contribution of the project activity to sustainable development	Yes	OK						
Validation Criteria	Yes/No																				
Describe the purpose of the project activity, including a summary of the scope of activities/measures that are to be implemented within the project activity	Yes																				
Explain how the project activity will reduce GHG emissions or increase GHG removals	Yes																				
Indicate the sectoral scope(s) and type of the project activity	Yes																				
Explain the contribution of the project activity to sustainable development	Yes																				



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
A.1.2 Does the Section A.1 of PDD contains additional information as required and Guidance for completing the PDD Form?	PDD Page 5	PDD	/DR/	<p>The project activity is a Greenfield project activity. Prior to implementation of the project, same amount of electricity was generated by fossil fuel based power plant connected to the NEWNE grid. Further, annual average and total GHG emission reductions for the chosen crediting period 21,085 CO<sub>2</sub>e. Thus, validation team concludes that section A.1 of the PDD contains additional information as required and Guidance for completing the PDD Form.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>Scenario existing prior to the implementation of the project activity</td> <td>Yes</td> </tr> <tr> <td>Baseline scenario as identified in Section B.4 of PDD</td> <td>Yes</td> </tr> <tr> <td>Estimate of annual average and total GHG emission reductions for the chosen crediting period</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	Scenario existing prior to the implementation of the project activity	Yes	Baseline scenario as identified in Section B.4 of PDD	Yes	Estimate of annual average and total GHG emission reductions for the chosen crediting period	Yes	OK
Validation Criteria	Yes/No												
Scenario existing prior to the implementation of the project activity	Yes												
Baseline scenario as identified in Section B.4 of PDD	Yes												
Estimate of annual average and total GHG emission reductions for the chosen crediting period	Yes												
A.1.3 Is the description of the proposed project activity in the PDD is accurate, complete, and provides an understanding of the proposed CDM project activity?	Para 64-67 of VVS	PDD	/DR/	<p>Yes. The validation team has checked the evidences and conducted on site visit of the project and confirmed the description of the proposed project in the PDD is accurate, complete and provides an understanding of the proposed CDM project activity.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>Is the proposed CDM project activity at existing facilities or utilizing existing equipments?</td> <td>No</td> </tr> <tr> <td>Is the physical site visit undertaken?</td> <td>Yes</td> </tr> <tr> <td>Is the type of project activity correctly indicated, if small scale project activity (else write not applicable)?</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	Is the proposed CDM project activity at existing facilities or utilizing existing equipments?	No	Is the physical site visit undertaken?	Yes	Is the type of project activity correctly indicated, if small scale project activity (else write not applicable)?	Yes	OK
Validation Criteria	Yes/No												
Is the proposed CDM project activity at existing facilities or utilizing existing equipments?	No												
Is the physical site visit undertaken?	Yes												
Is the type of project activity correctly indicated, if small scale project activity (else write not applicable)?	Yes												
A.1.4 If the project activity involves the alternation of an existing installation or process, does the project description clearly state the differences resulting from the project activity compared to the pre-	Para 68 of VVS	PDD	/DR/	<p>This is green field project activity and does not involve alternation of an existing installation or process.</p>	OK								



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion
project situation?					
A.1.5 Is all information provided consistent and in compliance with the actual situation or planning?	Para 69(a) of VVS	PDD	/DR/	Yes. The validation team has checked the evidences and conducted on site visit of the project and confirmed all information provided are consistent and in compliance with the actual situation.	OK
A.1.6 Is all information with respect to project description deemed accurate and complete?	Para 69(b) of VVS	PDD	/DR/	Yes. The validation team has checked the evidences and conducted on site visit of the project and confirmed all information with respect to project description deemed accurate and complete.	OK
A.1.7 If a physical site visit is not conducted, is it justified appropriately?	Para 69l of VVS	PDD	/DR/	The site visit of the project activity has been completed on and justified appropriately.	OK
A 1.8 Are the documents/ evidences consistent? Is there is any discrepancy in documents?	Praa 22 of VVS	PDD	/DR/	CAR#02 has been raised for the following issue:  <ol style="list-style-type: none"> <li>1. PP is requested to submit all the statutory clearance and ownership documents of the proposed CDM project activity.</li> <li>2. PP is requested to provide the reference /source for the technical specifications of the WTGs as mentioned in the table in section A.4.2 of the webhosted PDD.</li> <li>3. PP is requested to provide the copy of the standards for Wind Turbine Safety and Design, Noise level and Mechanical Load as mentioned in section A.4.2 of the PDD.</li> <li>4. PP is requested to provide an undertaking confirming that no public funding has been used for the proposed CDM project activity as mentioned in section A.4.4 of the PDD</li> <li>5. PP is requested to confirm that the proposed CDM project activity is not a debundled component of a large-scale project activity in accordance with EB 54, Annex 3. in section A.4.5 of the webhosted PDD.</li> </ol> Further, CAR#10 has been raised for the following issue: 1) PP is requested to provide the copy of Operations and Maintenance Agreement signed between Suzlon & EECL as mentioned in section B.7.2 of	<del>CAR#02</del> <del>CAR#10</del> <del>CAR#11</del> <del>CAR#12</del> <del>CAR#13</del> <del>CAR#17</del> OK



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion
				<p>the webhosted PDD</p> <p>Further, CAR#11 has been raised for the following issue:</p> <ol style="list-style-type: none"> <li>1) PP is requested to provide the copies of the purchase orders of the project activity to substantiate the start date of the project activity as mentioned in section C.1.1 of the webhosted PDD.</li> <li>2) PP is requested to provide evidences to substantiate the expected operational life of the project activity as mentioned in section C.1.2 of the webhosted PDD.</li> </ol> <p>Further, CAR#12 has been raised for the following issue:</p> <ol style="list-style-type: none"> <li>1) PP is requested to provide the copies of the public notices and the invitation letters sent to invite the local stakeholders.</li> <li>2) PP is requested to provide the copy of the minutes of meeting of the local stakeholder consultation as mentioned in section E.1 of the PDD.</li> </ol> <p>Further, CAR#13 has been raised for the following issue:            PP has used the Ministry of Environment and Forests (MoEF), Government of India notification dated September 14th, 2006 regarding the requirement of EIA studies as per the Environment Protection Rule, 1986 (MoEF, 2002). However, the PP is requested to provide the reference of the latest notification issued by Govt. of India for the requirement of the EIA clearance of the project activities.</p> <p>Further, CAR#17 has been raised for the following issue:</p> <ol style="list-style-type: none"> <li>1. PP is requested to provide actual debt/equity ratio and copy of loan sanction letter</li> <li>2. PP is requested to provide copy of O&amp;M letter.</li> </ol>	
<b>A.2. Location of project activity</b>					



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion
A.2.1 Is the host Party(ies) correctly indicated in the PDD?	A.2 of PDD	PDD	/DR/	Yes, the host party is India and has been correctly indicated in the PDD.	OK
A.2.2 Is the Region/State/Province etc., correctly indicated in the PDD?	A.2 of PDD	PDD	/DR/	Yes, the region/ state/ provinces have been correctly mentioned in the section A.2 of the PDD which is in the state of Gujarat.	OK
A.2.3 Is the City/Town/Community etc., correctly indicated in the PDD?	A.2 of PDD	PDD	/DR/	Yes, the City/Town/Community etc., has been correctly indicated in the PDD which is Dahisara Village, Taluka- Jasdan; Pipaliya Dhoro Village, Taluka- Chotila; Khadvavdi Village, Taluka- Jasdan; Barvada Village, Taluka- Jasdan	OK
A.2.4 Is the Physical/Geographical location correctly indicated in the PDD?	A.2 of PDD	PDD	/DR/	CAR#02 has been raised for the following issue: The location numbers of the WTGs are not mentioned in the table in section A.4.1.4 of the webhosted PDD. PP is requested to provide the location number of the WTGs in section A.4.1.4 of the webhosted PDD as per the commissioning certificates of the project activity.	CAR#02 OK
<b>A.3. Technologies and/or measures</b>					
A.3.1 Does the PDD defines the technologies and measures to be employed and/or implemented by the project activity, including a list of the facilities, systems and equipment that will be installed and/or modified by the project activity?	A.3 of PDD	PDD	/DR/	Yes. The project is a newly-built grid-connected renewable power generation project activity. The project will use wind energy to generate electricity. The key technical parameters of the wind turbine are listed in the PDD.	OK

Validation Criteria	Yes/No
Information allow the unique identification of the proposed project activity i.e., geographical coordinates	No (Please refer CAR#02)
Is map included in the PDD?	Yes
Is the description of location is limited to one page?	Yes

Validation Criteria	Yes/No
The age and average lifetime of the equipment defined based on manufacturer's specifications and industry standards	Yes
Existing and forecast installed capacities, load factors and efficiencies defined	Yes



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
				<table border="1"> <tr> <td>Monitoring equipments and locations are defined.</td> <td>Yes</td> </tr> <tr> <td>Energy and mass flows and balances of system and equipments included in the project activity</td> <td>Yes</td> </tr> <tr> <td>Is description complete with regards to as how the same types and levels of services provided by the project activity would have been provided in the baseline scenario</td> <td>Yes</td> </tr> </table>	Monitoring equipments and locations are defined.	Yes	Energy and mass flows and balances of system and equipments included in the project activity	Yes	Is description complete with regards to as how the same types and levels of services provided by the project activity would have been provided in the baseline scenario	Yes			
Monitoring equipments and locations are defined.	Yes												
Energy and mass flows and balances of system and equipments included in the project activity	Yes												
Is description complete with regards to as how the same types and levels of services provided by the project activity would have been provided in the baseline scenario	Yes												
A.3.2 Does the PDD contains list of equipments in the scenario existing prior the implementation of PA and/or the baseline scenario?	A.3 of PDD	PDD	/DR/	<p>The project activity is green field activity and equipment existing in pre-project scenario is not applicable. The same was verified through purchase order, commissioning certificate and site visit.</p> <table border="1"> <tr> <td>Validation Criteria</td> <td>Yes/No</td> </tr> <tr> <td>Facilities, systems and equipment in operation under the existing scenario prior to the implementation of the project activity</td> <td>No</td> </tr> <tr> <td>Facilities, systems and equipment in the baseline scenario, as established in section B.4 of PDD.</td> <td>No</td> </tr> </table>	Validation Criteria	Yes/No	Facilities, systems and equipment in operation under the existing scenario prior to the implementation of the project activity	No	Facilities, systems and equipment in the baseline scenario, as established in section B.4 of PDD.	No	OK		
Validation Criteria	Yes/No												
Facilities, systems and equipment in operation under the existing scenario prior to the implementation of the project activity	No												
Facilities, systems and equipment in the baseline scenario, as established in section B.4 of PDD.	No												
A.3.3 Is the existing scenario prior to the implementation of the project activity same as baseline scenario identified in Section B.4 of PDD?	A.3 of PDD	PDD	/DR/	<p>Yes, the existing scenario prior to the implementation of the project activity same as baseline scenario identified in Section B.4 of PDD.</p> <p>Baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.</p>	OK								
A.3.4 Is the scale and type of the project activity correctly identified?	Para 31 of PS	PDD	/DR/	<p>Yes, the scale and the type of project activity are correctly identified And requirement of para 31 of project standard stands addressed.</p> <table border="1"> <tr> <td>Validation Criteria</td> <td>Yes/No</td> </tr> <tr> <td>Sectoral scope(s) correctly indicated</td> <td>Yes</td> </tr> <tr> <td>Type of project activity correctly indicated</td> <td>Yes</td> </tr> <tr> <td>Description on environmentally safe and sound technology(ies) included</td> <td>Yes</td> </tr> </table>	Validation Criteria	Yes/No	Sectoral scope(s) correctly indicated	Yes	Type of project activity correctly indicated	Yes	Description on environmentally safe and sound technology(ies) included	Yes	OK
Validation Criteria	Yes/No												
Sectoral scope(s) correctly indicated	Yes												
Type of project activity correctly indicated	Yes												
Description on environmentally safe and sound technology(ies) included	Yes												



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment		Conclusion
				Description on know-how transferred to the host Party, if applicable, included.	NA	
<b>A.4. Party(ies) and project participant(s)</b>						
A.4.1. Is the table required for the indication of Party(ies) and project participant(s) correctly applied?	Para 33 of PS A.4 of PDD	PDD	/DR/	Yes, the table under section A.3 of the PDD required for the indication of project participants is correctly applied as required by EB 34, Annex 9. Further, below CAR has been raised: The host party identified in section A.3 of web hosted PDD is not clear. Please clarify the same.		CAR #14 OK
A.4.2. Is all information provided in consistency with details provided by further chapters of the PDD (in particular Appendix 1)?	A.4 of PDD	PDD	/DR/	Yes. All information provided is in consistency with details provided by further chapters of the PDD (in particular Appendix 1). The same has been cross checked during the course of validation and found correct.		OK
<b>A.5. Public funding of project activity</b>						
A.5.1. Does the information on public funding provided conform to the actual situation or planning as presented by the project participant(s)?	A.5 of PDD	PDD	/DR/	In section A.4.4. of the PDD, it has been mentioned that no –public funding has been provided for the project activity.  PP is requested to provide an undertaking confirming that no public funding has been used for the proposed CDM project activity as mentioned in section A.4.4 of the PDD.		CAR #03 OK
				Validation Criteria	Yes/No	
				Does project receives any public funding?	No (Please refer CAR#03)	
				Is the funding from Parties included in Annex I to Kyoto Protocol?	NA	
				If yes, information regarding public funding is provided?	NA	



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion														
A.5.2. Is all information provided consistent with details provided by further chapters of the PDD (in particular Appendix 2)?	A.5 of PDD	PDD	/DR/	Yes. All information provided is in consistency with details provided by further chapters of the PDD (in particular Appendix 2).	OK														
A.5.3 In case of public funding from Annex I Parties, is it confirmed that such funding does not result in a diversion of official development assistance?	Para 34 of PS	PDD	/DR/	PP is requested to provide an undertaking confirming that no public funding has been used for the proposed CDM project activity as mentioned in section A.4.4 of the PDD.	<del>CAR#03</del> OK														
<b>A.6. Debundling of project activity (section for SSC PAs)</b>																			
A.6.1. Is it confirmed that proposed project activity is not a debundled component of large scale project activities?	A.6 of PDD	PDD	/DR/	<p>This is the first wind project by the PP. Further, in UNFCCC, no project was registered considering EEPL as PP. PP is requested to confirm that the proposed CDM project activity is not a debundled component of a large-scale project activity in accordance with EB 54, Annex 3. in section A.4.5 of the webhosted PDD.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>Is there any registered CDM, including requested for registration, project activity with the same PPs?</td> <td>No (Please refer CAR#03)</td> </tr> <tr> <td>Is it in the same project category and technology/measure?</td> <td>No (Please refer CAR#03)</td> </tr> <tr> <td>Is it registered, including requested for registration, within previous 2 years</td> <td>No (Please refer CAR#03)</td> </tr> <tr> <td>Is the project boundary within 1 km of the project boundary of proposed small scale activity at the closest point?</td> <td>No (Please refer CAR#03)</td> </tr> <tr> <td>If the answer to above questions is yes but it is confirmed the combined capacity of previous projects is within the SSC thresholds for that type? (else write not applicable)</td> <td>No (Please refer CAR#03)</td> </tr> <tr> <td>Is the assessment complies with the latest version of</td> <td>No (Please</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	Is there any registered CDM, including requested for registration, project activity with the same PPs?	No (Please refer CAR#03)	Is it in the same project category and technology/measure?	No (Please refer CAR#03)	Is it registered, including requested for registration, within previous 2 years	No (Please refer CAR#03)	Is the project boundary within 1 km of the project boundary of proposed small scale activity at the closest point?	No (Please refer CAR#03)	If the answer to above questions is yes but it is confirmed the combined capacity of previous projects is within the SSC thresholds for that type? (else write not applicable)	No (Please refer CAR#03)	Is the assessment complies with the latest version of	No (Please	<del>CAR#03</del> OK
Validation Criteria	Yes/No																		
Is there any registered CDM, including requested for registration, project activity with the same PPs?	No (Please refer CAR#03)																		
Is it in the same project category and technology/measure?	No (Please refer CAR#03)																		
Is it registered, including requested for registration, within previous 2 years	No (Please refer CAR#03)																		
Is the project boundary within 1 km of the project boundary of proposed small scale activity at the closest point?	No (Please refer CAR#03)																		
If the answer to above questions is yes but it is confirmed the combined capacity of previous projects is within the SSC thresholds for that type? (else write not applicable)	No (Please refer CAR#03)																		
Is the assessment complies with the latest version of	No (Please																		



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
				“Guidelines on assessment of de-bundling for SSC project activities” refer CAR#03)									
A.6.2. Is it confirmed that requirements related to Type I projects have been assessed appropriately?	PDD	PDD	/DR/	<p>The project is not a de-bundled component of large scale project activity, the proposed CDM project is renewable wind energy based power generation and meet the requirements to be type 1 project. Validation team hereby confirms that present project activity is Type 1.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>It has been confirmed how Type I projects are not debundled component of large scale project activity in case two or more projects are taking place within 1 km by the same project participants</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	It has been confirmed how Type I projects are not debundled component of large scale project activity in case two or more projects are taking place within 1 km by the same project participants	N/A	OK				
Validation Criteria	Yes/No												
It has been confirmed how Type I projects are not debundled component of large scale project activity in case two or more projects are taking place within 1 km by the same project participants	N/A												
A.6.3. Is it confirmed that requirements related to transport projects have been assessed appropriately?		PDD	/DR/	<p>The present project is green field wind based power generation project and this criteria is not applicable.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The assessment is done by excluding the criteria of within 1 km.</td> <td>N/A</td> </tr> <tr> <td>It is confirmed that project is not a debundled component of large scale project activity.</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The assessment is done by excluding the criteria of within 1 km.	N/A	It is confirmed that project is not a debundled component of large scale project activity.	N/A	OK		
Validation Criteria	Yes/No												
The assessment is done by excluding the criteria of within 1 km.	N/A												
It is confirmed that project is not a debundled component of large scale project activity.	N/A												
<b>A.7. Bundling of project activity (section for SSC PAs)</b>													
A.7.1. Is it confirmed that proposed project activity is a bundled project activity?	Para 9 of PDD	PDD	/DR/	<p>Proposed project activity is not a bundled project activity. All the WTGs are installed by the EEPL only. This criteria is not applicable.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The project activity is a bundled project activity.</td> <td>N/A</td> </tr> <tr> <td>The F-CDM-SSC-BUN correctly is provided?</td> <td>N/A</td> </tr> <tr> <td>The project confirms to the General principles of bundling</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The project activity is a bundled project activity.	N/A	The F-CDM-SSC-BUN correctly is provided?	N/A	The project confirms to the General principles of bundling	N/A	OK
Validation Criteria	Yes/No												
The project activity is a bundled project activity.	N/A												
The F-CDM-SSC-BUN correctly is provided?	N/A												
The project confirms to the General principles of bundling	N/A												
<b>SECTION B. Application of selected applied/approved baseline and monitoring methodology</b>													



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
<b>B.1. Reference of methodology</b>													
B.1.1 Is the reference to the selected methodology consistent with the CDM website?	B.1 of PDD Para 35 of PS	PDD	/DR/	<p>Yes. The reference to the selected methodology is consistent with the CDM website as following:  <a href="http://cdm.unfccc.int/methodologies/PAmethodologies/approved">http://cdm.unfccc.int/methodologies/PAmethodologies/approved</a></p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The number of the selected methodology is correct</td> <td>Yes</td> </tr> <tr> <td>The title of the selected methodology is correct</td> <td>Yes</td> </tr> <tr> <td>The version of the selected methodology is correct</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The number of the selected methodology is correct	Yes	The title of the selected methodology is correct	Yes	The version of the selected methodology is correct	Yes	OK
Validation Criteria	Yes/No												
The number of the selected methodology is correct	Yes												
The title of the selected methodology is correct	Yes												
The version of the selected methodology is correct	Yes												
B.1.2 Is the reference to any tools, standards or guidelines as required by the methodology provided?	Para 36 of PS	PDD	/DR/	<p>CAR#04 has been raised for the following issue:            PP is also requested to mention the name and version of the tools used for the project activity in accordance with the applied baseline and monitoring methodology.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The title of tools/guidelines/standards is correct</td> <td>No (Please refer to CAR#04)</td> </tr> <tr> <td>The version of tools/guidelines/standards is correct</td> <td>No (Please refer to CAR#04)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The title of tools/guidelines/standards is correct	No (Please refer to CAR#04)	The version of tools/guidelines/standards is correct	No (Please refer to CAR#04)	CAR#04 OK		
Validation Criteria	Yes/No												
The title of tools/guidelines/standards is correct	No (Please refer to CAR#04)												
The version of tools/guidelines/standards is correct	No (Please refer to CAR#04)												
B.1.3 Is the selected methodology and referenced tools/standards/guidances are valid at the time of request for registration?	Para 70-71, 75 VVS	PDD	/DR/	<p>CAR#04 has been raised for the following issue:            PP is also requested to mention the name and version of the tools used for the project activity in accordance with the applied baseline and monitoring methodology.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The selected methodology is valid at request for registration</td> <td>No (Please refer to CAR#04)</td> </tr> <tr> <td>The reference tools/guidelines/standards/EB decision are applied correctly</td> <td>No (Please refer to CAR#04)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The selected methodology is valid at request for registration	No (Please refer to CAR#04)	The reference tools/guidelines/standards/EB decision are applied correctly	No (Please refer to CAR#04)	CAR#04 OK		
Validation Criteria	Yes/No												
The selected methodology is valid at request for registration	No (Please refer to CAR#04)												
The reference tools/guidelines/standards/EB decision are applied correctly	No (Please refer to CAR#04)												
<b>B.2. Applicability of methodology and/or Project activity eligibility</b>													



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion														
B.2.1 Does the PDD contains information as why the selected approved methodology applicable to the project activity?	Para 38 of PS B.2 of PDD	PDD	/DR/	<table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>All applicability conditions of selected methodology included</td> <td>Yes</td> </tr> <tr> <td>Applicability conditions are consistent with the selected methodology(ies)</td> <td>Yes</td> </tr> <tr> <td>Justification for each applicability conditions is provided</td> <td>Yes</td> </tr> <tr> <td>All applicability conditions of referred tools/standards/guidelines included</td> <td>Yes</td> </tr> <tr> <td>Applicability conditions are consistent with the referred tools/standards/guidelines</td> <td>Yes</td> </tr> <tr> <td>Justification for each applicability conditions is provided</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	All applicability conditions of selected methodology included	Yes	Applicability conditions are consistent with the selected methodology(ies)	Yes	Justification for each applicability conditions is provided	Yes	All applicability conditions of referred tools/standards/guidelines included	Yes	Applicability conditions are consistent with the referred tools/standards/guidelines	Yes	Justification for each applicability conditions is provided	Yes	OK
Validation Criteria	Yes/No																		
All applicability conditions of selected methodology included	Yes																		
Applicability conditions are consistent with the selected methodology(ies)	Yes																		
Justification for each applicability conditions is provided	Yes																		
All applicability conditions of referred tools/standards/guidelines included	Yes																		
Applicability conditions are consistent with the referred tools/standards/guidelines	Yes																		
Justification for each applicability conditions is provided	Yes																		
B.2.2Is the justification provided in the PDD based correctly quoted and interpreted?	Para 76 of VVS B.2 of PDD	PDD	/DR/	<table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>Justification against each applicability conditions is critically explained/substantiated inB.2 of PDD</td> <td>Yes</td> </tr> <tr> <td>Is explanation of documentation used consistent with Appendix 3 of PDD, if used</td> <td>Yes</td> </tr> <tr> <td>The information in PDD is compared/cross checked with other sources, if available, using local expertise and sectoral expert</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	Justification against each applicability conditions is critically explained/substantiated inB.2 of PDD	Yes	Is explanation of documentation used consistent with Appendix 3 of PDD, if used	Yes	The information in PDD is compared/cross checked with other sources, if available, using local expertise and sectoral expert	Yes	OK						
Validation Criteria	Yes/No																		
Justification against each applicability conditions is critically explained/substantiated inB.2 of PDD	Yes																		
Is explanation of documentation used consistent with Appendix 3 of PDD, if used	Yes																		
The information in PDD is compared/cross checked with other sources, if available, using local expertise and sectoral expert	Yes																		
B.2.3 Is the applicability of the selected methodology satisfied/met?	Para 76 of VVS Para 78, 81 of VVS	PDD	/DR/	<p>CAR#04 has been raised for the following issue:</p> <ol style="list-style-type: none"> <li>The applicability condition in the 2<sup>nd</sup> row of the table in section B.2 of the webhosted PDD is not completely inline with the applicability condition mentioned in the applied baseline and monitoring methodology AMS I. D. version 17. PP is requested to correct the same.</li> <li>PP is requested to mention the name of the grid in which the generated electricity will be supplied/ injected in the justification for the applicability condition 1 of the baseline and monitoring methodology AMS I. D. version 17 as mentioned in the table in section B.2 of the webhosted PDD.</li> <li>The applicability condition 2 of the methodology AMS I. D. version 17</li> </ol>	CAR#04 OK														



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
				<p>has not been discussed in the table in section B.2 of the webhosted PDD. PP is requested to discuss the same.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The selected methodology is applicable to project activity</td> <td>No Please refer CAR#04</td> </tr> <tr> <td>Is there any deviation from methodology found or applied</td> <td>NA</td> </tr> <tr> <td>Is there any clarification that has been sought or applied in the project activity</td> <td>NA</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The selected methodology is applicable to project activity	No Please refer CAR#04	Is there any deviation from methodology found or applied	NA	Is there any clarification that has been sought or applied in the project activity	NA	
Validation Criteria	Yes/No												
The selected methodology is applicable to project activity	No Please refer CAR#04												
Is there any deviation from methodology found or applied	NA												
Is there any clarification that has been sought or applied in the project activity	NA												
B.2.4 Is it confirmed that the project activity meets the SSC eligibility requirements?	Para 81 of PS B.2 of PDD Para 150 of VVS	PDD	/DR/	<p>CAR#04 has been raised for the following issue:</p> <ol style="list-style-type: none"> <li>The applicability condition in the 2<sup>nd</sup> row of the table in section B.2 of the webhosted PDD is not completely inline with the applicability condition mentioned in the applied baseline and monitoring methodology AMS I. D. version 17. PP is requested to correct the same.</li> <li>PP is requested to mention the name of the grid in which the generated electricity will be supplied/ injected in the justification for the applicability condition 1 of the baseline and monitoring methodology AMS I. D. version 17 as mentioned in the table in section B.2 of the webhosted PDD.</li> <li>The applicability condition 2 of the methodology AMS I. D. version 17 has not been discussed in the table in section B.2 of the webhosted PDD. PP is requested to discuss the same.</li> </ol> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The PDD contains complete and accurate description of project type(s) i.e., Type I, II and/or III</td> <td>No Please refer CAR#04</td> </tr> <tr> <td>If Type I project activity, the maximum output capacity does not exceed 15 MW(e) and such capacity of generator in case turbine-generator systems are used (more electrical or mechanical systems).</td> <td>Yes</td> </tr> <tr> <td>If Type I project activity, the maximum capacity does not</td> <td>NA</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The PDD contains complete and accurate description of project type(s) i.e., Type I, II and/or III	No Please refer CAR#04	If Type I project activity, the maximum output capacity does not exceed 15 MW(e) and such capacity of generator in case turbine-generator systems are used (more electrical or mechanical systems).	Yes	If Type I project activity, the maximum capacity does not	NA	CAR#04 OK
Validation Criteria	Yes/No												
The PDD contains complete and accurate description of project type(s) i.e., Type I, II and/or III	No Please refer CAR#04												
If Type I project activity, the maximum output capacity does not exceed 15 MW(e) and such capacity of generator in case turbine-generator systems are used (more electrical or mechanical systems).	Yes												
If Type I project activity, the maximum capacity does not	NA												



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion												
				<table border="1"> <tr> <td>exceed 45 MWth for biomass, biofuels and biogas projects (for thermal systems)</td> <td></td> </tr> <tr> <td>If case of thermal application of solar energy projects the maximum output does not exceed 64,000 m2 for flat plate or evacuated tubular collector.</td> <td>NA</td> </tr> <tr> <td>If Type II project activity, the maximum output capacity does not exceed 60 GWh (e) per year or an appropriate equivalent e.g. 180 GWh (th) per year</td> <td>NA</td> </tr> <tr> <td>If Type III project activity, the GHG emission reductions does not exceed 60,000 tCO2e per year in any year of the crediting period</td> <td>NA</td> </tr> <tr> <td>If project activity uses more than one component, it is confirmed that each component is within the thresholds for each type</td> <td>NA</td> </tr> <tr> <td>The project activity confirms to the requirements of latest version of "General guidelines to SSC CDM methodologies"</td> <td>Yes</td> </tr> </table>	exceed 45 MWth for biomass, biofuels and biogas projects (for thermal systems)		If case of thermal application of solar energy projects the maximum output does not exceed 64,000 m2 for flat plate or evacuated tubular collector.	NA	If Type II project activity, the maximum output capacity does not exceed 60 GWh (e) per year or an appropriate equivalent e.g. 180 GWh (th) per year	NA	If Type III project activity, the GHG emission reductions does not exceed 60,000 tCO2e per year in any year of the crediting period	NA	If project activity uses more than one component, it is confirmed that each component is within the thresholds for each type	NA	The project activity confirms to the requirements of latest version of "General guidelines to SSC CDM methodologies"	Yes	
exceed 45 MWth for biomass, biofuels and biogas projects (for thermal systems)																	
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If project activity uses more than one component, it is confirmed that each component is within the thresholds for each type	NA																
The project activity confirms to the requirements of latest version of "General guidelines to SSC CDM methodologies"	Yes																
<b>B.3. Project boundary</b>																	
B.3.1 Does the project boundary include the physical delineation of the proposed CDM project activity?	B.3 of PDD	PDD	/DR/	<p>CAR#09 has been raised for the following issue:</p> <p>As per the project boundary diagram mentioned in section B.3 of the webhosted PDD and during the site visit of the project activity it was noted that other WTGs which are not part this proposed CDM project activity are connected to the same substation meter. So, PP is requested to provide a proper apportioning procedure for the measurement of the electricity generated by the proposed CDM project activity in the PDD and to revise the monitoring plan accordingly.</p> <p>Further CAR#15 has been raised for the following issue:</p> <p>Project boundary description is not mentioned in section B.3 of PDD.</p> <p>Your Assessment and Comment Here:</p>	<p>CAR#09            CAR#15            OK</p>												



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion												
				<table border="1"> <tr> <td>Validation Criteria</td> <td>Yes/No</td> </tr> <tr> <td>The flow diagram of the project boundary included</td> <td>No (please refer CAR#09)</td> </tr> <tr> <td>The flow diagram consistent with the information in section A.3 of PDD</td> <td>No (please refer CAR#09)</td> </tr> <tr> <td>The flow diagram indicates the GHG sources included in the project boundary</td> <td>No (please refer CAR#09)</td> </tr> <tr> <td>The data and parameters to be monitored are indicated</td> <td>No (please refer CAR#09)</td> </tr> <tr> <td>The project boundary information consistent with situation observed during physical site visit, if conducted</td> <td>No (please refer CAR#09)</td> </tr> </table>	Validation Criteria	Yes/No	The flow diagram of the project boundary included	No (please refer CAR#09)	The flow diagram consistent with the information in section A.3 of PDD	No (please refer CAR#09)	The flow diagram indicates the GHG sources included in the project boundary	No (please refer CAR#09)	The data and parameters to be monitored are indicated	No (please refer CAR#09)	The project boundary information consistent with situation observed during physical site visit, if conducted	No (please refer CAR#09)	
Validation Criteria	Yes/No																
The flow diagram of the project boundary included	No (please refer CAR#09)																
The flow diagram consistent with the information in section A.3 of PDD	No (please refer CAR#09)																
The flow diagram indicates the GHG sources included in the project boundary	No (please refer CAR#09)																
The data and parameters to be monitored are indicated	No (please refer CAR#09)																
The project boundary information consistent with situation observed during physical site visit, if conducted	No (please refer CAR#09)																
B.3.2 Are all emission sources and gases related to the baseline scenario, project scenario clearly identified and described in project boundary in a complete and transparent manner?	Para 40 of PS B.2 of PDD	PDD	/DR/	<p>Yes, the CO<sub>2</sub> gas as GHG emission source has been included for the project activity, which is inline with the requirement of the methodology AMS I. D. Version 17</p> <table border="1"> <tr> <td>Validation Criteria</td> <td>Yes/No</td> </tr> <tr> <td>The table included for GHG sources included</td> <td>Yes</td> </tr> <tr> <td>The inclusion/exclusion is justified for GHG sources in the PDD</td> <td>Yes</td> </tr> </table>	Validation Criteria	Yes/No	The table included for GHG sources included	Yes	The inclusion/exclusion is justified for GHG sources in the PDD	Yes	OK						
Validation Criteria	Yes/No																
The table included for GHG sources included	Yes																
The inclusion/exclusion is justified for GHG sources in the PDD	Yes																
B.3.3 Is the project boundary consistent with the observations made during site visit.	Para 83, 84 of VVS	PDD	/DR/	<p>CAR#09 has been raised for the following issue:</p> <p>During the site visit of the project activity it was also noted that one 'ABT meter' was also installed along with the main meter and the check meter at the substation. PP is requested to clarify what exactly the ABT meter is and why it has been installed and please provide the suitable evidences to support the same.</p> <table border="1"> <tr> <td>Validation Criteria</td> <td>Yes/No</td> </tr> <tr> <td>The project boundary is based on objective evidences</td> <td>No (please refer CAR#09)</td> </tr> <tr> <td>The project boundary as defined in the PDD is consistent</td> <td>No (please refer</td> </tr> </table>	Validation Criteria	Yes/No	The project boundary is based on objective evidences	No (please refer CAR#09)	The project boundary as defined in the PDD is consistent	No (please refer	CAR#09 OK						
Validation Criteria	Yes/No																
The project boundary is based on objective evidences	No (please refer CAR#09)																
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Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion				
				<table border="1"> <tr> <td>with the observation made during site visit</td> <td>CAR#09)</td> </tr> <tr> <td>The inclusion/exclusion of the GHG sources is based on objective evidences, wherever possible</td> <td>Yes</td> </tr> </table>	with the observation made during site visit	CAR#09)	The inclusion/exclusion of the GHG sources is based on objective evidences, wherever possible	Yes	
with the observation made during site visit	CAR#09)								
The inclusion/exclusion of the GHG sources is based on objective evidences, wherever possible	Yes								
B.3.4. Are there emission sources that will be affected by the implementation of the proposed project activity and which are expected to contribute more than 1% of the overall expected average annual emissions reductions, and are not addressed by the selected approved methodology?	Para 87 of VVS	PDD	/DR/	The project activity is renewable energy based 12.6 MW wind power project. There is no greenhouse gas emissions occurring within the proposed CDM project activity boundary as a result of the implementation of the proposed CDM project activity which are expected to contribute more than 1% of the overall expected average annual emissions reductions, which are not addressed by the applied methodology.	OK				
<b>B.4. Establishment and description of baseline scenario</b>									
B.4.1. Does the PDD discuss the identification of the most likely baseline scenario? Does the PDD follow the steps to determine the baseline scenario required by the methodology/tool and has the application of the tools as per methodology been consulted, if the Tool(s) are required by the methodology?	Para 89 of VVS	PDD	/DR/	<p>The baseline has been identified for proposed project activity as per the methodology AMS I D version 17 i.e. NEWNE grid and mentioned clearly in the PDD. Further, CAR#08 has been raised for the following issue:</p> <ol style="list-style-type: none"> <li>1. PP is requested to apply the latest available version of tool to calculate the emission factor for an electricity system for the calculation of the emission factor for the project activity.</li> <li>2. Please provide the source/ weblink for the CO2 Baseline database version 6 as mentioned in section B.6. 1 of the webhosted PDD.</li> <li>3. Please provide the emission reduction calculation sheet and emission factor calculation sheet for the project activity.</li> </ol>	<p><del>CAR#08</del>  <del>CAR#03</del>            OK</p>				



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
				<p>4. Please mention the source/ weblink of the CEA CO2 Baseline Database in the table in section B.6.2 of the PDD. Furthermore, please ensure that the CO2 Baseline Database used for the determination of emission factor of the project activity was the latest data available at the time of PDD provided to the DOE for the validation as per the requirement of 'tool to calculate the emission factor of an electricity system'.</p> <p>Further, CAR #03 has been raised for the following issue:            PP is also requested to mention the name and version of the tools used for the project activity in accordance with the applied baseline and monitoring methodology.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied?</td> <td></td> </tr> <tr> <td>If the selected methodology requires the use of tools to establish the baseline scenario, the specific guidance in the methodology supersedes the corresponding requirements of the tool.</td> <td>No Please refer CAR#06 &amp; CAR#03</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied?		If the selected methodology requires the use of tools to establish the baseline scenario, the specific guidance in the methodology supersedes the corresponding requirements of the tool.	No Please refer CAR#06 & CAR#03			
Validation Criteria	Yes/No												
The procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied?													
If the selected methodology requires the use of tools to establish the baseline scenario, the specific guidance in the methodology supersedes the corresponding requirements of the tool.	No Please refer CAR#06 & CAR#03												
B.4.2. Are all potential realistic and credible alternative scenarios listed in the methodology considered in identification of the most reasonable baseline scenario? Are all scenarios reasonable in the con-text of the proposed CDM project and no reasonable alternative scenario has been excluded?	Para 90 of VVS	PDD	/DR/	<p>As the considered small scale methodology, AMS I.D, stipulates the baseline scenario of the project activity, thus, alternative analysis is not required for this project activity.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The alternative scenarios considered by the project participants and any scenarios that are supplementary to those required by the methodology, are realistic and credible in the context of the proposed project activity.</td> <td>NA</td> </tr> <tr> <td>The identified alternative scenarios are appropriate based on financial expertise, local and sectoral knowledge of the assessment team.</td> <td>NA</td> </tr> <tr> <td>No alternative scenario has been excluded.</td> <td>NA</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The alternative scenarios considered by the project participants and any scenarios that are supplementary to those required by the methodology, are realistic and credible in the context of the proposed project activity.	NA	The identified alternative scenarios are appropriate based on financial expertise, local and sectoral knowledge of the assessment team.	NA	No alternative scenario has been excluded.	NA	OK
Validation Criteria	Yes/No												
The alternative scenarios considered by the project participants and any scenarios that are supplementary to those required by the methodology, are realistic and credible in the context of the proposed project activity.	NA												
The identified alternative scenarios are appropriate based on financial expertise, local and sectoral knowledge of the assessment team.	NA												
No alternative scenario has been excluded.	NA												



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
B.4.3 Is there a verifiable description of the baseline scenario? Does this include a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed CDM project activity?	Para 91, 92 of VVS			<p>Yes. There is a verifiable description of the baseline scenario and in consistent with that in the applied methodology.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The information (assumptions, calculations, rationales used in the PDD) used to substantiate the most plausible baseline scenario is quoted and interpreted correctly.</td> <td>Yes</td> </tr> <tr> <td>The information (as mentioned above) has been crosschecked from other sources and/or with local expert.</td> <td>Yes</td> </tr> <tr> <td>The PDD provides a description of the identified baseline scenario, including a description of the technology that would be employed</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The information (assumptions, calculations, rationales used in the PDD) used to substantiate the most plausible baseline scenario is quoted and interpreted correctly.	Yes	The information (as mentioned above) has been crosschecked from other sources and/or with local expert.	Yes	The PDD provides a description of the identified baseline scenario, including a description of the technology that would be employed	Yes	OK
Validation Criteria	Yes/No												
The information (assumptions, calculations, rationales used in the PDD) used to substantiate the most plausible baseline scenario is quoted and interpreted correctly.	Yes												
The information (as mentioned above) has been crosschecked from other sources and/or with local expert.	Yes												
The PDD provides a description of the identified baseline scenario, including a description of the technology that would be employed	Yes												
B.4.4. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario, including relevant national and/or sectoral policies and circumstances?	Para 93 of VVS	PDD	/DR/	<p>All applicable CDM requirements been taken into account in the identification of the baseline scenario.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>All applicable CDM requirements have been taken into account in the identification of the baseline scenario.</td> <td>Yes</td> </tr> <tr> <td>The relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector have been considered appropriately</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	All applicable CDM requirements have been taken into account in the identification of the baseline scenario.	Yes	The relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector have been considered appropriately	N/A	OK		
Validation Criteria	Yes/No												
All applicable CDM requirements have been taken into account in the identification of the baseline scenario.	Yes												
The relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector have been considered appropriately	N/A												
<b>B.5. Additionality</b>													



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion												
B.5.1.Does the PDD clearly demonstrate the additionality using the approach as specified in the methodology and by following all the required steps?	B.5 of PDD			<p>CAR#06, CAR#07 has been raised for the following issue:</p> <p><b>CAR#06</b>            1) Please mention the latest version of Attachment A to Appendix B of the simplified Modalities and Procedures for small-scale project activities in section B.5 of the PDD.            2) Please also clarify regarding the default value for expected return on equity calculated after taxes.            3) PP is requested to incorporate transparently all the input values for the calculation of the IRR of the project activity along with the sources of all the input values in section B.5 of the PDD.</p> <p><b>CAR#17</b>            1) PP is requested to provide actual debt/equity ratio and copy of loan sanction letter            2) PP is requested to provide copy of O&amp;M letter.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The discussion on additionality is included in the PDD as per the applied methodology and/or tools referred therein</td> <td>No. please refer CAR#06</td> </tr> <tr> <td>The compliance and outcome of each required step in the applied methodology and/or tool is indicated in clear and transparent manner in the PDD</td> <td>NA</td> </tr> <tr> <td>The method selected to demonstrate additionality (e.g. investment analysis or barrier analysis) is indicated.</td> <td>No. please refer CAR#06</td> </tr> <tr> <td>All data used (variables, parameters, data sources, etc.), how the additionality of the project activity is demonstrated, is transparently included in the PDD</td> <td>No. please refer CAR#06</td> </tr> <tr> <td>If investment analysis is used, list all relevant assumptions</td> <td>No. please</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The discussion on additionality is included in the PDD as per the applied methodology and/or tools referred therein	No. please refer CAR#06	The compliance and outcome of each required step in the applied methodology and/or tool is indicated in clear and transparent manner in the PDD	NA	The method selected to demonstrate additionality (e.g. investment analysis or barrier analysis) is indicated.	No. please refer CAR#06	All data used (variables, parameters, data sources, etc.), how the additionality of the project activity is demonstrated, is transparently included in the PDD	No. please refer CAR#06	If investment analysis is used, list all relevant assumptions	No. please	<p><del>CAR#06</del>  <del>CAR#17</del>            OK</p>
Validation Criteria	Yes/No																
The discussion on additionality is included in the PDD as per the applied methodology and/or tools referred therein	No. please refer CAR#06																
The compliance and outcome of each required step in the applied methodology and/or tool is indicated in clear and transparent manner in the PDD	NA																
The method selected to demonstrate additionality (e.g. investment analysis or barrier analysis) is indicated.	No. please refer CAR#06																
All data used (variables, parameters, data sources, etc.), how the additionality of the project activity is demonstrated, is transparently included in the PDD	No. please refer CAR#06																
If investment analysis is used, list all relevant assumptions	No. please																



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion												
				<table border="1"> <tr> <td>and parameters used in the analysis is included.</td> <td>refer CAR#06</td> </tr> <tr> <td>The benchmark applied, wherever applied, is clearly indicated.</td> <td>No. please refer CAR#06</td> </tr> <tr> <td>The credible scenarios compared described where cost comparison is used.</td> <td>Yes</td> </tr> <tr> <td>The barriers are substantiated for key facts, assumptions rationale and credibility in demonstrating additionality.</td> <td>Yes</td> </tr> <tr> <td>The prior consideration of the CDM in accordance with applicable provisions related to the demonstration of prior consideration of the CDM included.</td> <td>Yes</td> </tr> </table>	and parameters used in the analysis is included.	refer CAR#06	The benchmark applied, wherever applied, is clearly indicated.	No. please refer CAR#06	The credible scenarios compared described where cost comparison is used.	Yes	The barriers are substantiated for key facts, assumptions rationale and credibility in demonstrating additionality.	Yes	The prior consideration of the CDM in accordance with applicable provisions related to the demonstration of prior consideration of the CDM included.	Yes			
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The benchmark applied, wherever applied, is clearly indicated.	No. please refer CAR#06																
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The barriers are substantiated for key facts, assumptions rationale and credibility in demonstrating additionality.	Yes																
The prior consideration of the CDM in accordance with applicable provisions related to the demonstration of prior consideration of the CDM included.	Yes																
B.5.2. Is the discussion on the prior consideration of CDM consistent with the starting date of the project?	Para 105,106 of VVS	PDD	/DR/	<p>CAR#11 has been raised for the below issue:          PP is requested to provide the copies of the purchase orders of the project activity to substantiate the start date of the project activity as mentioned in section C.1.1 of the webhosted PDD.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The start date of the project activity as indicated in the PDD conforms to the glossary of CDM terms</td> <td>No (please refer CAR#11)</td> </tr> <tr> <td>The date of publication of the PDD is prior to the start date of the project activity</td> <td>No (please refer CAR#11)</td> </tr> <tr> <td>The start date of the project activity is on or after 2nd August 2008</td> <td>No (please refer CAR#11)</td> </tr> <tr> <td>The start date of the project activity is before 2nd August 2008</td> <td>No (please refer CAR#11)</td> </tr> <tr> <td>The prior consideration of CDM is demonstrated as per the requirement</td> <td>No (please refer CAR#11)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The start date of the project activity as indicated in the PDD conforms to the glossary of CDM terms	No (please refer CAR#11)	The date of publication of the PDD is prior to the start date of the project activity	No (please refer CAR#11)	The start date of the project activity is on or after 2nd August 2008	No (please refer CAR#11)	The start date of the project activity is before 2nd August 2008	No (please refer CAR#11)	The prior consideration of CDM is demonstrated as per the requirement	No (please refer CAR#11)	CAR#11 OK
Validation Criteria	Yes/No																
The start date of the project activity as indicated in the PDD conforms to the glossary of CDM terms	No (please refer CAR#11)																
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The prior consideration of CDM is demonstrated as per the requirement	No (please refer CAR#11)																



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion																						
B.5.3. Is the start date of the project activity before 2nd Aug 2008 (the start date is prior to the date of publication of the PDD for global stakeholder consultation and new methodology is not proposed) How is the prior consideration of CDM demonstrated?	Para 28 of PS Para 108,109,110 of VVS	PDD	/DR/	<p>The start date of the project activity is after 2<sup>nd</sup> August, 2008. Hence, this criterion is not applicable for this project activity.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The evidence of awareness of CDM prior to the project start date is provided</td> <td>N/A</td> </tr> <tr> <td>The evidence of benefits of CDM were decisive factor to proceed with the project provided</td> <td>N/A</td> </tr> <tr> <td>The provided evidence confirms the requirements as per para 108(a) of VVS or the latest guidance on this matter</td> <td>N/A</td> </tr> <tr> <td>The continuing and real actions were taken to secure the CDM status for the project activity</td> <td>N/A</td> </tr> <tr> <td>The provided evidence confirms the requirements as per para108(b) and 109 of VVS or the latest guidance on this matter</td> <td>N/A</td> </tr> <tr> <td>The gap between documented evidence is less than 2 years</td> <td>N/A</td> </tr> <tr> <td>The gap between documented evidence is between greater than 2 years but less than 3 years but is justified based on the context of evidence and information assessed</td> <td>N/A</td> </tr> <tr> <td>The gap between documented evidence is greater than 3 years</td> <td>N/A</td> </tr> <tr> <td>The timelines based on the investment decision, construction work commencement, key purchase order places, commissioning etc., with regard to implementation are included in the PDD.</td> <td>N/A</td> </tr> <tr> <td>The prior consideration of CDM is demonstrated as per the requirement</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The evidence of awareness of CDM prior to the project start date is provided	N/A	The evidence of benefits of CDM were decisive factor to proceed with the project provided	N/A	The provided evidence confirms the requirements as per para 108(a) of VVS or the latest guidance on this matter	N/A	The continuing and real actions were taken to secure the CDM status for the project activity	N/A	The provided evidence confirms the requirements as per para108(b) and 109 of VVS or the latest guidance on this matter	N/A	The gap between documented evidence is less than 2 years	N/A	The gap between documented evidence is between greater than 2 years but less than 3 years but is justified based on the context of evidence and information assessed	N/A	The gap between documented evidence is greater than 3 years	N/A	The timelines based on the investment decision, construction work commencement, key purchase order places, commissioning etc., with regard to implementation are included in the PDD.	N/A	The prior consideration of CDM is demonstrated as per the requirement	N/A	OK
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The prior consideration of CDM is demonstrated as per the requirement	N/A																										
B.5.4. For project activity with a start date on or after 2nd August 2008 (for which the start date is prior to the date of publication of the PDD for global stakeholder consultation	Para 27 of PS Para 107 of VVS	PDD	/DR/	<p>As per the webhosted PDD, the starting date of the project activity is 20/04/2011, which is after 2<sup>nd</sup> August, 2008. Further, CAR#07 has been raised</p> <p>PP is requested to provide the evidences for all the milestones achieved for the prior CDM consideration for the proposed CDM project activity as mentioned in section B.5 of the PDD and in accordance with the requirement of EB 62, Annex</p>	CAR#07 OK																						



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion										
and new meth is not proposed) How is the prior consideration of CDM demonstrated?				13. <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The prior consideration of CDM was notified to host Party DNA and UNFCCC as per the applicable form and guidance</td> <td></td> </tr> <tr> <td>The prior consideration notification has been confirmed from the UNFCCC website</td> <td></td> </tr> <tr> <td>The communication between PP and DNA and/or UNFCCC in this regard were found satisfactory</td> <td></td> </tr> <tr> <td>The prior consideration of CDM is demonstrated as per the requirement</td> <td></td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The prior consideration of CDM was notified to host Party DNA and UNFCCC as per the applicable form and guidance		The prior consideration notification has been confirmed from the UNFCCC website		The communication between PP and DNA and/or UNFCCC in this regard were found satisfactory		The prior consideration of CDM is demonstrated as per the requirement		
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B.5.5. If the baseline scenario is not prescribed in the approved methodology, is it confirmed that the list of identified credible alternatives to the project activity in the PDD selected to determine the most realistic baseline scenario is appropriate?	Para 113, 114 of VVS	PDD	/DR/	The baseline scenario is prescribed in the approved methodology and no further analysis is required as per para 115 of VVS. <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The list of alternatives includes (in PDD) as one of the options that the project activity is undertaken without being registered as a proposed project activity</td> <td>N/A</td> </tr> <tr> <td>The list contains all plausible alternatives based on local and sectoral knowledge of the validation team</td> <td>N/A</td> </tr> <tr> <td>The list contains viable means of supplying the comparable outputs or services that are to be supplied by the proposed project activity</td> <td>N/A</td> </tr> <tr> <td>The alternatives comply with all applicable and enforced legislation.</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The list of alternatives includes (in PDD) as one of the options that the project activity is undertaken without being registered as a proposed project activity	N/A	The list contains all plausible alternatives based on local and sectoral knowledge of the validation team	N/A	The list contains viable means of supplying the comparable outputs or services that are to be supplied by the proposed project activity	N/A	The alternatives comply with all applicable and enforced legislation.	N/A	OK
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The alternatives comply with all applicable and enforced legislation.	N/A														



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion														
B.5.6. If an investment analysis has been used, has it been demonstrated that the proposed project activity is not the most economically or financially attractive alternative, or is not economically or financially feasible, without the revenue from the sale of CERs.	Para 117, 119 of VVS	PDD	/DR/	<p>The investment analysis of the project activity has been conducted by using the benchmark analysis and not by the cost comparison analysis. Further, CAR#06 has been raised for the following issue:</p> <p>1) Please mention the latest version of Attachment A to Appendix B of the simplified Modalities and Procedures for small-scale project activities in section B.5 of the PDD.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The latest version of "Guidelines on the assessment of investment analysis" (EB62 Annex5 Version 5) is applied</td> <td>No. Please refer CAR#06</td> </tr> <tr> <td>The proposed project activity would produce no financial or economic benefits other than CDM-related income.</td> <td>Yes</td> </tr> <tr> <td>The documented costs associated with the proposed project activity and the alternatives identified demonstrate that there is at least one alternative which is less costly than the proposed project activity (Simple Cost Analysis)</td> <td>N/A</td> </tr> <tr> <td>The proposed project activity is less economically or financially attractive than at least one other credible and realistic alternative (Investment Comparison Analysis)</td> <td>N/A</td> </tr> <tr> <td>The financial returns of the proposed project activity would be insufficient to justify the required investment (Benchmark Analysis)</td> <td>Yes</td> </tr> <tr> <td>The investment analysis approach is appropriate in the context of the project activity.</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The latest version of "Guidelines on the assessment of investment analysis" (EB62 Annex5 Version 5) is applied	No. Please refer CAR#06	The proposed project activity would produce no financial or economic benefits other than CDM-related income.	Yes	The documented costs associated with the proposed project activity and the alternatives identified demonstrate that there is at least one alternative which is less costly than the proposed project activity (Simple Cost Analysis)	N/A	The proposed project activity is less economically or financially attractive than at least one other credible and realistic alternative (Investment Comparison Analysis)	N/A	The financial returns of the proposed project activity would be insufficient to justify the required investment (Benchmark Analysis)	Yes	The investment analysis approach is appropriate in the context of the project activity.	Yes	CAR#06 OK
Validation Criteria	Yes/No																		
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The financial returns of the proposed project activity would be insufficient to justify the required investment (Benchmark Analysis)	Yes																		
The investment analysis approach is appropriate in the context of the project activity.	Yes																		
B.5.7. Is the investment analysis complete and accurate?	Para 120 of VVS  B.2 of PDD	PDD	/DR/	<p>Yes, the investment analysis has been conducted using the latest version 5 of the 'Guidelines on the Assessment of Investment Analysis, EB 62, Annex 5' and the latest 'Guidelines for the reporting and validation of plant load factors' EB 48, Annex 11.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The project has applied investment analysis</td> <td>Yes</td> </tr> <tr> <td>The financial indicator selected by the PP is suitable in the</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The project has applied investment analysis	Yes	The financial indicator selected by the PP is suitable in the	Yes	OK								
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Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion														
				<table border="1"> <tr> <td>context of the project activity</td> <td></td> </tr> <tr> <td>Thorough assessment of all parameters and assumptions used in calculating the financial indicator is conducted</td> <td>Yes</td> </tr> <tr> <td>The parameters have been crosschecked against the third party or publicly available sources</td> <td>Yes</td> </tr> <tr> <td>The FSR, public announcement and annual financial report, as appropriate, have been reviewed with regards to the project activity and participants.</td> <td>Yes</td> </tr> <tr> <td>The correctness of the computation carried out and documented by PP is ensured.</td> <td>Yes</td> </tr> <tr> <td>The sensitivity analysis has been conducted to determine under what conditions variations in result would occur and the likelihood of these conditions.</td> <td>Yes</td> </tr> <tr> <td>The financial calculations, parameters, assumptions are as per the relevant and applicable clauses/paragraphs of the latest version of 'Guidelines on the assessment of investment analysis'</td> <td>Yes</td> </tr> </table>	context of the project activity		Thorough assessment of all parameters and assumptions used in calculating the financial indicator is conducted	Yes	The parameters have been crosschecked against the third party or publicly available sources	Yes	The FSR, public announcement and annual financial report, as appropriate, have been reviewed with regards to the project activity and participants.	Yes	The correctness of the computation carried out and documented by PP is ensured.	Yes	The sensitivity analysis has been conducted to determine under what conditions variations in result would occur and the likelihood of these conditions.	Yes	The financial calculations, parameters, assumptions are as per the relevant and applicable clauses/paragraphs of the latest version of 'Guidelines on the assessment of investment analysis'	Yes	
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The financial calculations, parameters, assumptions are as per the relevant and applicable clauses/paragraphs of the latest version of 'Guidelines on the assessment of investment analysis'	Yes																		
B 5.8 Whether the PLF study report is prepared after the decision making? If yes then whether the PLF used at the time of decision making documented?	Para 120 of VVS Section B.5 of PDD	PDD	/DR/	PLF considered in IRR is 20.05%. Project participant has provided PLF report prepared by third party M/s. Vijayant Consultants Management and Project Consultants. The PLF of the project activity i.e. 20.05% was verified with the PLF determination report provided by the third party. The PLF determination report provided by the third party were found to be appropriate and acceptable, thus the project activity conforms to the requirement of paragraph 3 (b) of EB 48, Annex 11.	OK														
B 5.9 Are the input values used in the investment analysis valid and applicable at the time of the investment decision taken by the PP?	EB 62 Annex 5, Section B.5 of PDD	PDD, IRR Sheet	/DR/	<p>CAR#06 has been raised for the following issue:</p> <p>1) PP is requested to incorporate transparently all the input values for the calculation of the IRR of the project activity along with the sources of all the input values in section B.5 of the PDD.</p> <p>2) PP is requested to explain whether all the input values used for the calculation of the IRR of the project activity were available and applicable at the time of</p>	CAR#06 OK														



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion										
				investment decision taken for the implementation of the project activity.											
B 5.10 Does the time period of the investment analysis reflect the expected operation of the underlying project activity (technical lifetime)? In case shorter period is chosen, has the fair value of project activity assets included at the end of assessment period?	EB 62, Annex 5, Section B.5 of PDD	PDD, IRR Sheet	/DR/	<p>PP had chosen the technical life of the project as 20 years. In accordance to the technical specification provided by the equipment supplier the operation lifetime of the project activity is also 20 years. Hence PP had chosen the operational life of the project as technical life for the investment analysis. However CAR#11 was raised related to this section:</p> <p>PP is requested to provide evidences to substantiate the expected operational life of the project activity as mentioned in section C.1.2 of the webhosted PDD.</p>	CAR#11 OK										
B 5.11 Is depreciation calculated in accordance with normal accounting practice in the Host Country?	Section B 5 of PDD	PDD, IRR Sheet	/DR/	PP had calculated the depreciation in accordance with the normal accounting practice in India (host Country).	OK										
B.5.12. If a benchmark is used, is it confirmed that it is suitable in the context of the project activity?	Para 121 of VVS B.5 of PDD EB51 Annex 59 EB40 Para40	PDD IRR Sheet	/DR/	<p>PP has calculated post tax Return on Equity as benchmark for the project activity. Same is appropriate for this project activity. Further, CAR#06 has been raised:</p> <p>The benchmark under para 8, page 7 of EB 62, Annex 5, is provided in the real terms however the financial analysis of the project activity is conducted on the nominal terms. Thus, the PP is requested to explain the same.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The project has applied benchmark analysis</td> <td>Yes</td> </tr> <tr> <td>The type of benchmark applied is suitable for the type of financial indicator</td> <td>Yes</td> </tr> <tr> <td>The risk premium, as appropriate, applied in determining the benchmark reflects the risk associated with the project type/activity</td> <td>Yes</td> </tr> <tr> <td>It is reasonable to assume that no investment would be made at a rate of return lower than benchmark.</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The project has applied benchmark analysis	Yes	The type of benchmark applied is suitable for the type of financial indicator	Yes	The risk premium, as appropriate, applied in determining the benchmark reflects the risk associated with the project type/activity	Yes	It is reasonable to assume that no investment would be made at a rate of return lower than benchmark.	Yes	CAR#06 OK
Validation Criteria	Yes/No														
The project has applied benchmark analysis	Yes														
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Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment		Conclusion		
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The applied benchmark is determined as per the relevant and applicable clauses/paragraphs of the latest version of 'Guidelines on the assessment of investment analysis'	No. Please refer CAR#06							
B 5.13 Whether beta selected for calculation of benchmark (if applicable) is conservative and whether justification provided for selection of companies for beta.?	Para 121 of VVS B.5 of PDD	PDD	/DR/	PP has calculated conservative beta value of the companies and justification for the selection of the companies are also mentioned in the PDD.		OK		
B 5.14 Whether benchmark is based on parameters that are standard in the market? If so whether cost of equity is calculated using values provided in Appendix A of latest version of Guidelines on assessment of investment analysis or it is calculated using best financial practices?	EB 62 Annex 5, B.5 of PDD	PDD IRR Sheet	/DR/	<p>PP has calculated post tax Return on Equity as benchmark for the project activity. Same is appropriate for this project activity. Further, CAR#06 has been raised:</p> <p>The benchmark under para 8, page 7 of EB 62, Annex 5, is provided in the real terms however the financial analysis of the project activity is conducted on the nominal terms. Thus, the PP is requested to explain the same.</p>		<del>CAR#06</del> OK		
B 5.15 Whether discount rates and benchmark derived in line with requirements in latest version of Tool for the demonstration and assessment of additionality, as applicable?	EB 70, Annex 8, B.5 of PDD	PDD	/DR/	PP has considered conservative benchmark between cost of equity calculated based on CAPM model and default return on equity as per EB 62 Annex 5.		OK		



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion												
B.5.16. Does the investment analysis rely on the values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed CDM project activity?	Para 121 of VVS	PDD IRR Sheet	/DR/	<p>FSR is not the basis of investment analysis and hence this is not applicable.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The FSR has been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed</td> <td>N/A</td> </tr> <tr> <td>The values used in the PDD and associated annexes are fully consistent with the FSR, and where inconsistencies occur the appropriateness of the values applied is validated as justified</td> <td>N/A</td> </tr> <tr> <td>The input values from the FSR are valid and applicable at the time of investment decision</td> <td>N/A</td> </tr> <tr> <td>The input values have been cross checked, as appropriate, and confirmed by local and sectoral expertise</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The FSR has been the basis of the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short to confirm that it is unlikely in the context of the underlying project activity that the input values would have materially changed	N/A	The values used in the PDD and associated annexes are fully consistent with the FSR, and where inconsistencies occur the appropriateness of the values applied is validated as justified	N/A	The input values from the FSR are valid and applicable at the time of investment decision	N/A	The input values have been cross checked, as appropriate, and confirmed by local and sectoral expertise	N/A	OK		
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B.5.17. If a barrier analysis has been used, has it been shown that the proposed project activity faces barriers that prevent the implementation of this type of proposed project activity but would not have prevented the implementation of at least one of the alternatives?	Para 124, 125, 126 of VVS	PDD, IRR Sheet	/DR/	<p>The barrier analysis has not been used for the demonstration of the additionality of this project activity. Hence, this criteria is not applicable.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>Is it indicated in the PDD that which barrier (as defined in the applicable tool/methodology) is applied</td> <td>N/A</td> </tr> <tr> <td>Is the barrier analysis allowed by the approved methodology(ies)</td> <td>N/A</td> </tr> <tr> <td>Is it demonstrated that issues that have direct impact on the financial returns of the project activity are not considered barriers</td> <td>N/A</td> </tr> <tr> <td>Is it demonstrated that barriers are real and objective as per EB50 Annex13 (as per relevant clauses specific to the type of barrier selected)</td> <td>N/A</td> </tr> <tr> <td>The available evidences in this regard have been assessed and confirmed to exist, based on the interview with individuals</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	Is it indicated in the PDD that which barrier (as defined in the applicable tool/methodology) is applied	N/A	Is the barrier analysis allowed by the approved methodology(ies)	N/A	Is it demonstrated that issues that have direct impact on the financial returns of the project activity are not considered barriers	N/A	Is it demonstrated that barriers are real and objective as per EB50 Annex13 (as per relevant clauses specific to the type of barrier selected)	N/A	The available evidences in this regard have been assessed and confirmed to exist, based on the interview with individuals	N/A	OK
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Is it confirmed that each selected barrier is credible	N/A																		
B.5.18. Is the proposed project type be justified as first-of-its kind?	EB 63 Annex 11	PDD	/DR/	<p>This project activity has not been presented as the first-of-its-kind project and hence this criteria is not applicable.</p> <table border="1"> <tr> <td>Validation Criteria</td> <td>Yes/No</td> </tr> <tr> <td>Is project activity presented as first of its kind?</td> <td>N/A</td> </tr> <tr> <td>The applicable geographical area is defined appropriately taking note of the country specific or not technology</td> <td>N/A</td> </tr> <tr> <td>There is no technology existing (commercial operation) at the time of project start date that is able to deliver the same output</td> <td>N/A</td> </tr> <tr> <td>A fixed crediting period is chosen with no option of renewal</td> <td>N/A</td> </tr> <tr> <td>The latest guidance of first of its kind has been applied</td> <td>N/A</td> </tr> <tr> <td>The first of its kind is based on objective evidence and can be confirmed independently</td> <td>N/A</td> </tr> </table>	Validation Criteria	Yes/No	Is project activity presented as first of its kind?	N/A	The applicable geographical area is defined appropriately taking note of the country specific or not technology	N/A	There is no technology existing (commercial operation) at the time of project start date that is able to deliver the same output	N/A	A fixed crediting period is chosen with no option of renewal	N/A	The latest guidance of first of its kind has been applied	N/A	The first of its kind is based on objective evidence and can be confirmed independently	N/A	OK
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The first of its kind is based on objective evidence and can be confirmed independently	N/A																		



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion																												
B.5.19. Is the project activity not common practice, unless proposed as first of its kind?	Para 128 of VVS EB 63 Annex 12	PDD	/DR/	<p>This is a small scale project activity, so common practice analysis of the project activity is not required as per "Guidelines on the demonstration of additionality of small-scale project activities, EB 68, Annex 27".</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The common practice has been demonstrated as per approved methodology(ies) and applicable tool(s)</td> <td>N/A</td> </tr> <tr> <td>The latest guidance on demonstration of common practice is applied including all steps</td> <td>N/A</td> </tr> <tr> <td>The applicable geographical area is defined appropriately taking note of the country specific or not technology</td> <td>N/A</td> </tr> <tr> <td>The compliance of Step 4a is confirmed</td> <td>N/A</td> </tr> <tr> <td>The compliance of Step 4b is confirmed</td> <td>N/A</td> </tr> <tr> <td>It is confirmed that <math>N_{all} - N_{diff}</math> is not greater than 3</td> <td>N/A</td> </tr> <tr> <td>It is confirmed that F is not greater than 0.2</td> <td>N/A</td> </tr> <tr> <td>The value of <math>N_{all} - N_{diff}</math> is greater than 3 and the value of F is greater than 0.2</td> <td>N/A</td> </tr> <tr> <td>The identification of <math>N_{all}</math> is based on objective evidences and does not include CDM registered and undergoing validation projects</td> <td>N/A</td> </tr> <tr> <td>The identification of <math>N_{diff}</math> is based on objective evidences and key distinctions have been clearly explained and substantiated</td> <td>N/A</td> </tr> <tr> <td>The list of activities considered under <math>N_{all}</math> and <math>N_{diff}</math> is complete and verifiable</td> <td>N/A</td> </tr> <tr> <td>The assessment and result of common practice analysis are confirmed by local and sectoral expertise</td> <td>N/A</td> </tr> <tr> <td>It is confirmed that project activity is not a common practice and therefore additional</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The common practice has been demonstrated as per approved methodology(ies) and applicable tool(s)	N/A	The latest guidance on demonstration of common practice is applied including all steps	N/A	The applicable geographical area is defined appropriately taking note of the country specific or not technology	N/A	The compliance of Step 4a is confirmed	N/A	The compliance of Step 4b is confirmed	N/A	It is confirmed that $N_{all} - N_{diff}$ is not greater than 3	N/A	It is confirmed that F is not greater than 0.2	N/A	The value of $N_{all} - N_{diff}$ is greater than 3 and the value of F is greater than 0.2	N/A	The identification of $N_{all}$ is based on objective evidences and does not include CDM registered and undergoing validation projects	N/A	The identification of $N_{diff}$ is based on objective evidences and key distinctions have been clearly explained and substantiated	N/A	The list of activities considered under $N_{all}$ and $N_{diff}$ is complete and verifiable	N/A	The assessment and result of common practice analysis are confirmed by local and sectoral expertise	N/A	It is confirmed that project activity is not a common practice and therefore additional	N/A	OK
Validation Criteria	Yes/No																																
The common practice has been demonstrated as per approved methodology(ies) and applicable tool(s)	N/A																																
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It is confirmed that project activity is not a common practice and therefore additional	N/A																																



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion												
B.5.20. Is it confirmed that the proposed SSC project activity is additional in accordance with CDM requirements?	Para 158 of VVS	PDD	/DR/	<p>The project activity is 12.6 MW wind power project. The additionality has been demonstrated using investment analysis as per methodology and relevant applicable tools as explained above in the body of report. The validation team hereby confirms the proposed SSC project activity is additional in accordance with CDM requirements.</p> <table border="1" data-bbox="996 630 1899 976"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The additionality has been demonstrated as per Attachment A to Appendix B of 4/CMP.1, Annex11</td> <td>Yes</td> </tr> <tr> <td>The type of additionality approach is clearly included in the PDD</td> <td>Yes</td> </tr> <tr> <td>The approach confirms to the Non-binding best practice examples to demonstrate additionality for SSC project activities</td> <td>Yes</td> </tr> <tr> <td>In case of microscale project activities, it is confirmed that PDD complies with the requirements of "Guidelines for demonstrating additionality of microscale project activities"</td> <td>N/A</td> </tr> <tr> <td>The additionality has been demonstrated in case of microscale projects as per para 160 of VVS and referenced guidance</td> <td>N/A</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The additionality has been demonstrated as per Attachment A to Appendix B of 4/CMP.1, Annex11	Yes	The type of additionality approach is clearly included in the PDD	Yes	The approach confirms to the Non-binding best practice examples to demonstrate additionality for SSC project activities	Yes	In case of microscale project activities, it is confirmed that PDD complies with the requirements of "Guidelines for demonstrating additionality of microscale project activities"	N/A	The additionality has been demonstrated in case of microscale projects as per para 160 of VVS and referenced guidance	N/A	OK
Validation Criteria	Yes/No																
The additionality has been demonstrated as per Attachment A to Appendix B of 4/CMP.1, Annex11	Yes																
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<b>B.6. Emission reductions</b>																	



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion																		
B.6.1.Are the steps and equations (Explanation of methodological choices) applied to calculate emission reductions in compliance with the requirements of selected baseline and monitoring methodology and referred tools?	Para 96 of VVS Section B.6.1 of PDD	PDD	/DR/	<p>The emission reductions of the project activity has been calculated by using the formula <math>BE_y = EG_{BL,y} * EF_{CO_2,grid,y}</math> provided in para 11 of the applied baseline and monitoring methodology AMS I. D. version 17. Further, CAR#16 has been raised for the following issue:</p> <p>1) Complete steps for calculating emission factor are not mentioned in PDD.            2) Emission reductions are not mentioned correctly in section B 6.3 of PDD            3) Years mentioned in tables in Section 6.4 are not consistent with table provided in section section A.3</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The methods or methodological steps in the selected methodology(ies), for calculating baseline emissions are explained and justified in the PDD</td> <td>No (Please refer CAR#16)</td> </tr> <tr> <td>The methods or methodological steps in the selected methodology(ies), for calculating project emissions are explained and justified in the PDD</td> <td>No (Please refer CAR#16)</td> </tr> <tr> <td>The methods or methodological steps in the selected methodology(ies), for calculating leakages are explained and justified in the PDD</td> <td>No (Please refer CAR#16)</td> </tr> <tr> <td>The equations that will be used in calculating emission reductions are included in the PDD</td> <td>No (Please refer CAR#16)</td> </tr> <tr> <td>The methodological choices are explained and justified where methodology prescribes the baseline scenarios</td> <td>Yes</td> </tr> <tr> <td>The methodological choices are explained and justified where methodology provides different options</td> <td>Yes</td> </tr> <tr> <td>The methodological choices are explained and justified where methodology allows different default values</td> <td>Yes</td> </tr> <tr> <td>The referred tools by the methodology are applied, explained and choices justified, as appropriate</td> <td>No (Please refer CAR#16)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The methods or methodological steps in the selected methodology(ies), for calculating baseline emissions are explained and justified in the PDD	No (Please refer CAR#16)	The methods or methodological steps in the selected methodology(ies), for calculating project emissions are explained and justified in the PDD	No (Please refer CAR#16)	The methods or methodological steps in the selected methodology(ies), for calculating leakages are explained and justified in the PDD	No (Please refer CAR#16)	The equations that will be used in calculating emission reductions are included in the PDD	No (Please refer CAR#16)	The methodological choices are explained and justified where methodology prescribes the baseline scenarios	Yes	The methodological choices are explained and justified where methodology provides different options	Yes	The methodological choices are explained and justified where methodology allows different default values	Yes	The referred tools by the methodology are applied, explained and choices justified, as appropriate	No (Please refer CAR#16)	<del>CAR#16</del> OK
Validation Criteria	Yes/No																						
The methods or methodological steps in the selected methodology(ies), for calculating baseline emissions are explained and justified in the PDD	No (Please refer CAR#16)																						
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The referred tools by the methodology are applied, explained and choices justified, as appropriate	No (Please refer CAR#16)																						



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion										
B.6.2. Are the data and parameters fixed ex ante applied to calculate emission reductions in compliance with the requirements of selected baseline and monitoring methodology and referred tools?	Para 97, 98 of VVS Section B.6.2 of PDD	PDD	DR	<p>The validation team has checked the PDD and confirmed the data and parameters fixed ex-ante applied to calculate emission reductions are in compliance with the applied methodology and tools. Further, CAR#08 has been raised for the following issue:</p> <p>1) PP is requested to apply the latest available version of tool to calculate the emission factor for an electricity system for the calculation of the emission factor for the project activity.</p> <p>2.) Please provide the source/ weblink for the CO2 Baseline database version 6 as mentioned in section B.6. 1 of the webhosted PDD.</p> <p>3.) Please provide the emission reduction calculation sheet and emission factor calculation sheet for the project activity.</p> <p>4.) Please mention the source/ weblink of the CEA CO2 Baseline Database in the table in section B.6.2 of the PDD. Furthermore, please ensure that the CO2 Baseline Database used for the determination of emission factor of the project activity was the latest data available at the time of PDD provided to the DOE for the validation as per the requirement of 'tool to calculate the emission factor of an electricity system'.</p> <table border="1" data-bbox="994 1120 1944 1404"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The data and parameters defined ex ante are complete in the context of the project activity</td> <td>No (Please refer CAR#08)</td> </tr> <tr> <td>The data that are calculated using equations provided in the methodology are not included in this section of PDD</td> <td>Yes</td> </tr> <tr> <td>The table for each data and parameter is correctly filled as required by the guidance to fill PDD</td> <td>No (Please refer CAR#08)</td> </tr> <tr> <td>The values applied (single or multiple) of each data is included in a single table, as appropriate</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The data and parameters defined ex ante are complete in the context of the project activity	No (Please refer CAR#08)	The data that are calculated using equations provided in the methodology are not included in this section of PDD	Yes	The table for each data and parameter is correctly filled as required by the guidance to fill PDD	No (Please refer CAR#08)	The values applied (single or multiple) of each data is included in a single table, as appropriate	Yes	CAR#08 OK
Validation Criteria	Yes/No														
The data and parameters defined ex ante are complete in the context of the project activity	No (Please refer CAR#08)														
The data that are calculated using equations provided in the methodology are not included in this section of PDD	Yes														
The table for each data and parameter is correctly filled as required by the guidance to fill PDD	No (Please refer CAR#08)														
The values applied (single or multiple) of each data is included in a single table, as appropriate	Yes														



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion														
				<table border="1"> <tr> <td data-bbox="1003 379 1738 443">The choice of data applied is clearly indicated and justified with reference to the source</td> <td data-bbox="1738 379 1964 443">No (Please refer CAR#08)</td> </tr> <tr> <td data-bbox="1003 443 1738 539">The applied value of the data and parameters, as required in some cases e.g. PLF, is as per the applicable guidance issued by CDM EB</td> <td data-bbox="1738 443 1964 539">Yes</td> </tr> <tr> <td data-bbox="1003 539 1738 699">If the data is determined based on measurements methods and procedures, if applicable, the reference to standards used, responsible person/entity that took the measurement, date of measurement and measured results are correctly indicated.</td> <td data-bbox="1738 539 1964 699">NA</td> </tr> <tr> <td data-bbox="1003 699 1738 730">The purpose of data is clearly indicated in the table</td> <td data-bbox="1738 699 1964 730">Yes</td> </tr> <tr> <td data-bbox="1003 730 1738 858">If sampling is allowed by the methodology, it is confirmed that the application is as per the latest version of "Standard for sampling and surveys for CDM PA and PoA", as appropriate</td> <td data-bbox="1738 730 1964 858">NA</td> </tr> <tr> <td data-bbox="1003 858 1738 890">The additional information is included in Appendix 4 of PDD</td> <td data-bbox="1738 858 1964 890">NA</td> </tr> <tr> <td data-bbox="1003 890 1738 973">The assumptions and sources used are appropriate, correct and would result in either accurate or otherwise conservative estimate of emission reductions</td> <td data-bbox="1738 890 1964 973">Yes</td> </tr> </table>	The choice of data applied is clearly indicated and justified with reference to the source	No (Please refer CAR#08)	The applied value of the data and parameters, as required in some cases e.g. PLF, is as per the applicable guidance issued by CDM EB	Yes	If the data is determined based on measurements methods and procedures, if applicable, the reference to standards used, responsible person/entity that took the measurement, date of measurement and measured results are correctly indicated.	NA	The purpose of data is clearly indicated in the table	Yes	If sampling is allowed by the methodology, it is confirmed that the application is as per the latest version of "Standard for sampling and surveys for CDM PA and PoA", as appropriate	NA	The additional information is included in Appendix 4 of PDD	NA	The assumptions and sources used are appropriate, correct and would result in either accurate or otherwise conservative estimate of emission reductions	Yes	
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If sampling is allowed by the methodology, it is confirmed that the application is as per the latest version of "Standard for sampling and surveys for CDM PA and PoA", as appropriate	NA																		
The additional information is included in Appendix 4 of PDD	NA																		
The assumptions and sources used are appropriate, correct and would result in either accurate or otherwise conservative estimate of emission reductions	Yes																		



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion										
B.6.3. Are the steps and equations applied to calculate ex ante calculation of emission reductions in compliance with the requirements of selected baseline and monitoring methodology and referred tools?	Para 97, 98 of VVS Section B.6.3 of PDD	PDD	DR	<p>Yes, the steps and equations applied to calculate baseline emissions are in compliance with the requirements of selected baseline and monitoring methodology AMS I. D. Version 17.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The ex ante calculation of emission reductions (BE, PE and LE) is performed transparently in the PDD</td> <td>Yes</td> </tr> <tr> <td>The values applied are consistent with section B.6.2 and B.7.1 for each specific data and/or parameter</td> <td>Yes</td> </tr> <tr> <td>The equations in the applied methodology(ies) and referred tools, as appropriate are correctly applied in reproducible manner in section B.6.3 as sample calculation</td> <td>Yes</td> </tr> <tr> <td>The ex ante calculations are explained in reproducible manner in Appendix 4 and/or electronics spreadsheet</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The ex ante calculation of emission reductions (BE, PE and LE) is performed transparently in the PDD	Yes	The values applied are consistent with section B.6.2 and B.7.1 for each specific data and/or parameter	Yes	The equations in the applied methodology(ies) and referred tools, as appropriate are correctly applied in reproducible manner in section B.6.3 as sample calculation	Yes	The ex ante calculations are explained in reproducible manner in Appendix 4 and/or electronics spreadsheet	Yes	OK
Validation Criteria	Yes/No														
The ex ante calculation of emission reductions (BE, PE and LE) is performed transparently in the PDD	Yes														
The values applied are consistent with section B.6.2 and B.7.1 for each specific data and/or parameter	Yes														
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The ex ante calculations are explained in reproducible manner in Appendix 4 and/or electronics spreadsheet	Yes														
B.6.4. Is the table to indicate the emission reductions over the crediting period included and correct?	Section B.6.4 of PDD	PDD	DR	<p>CL#05 has been raised</p> <p>PP is requested to mention in section B.4 of the PDD the reason for not considering the leakage due to the project activity.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The table is completely and correctly filled</td> <td>Yes</td> </tr> <tr> <td>The emission reductions (BE, PE, LE) are consistent with the other places in the PDD (B.6.3, Appendix 4 etc.)</td> <td>No (please refer CL#05)</td> </tr> <tr> <td>The information in this section is consistent with other sections (e.g. crediting period etc.)</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The table is completely and correctly filled	Yes	The emission reductions (BE, PE, LE) are consistent with the other places in the PDD (B.6.3, Appendix 4 etc.)	No (please refer CL#05)	The information in this section is consistent with other sections (e.g. crediting period etc.)	Yes	CL#05 OK		
Validation Criteria	Yes/No														
The table is completely and correctly filled	Yes														
The emission reductions (BE, PE, LE) are consistent with the other places in the PDD (B.6.3, Appendix 4 etc.)	No (please refer CL#05)														
The information in this section is consistent with other sections (e.g. crediting period etc.)	Yes														



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion														
B.6.5. Are all the steps taken and equations applied to calculate project emissions, baseline emissions and leakage and emission reductions correct and appropriate?	Para 99 of VVS	PDD	DR	<p>CL#05 has been raised</p> <p>PP is requested to mention in section B.4 of the PDD the reason for not considering the leakage due to the project activity.</p> <table border="1" data-bbox="996 630 1944 1101"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>All assumptions and data used by the project participants are listed in the PDD, including their references and sources</td> <td>Yes</td> </tr> <tr> <td>All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD</td> <td>Yes</td> </tr> <tr> <td>All values used in the PDD are considered reasonable in the context of the proposed CDM project activity</td> <td>Yes</td> </tr> <tr> <td>The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions</td> <td>No (please refer CL#05)</td> </tr> <tr> <td>All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD</td> <td>Yes</td> </tr> <tr> <td>The spreadsheet provided is transparent, unprotected and reproducible</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	All assumptions and data used by the project participants are listed in the PDD, including their references and sources	Yes	All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD	Yes	All values used in the PDD are considered reasonable in the context of the proposed CDM project activity	Yes	The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions	No (please refer CL#05)	All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD	Yes	The spreadsheet provided is transparent, unprotected and reproducible	Yes	CL#05 OK
Validation Criteria	Yes/No																		
All assumptions and data used by the project participants are listed in the PDD, including their references and sources	Yes																		
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The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions	No (please refer CL#05)																		
All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD	Yes																		
The spreadsheet provided is transparent, unprotected and reproducible	Yes																		
<b>B.7. Monitoring plan</b>																			



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion														
B.7.1.1. Does the monitoring plan of the PDD comply with the approved methodology(ies) and applicable tool(s)?	Para 132(a) of VVS	PDD	/DR/	<p>CAR#09 has been raised for the below mentioned issue:</p> <p>1) PP is requested to provide a proper apportioning procedure for the measurement of the electricity generated by the proposed CDM project activity in the PDD and to revise the monitoring plan accordingly.</p> <p>2) PP is also requested to provide the supporting document for the apportioning procedure applied to monitor the net electricity exported to the grid by the proposed CDM project activity.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The list of parameters included in the section B.7.1 of the PDD is complete in the context of the project activity with respect to the applied methodology(ies) and applicable tool(s)</td> <td>No (Please refer CAR#09)</td> </tr> <tr> <td>The description of monitoring plan for each monitored parameter is complies with the requirements of the approved methodology(ies) and applicable tool(s)</td> <td>No (Please refer CAR#09)</td> </tr> <tr> <td>The table is filled correctly and completely for each parameter to be monitored specifying source and applied value</td> <td>No (Please refer CAR#09)</td> </tr> <tr> <td>The table specifies the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals</td> <td>No (Please refer CAR#09)</td> </tr> <tr> <td>The QA/QC procedures (calibration procedures and frequency) and purpose of data as required by the approved methodology(ies) and applicable tool(s) are correctly indicated</td> <td>No (Please refer CAR#09)</td> </tr> <tr> <td>The information in this regard is consistent with Appendix 5 and emission reduction spreadsheet</td> <td>No (Please refer CAR#09)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The list of parameters included in the section B.7.1 of the PDD is complete in the context of the project activity with respect to the applied methodology(ies) and applicable tool(s)	No (Please refer CAR#09)	The description of monitoring plan for each monitored parameter is complies with the requirements of the approved methodology(ies) and applicable tool(s)	No (Please refer CAR#09)	The table is filled correctly and completely for each parameter to be monitored specifying source and applied value	No (Please refer CAR#09)	The table specifies the measurement methods and procedures, standards to be applied, accuracy of the measurements, person/entity responsible for the measurements, and, in case of periodic measurements, the measurement intervals	No (Please refer CAR#09)	The QA/QC procedures (calibration procedures and frequency) and purpose of data as required by the approved methodology(ies) and applicable tool(s) are correctly indicated	No (Please refer CAR#09)	The information in this regard is consistent with Appendix 5 and emission reduction spreadsheet	No (Please refer CAR#09)	CAR#09 OK
Validation Criteria	Yes/No																		
The list of parameters included in the section B.7.1 of the PDD is complete in the context of the project activity with respect to the applied methodology(ies) and applicable tool(s)	No (Please refer CAR#09)																		
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Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion										
B.7.1.2. Is the description of the monitoring plan (implementation) feasible in the context of the project activity?	Para 132(b) of VVS	PDD	/DR/	<p>CAR#09 has been raised for the below mentioned issue:</p> <p>1) PP is requested to provide a proper apportioning procedure for the measurement of the electricity generated by the proposed CDM project activity in the PDD and to revise the monitoring plan accordingly.</p> <p>2) PP is also requested to provide the supporting document for the apportioning procedure applied to monitor the net electricity exported to the grid by the proposed CDM project activity.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The monitoring plan described in the PDD is feasible within the project design</td> <td>No (Please refer CAR#09)</td> </tr> <tr> <td>The information in the monitoring plan, in this regard, is confirmed based on the documented procedures, interview, project plan and physical inspection during site visit, as appropriate</td> <td>No (Please refer CAR#09)</td> </tr> <tr> <td>The QA/QC procedures as included in the PDD are sufficient to determine the ex post emission reductions and be verified</td> <td>No (Please refer CAR#09)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The monitoring plan described in the PDD is feasible within the project design	No (Please refer CAR#09)	The information in the monitoring plan, in this regard, is confirmed based on the documented procedures, interview, project plan and physical inspection during site visit, as appropriate	No (Please refer CAR#09)	The QA/QC procedures as included in the PDD are sufficient to determine the ex post emission reductions and be verified	No (Please refer CAR#09)	CAR#09 OK		
Validation Criteria	Yes/No														
The monitoring plan described in the PDD is feasible within the project design	No (Please refer CAR#09)														
The information in the monitoring plan, in this regard, is confirmed based on the documented procedures, interview, project plan and physical inspection during site visit, as appropriate	No (Please refer CAR#09)														
The QA/QC procedures as included in the PDD are sufficient to determine the ex post emission reductions and be verified	No (Please refer CAR#09)														
B.7.2 Is there any sampling approach applied for any parameter to be monitored?	Section B.7.2 of PDD	PDD	/DR/	<p>Sampling is not required for this project activity. Thus, this clause is not applicable to this project activity.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The sampling approach is applied for some monitored parameters</td> <td>NA</td> </tr> <tr> <td>The sampling approach is allowed by the applied methodology(ies) or applicable tool(s)</td> <td>NA</td> </tr> <tr> <td>The sampling is clearly defined in Section B.7.2 of the PDD</td> <td>NA</td> </tr> <tr> <td>The sampling approach confirms to "Standard for sampling and surveys for CDM project activities and programme of activities"</td> <td>NA</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The sampling approach is applied for some monitored parameters	NA	The sampling approach is allowed by the applied methodology(ies) or applicable tool(s)	NA	The sampling is clearly defined in Section B.7.2 of the PDD	NA	The sampling approach confirms to "Standard for sampling and surveys for CDM project activities and programme of activities"	NA	OK
Validation Criteria	Yes/No														
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The sampling approach confirms to "Standard for sampling and surveys for CDM project activities and programme of activities"	NA														



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion																
B.7.3. Are the other elements of the monitoring plan completely defined?	Para 56 of PS Section B.7.3 of PDD	PDD	/DR/	<p>CAR#09 has been raised for the below mentioned issue:</p> <p>1) PP is requested to provide a proper apportioning procedure for the measurement of the electricity generated by the proposed CDM project activity in the PDD and to revise the monitoring plan accordingly.</p> <p>2) PP is also requested to provide the supporting document for the apportioning procedure applied to monitor the net electricity exported to the grid by the proposed CDM project activity.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The operational and management structure (authority and responsibility for registration, monitoring, measurement and reporting) to be put in place to implement the monitoring plan is included</td> <td>Yes</td> </tr> <tr> <td>The provisions included in PDD to ensure that data monitored required for verification and issuance be kept and archived electronically for 2 years after the end of crediting period or the last issuance of CERs, whichever occur later</td> <td>Yes</td> </tr> <tr> <td>The definitions of responsibilities and institutional arrangements for data collection and archiving included in the PDD</td> <td>Yes</td> </tr> <tr> <td>QA/QC procedures are defined clearly</td> <td>Yes</td> </tr> <tr> <td>The uncertainty levels, methods and the associated accuracy level of measuring instruments to be used for various parameters and variables are included.</td> <td>Yes</td> </tr> <tr> <td>The information in this regard is consistent with the other sections of the PDD viz., Appendix 5</td> <td>Yes</td> </tr> <tr> <td>The project participant will be able to implement the described monitoring plan</td> <td>No (Please refer CAR#09)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The operational and management structure (authority and responsibility for registration, monitoring, measurement and reporting) to be put in place to implement the monitoring plan is included	Yes	The provisions included in PDD to ensure that data monitored required for verification and issuance be kept and archived electronically for 2 years after the end of crediting period or the last issuance of CERs, whichever occur later	Yes	The definitions of responsibilities and institutional arrangements for data collection and archiving included in the PDD	Yes	QA/QC procedures are defined clearly	Yes	The uncertainty levels, methods and the associated accuracy level of measuring instruments to be used for various parameters and variables are included.	Yes	The information in this regard is consistent with the other sections of the PDD viz., Appendix 5	Yes	The project participant will be able to implement the described monitoring plan	No (Please refer CAR#09)	CAR#09 OK
Validation Criteria	Yes/No																				
The operational and management structure (authority and responsibility for registration, monitoring, measurement and reporting) to be put in place to implement the monitoring plan is included	Yes																				
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The information in this regard is consistent with the other sections of the PDD viz., Appendix 5	Yes																				
The project participant will be able to implement the described monitoring plan	No (Please refer CAR#09)																				



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion
B 7.4 Are there any parameters that are monitored which are used to calculate other parameters or parameters required by methodology (such as net electricity supplied)?	Para 55, 56 of PS Section B.7.3 of PDD	PDD	/DR/	CAR#09 has been raised for the below mentioned issue:  1) PP is requested to provide a proper apportioning procedure for the measurement of the electricity generated by the proposed CDM project activity in the PDD and to revise the monitoring plan accordingly.  2) PP is also requested to provide the supporting document for the apportioning procedure applied to monitor the net electricity exported to the grid by the proposed CDM project activity.	CAR#09 OK
B 7.5 Is it ensured that all parameters used to calculate emission reductions are either fixed-ante or monitored?	Para 55, 56 of PS Section B.7.3 of PDD	PDD	/DR/	It is checked that all the parameters used to calculate emission reductions are either fixed-ante or monitored.	OK
B 7.6 Is there is any additional information presented in section B 7 of PDD on monitoring?	Section B.7.3 of PDD	PDD	/DR/	No any additional information is presented in section B.7 of PDD on monitoring.	OK
B 7.7 Whether the parameters in the monitoring plan are consistent with line diagrams available in different sections (such as section B 7.3) of the PDD?.	Section B 7.1, B.7.3 of PDD	PDD	/DR/	CAR#09 has been raised for the below mentioned issue:  1) PP is requested to provide a proper apportioning procedure for the measurement of the electricity generated by the proposed CDM project activity in the PDD and to revise the monitoring plan accordingly.  2) PP is also requested to provide the supporting document for the apportioning procedure applied to monitor the net electricity exported to the grid by the proposed CDM project activity.	CAR#09 OK
B 7.8 Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and	Section B 7.1, B.7.3 of PDD	PDD	/DR/	Measurement equipments used in the monitoring of the parameters are the energy meters and are transparently described in the section B.7 of the PDD. The calibration frequency of these equipments is mentioned in the PDD and found to be in consistence with the applicable standard.	OK



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion												
deemed appropriate? Are the requirements for calibration of measurement equipment described and deemed appropriate?																	
B 7.9 Is the monitoring and recording frequency adequate for all monitoring parameters? Is it in line with the monitoring methodology?	Section B 7.1, B.7.3 of PDD	PDD	/DR/	Monitoring and recording frequency of the parameters used is mentioned adequately in accordance to the applied methodology AMS I.D version 17.0	OK												
<b>SECTION C. Duration and crediting period</b>																	
C.1.1. Is the start date of the project activity and operational lifetime clearly defined and reasonable?	Para 57, 58 of PS C.1 of PDD	PDD	/DR/	<p>CAR#11 has been raised for the following issues:</p> <ol style="list-style-type: none"> <li>PP is requested to provide the copies of the purchase orders of the project activity to substantiate the start date of the project activity as mentioned in section C.1.1 of the webhosted PDD.</li> <li>PP is requested to provide evidences to substantiate the expected operational life of the project activity as mentioned in section C.1.2 of the webhosted PDD.</li> </ol> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The start date of project activity is correctly included in the PDD in DD/MM/YYYY format</td> <td>Yes</td> </tr> <tr> <td>The evidence to support start date of project activity is included in the PDD</td> <td>No (Please refer CAR#11)</td> </tr> <tr> <td>The start date of project activity is as per the glossary of CDM and confirms the observations made during site visit</td> <td>No (Please refer CAR#11)</td> </tr> <tr> <td>The operational lifetime of the project activity is correctly included in the PDD</td> <td>No (Please refer CAR#11)</td> </tr> <tr> <td>The operational lifetime is in accordance with EB50 Annex15 or from other sources as appropriate.</td> <td>No (Please refer CAR#11)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The start date of project activity is correctly included in the PDD in DD/MM/YYYY format	Yes	The evidence to support start date of project activity is included in the PDD	No (Please refer CAR#11)	The start date of project activity is as per the glossary of CDM and confirms the observations made during site visit	No (Please refer CAR#11)	The operational lifetime of the project activity is correctly included in the PDD	No (Please refer CAR#11)	The operational lifetime is in accordance with EB50 Annex15 or from other sources as appropriate.	No (Please refer CAR#11)	CAR#11 OK
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Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
C.1.2. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	C.2 of PDD	PDD	/DR/	<p>The assumed fixed crediting period of 10 years has been clearly described in in section C.2.2.2 of the PDD.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The type of crediting period is correctly included in the PDD</td> <td>Yes</td> </tr> <tr> <td>The start date of crediting period is correctly included in the PDD in DD/MM/YYYY format based on expected commissioning of the project activity but is not earlier than the expected date of registration</td> <td>Yes</td> </tr> <tr> <td>The length of crediting period is correctly included in PDD as per the type of credit period chosen</td> <td></td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The type of crediting period is correctly included in the PDD	Yes	The start date of crediting period is correctly included in the PDD in DD/MM/YYYY format based on expected commissioning of the project activity but is not earlier than the expected date of registration	Yes	The length of crediting period is correctly included in PDD as per the type of credit period chosen		OK
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<b>SECTION D. Environmental impacts</b>													
D.1.1. Has an analysis of the environmental impacts of the project activity been sufficiently described?	D.1 of PDD Para 63 of PS			<p>CAR#13 is raised:</p> <ol style="list-style-type: none"> <li>The EIA notification referred under section D.1 of the PDD is not correct. PP is requested to use the correct notification.</li> <li>The PDD is not transparent on the analysis of impacts on various components of the environment. PP is requested to make it transparent.</li> </ol> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>An analysis of environmental impacts of the project activity carried out by project participant(s)</td> <td>No (Please refer CAR#13)</td> </tr> <tr> <td>Analysis of such impacts is included in the PDD, including any transboundary impacts, if applicable</td> <td>No (Please refer CAR#13)</td> </tr> <tr> <td>The reference is given to the related documentation in PDD</td> <td>No (Please refer CAR#13)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	An analysis of environmental impacts of the project activity carried out by project participant(s)	No (Please refer CAR#13)	Analysis of such impacts is included in the PDD, including any transboundary impacts, if applicable	No (Please refer CAR#13)	The reference is given to the related documentation in PDD	No (Please refer CAR#13)	CAR#13 OK
Validation Criteria	Yes/No												
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Analysis of such impacts is included in the PDD, including any transboundary impacts, if applicable	No (Please refer CAR#13)												
The reference is given to the related documentation in PDD	No (Please refer CAR#13)												
D.1.2. Are there any host Party requirements for an Environmental Impact Assessment (EIA)?	D.2 of PDD Para 64 of PS Para 134, 135 of VVS			<p>CAR#13 is raised:</p> <ol style="list-style-type: none"> <li>The EIA notification referred under section D.1 of the PDD is not correct. PP is requested to use the correct notification.</li> </ol>	CAR#13 OK								



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion												
				2) The PDD is not transparent on the analysis of impacts on various components of the environment. PP is requested to make it transparent. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The environmental impacts are considered significant</td> <td>No (Please refer CAR#13)</td> </tr> <tr> <td>If environmental impacts are considered significant by PP or host Party, has an EIA been conducted</td> <td>No (Please refer CAR#13)</td> </tr> <tr> <td>Is there any host Party requirements for EIA for project activity</td> <td>No (Please refer CAR#13)</td> </tr> <tr> <td>Is the EIA conducted in accordance with such procedures</td> <td>No (Please refer CAR#13)</td> </tr> <tr> <td>The reference is given to the related documentation in PDD</td> <td>No (Please refer CAR#13)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The environmental impacts are considered significant	No (Please refer CAR#13)	If environmental impacts are considered significant by PP or host Party, has an EIA been conducted	No (Please refer CAR#13)	Is there any host Party requirements for EIA for project activity	No (Please refer CAR#13)	Is the EIA conducted in accordance with such procedures	No (Please refer CAR#13)	The reference is given to the related documentation in PDD	No (Please refer CAR#13)	
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<b>SECTION E. Local stakeholder consultation</b>																	
E.1.1. Have local stakeholders been invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC web	Para 69 of PS	PDD	/DR/	Yes, as per the section E.1 of the PDD the local stakeholder consultation was conducted on 24th October 2011 at Rajpara substation, Surendranagar. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The local stakeholder consultation process is done prior to webhosting of the PDD for GSP</td> <td>Yes</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The local stakeholder consultation process is done prior to webhosting of the PDD for GSP	Yes	OK								
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The local stakeholder consultation process is done prior to webhosting of the PDD for GSP	Yes																
E.1.2. Have appropriate media been used to invite comments by local stakeholders?	Para 65, 66 of PS	PDD	/DR/	CAR#12 has been raised: 1) PP is requested to provide the copies of the public notices and the invitation letters sent to invite the local stakeholders.  2) PP is requested to provide the copy of the minutes of meeting of the local stakeholder consultation as mentioned in section E.1 of the PDD. <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The local stakeholders were identified appropriately</td> <td>Yes</td> </tr> <tr> <td>The local stakeholders were invited in reasonable time</td> <td>No (Please</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The local stakeholders were identified appropriately	Yes	The local stakeholders were invited in reasonable time	No (Please	CAR#12 OK						
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Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion								
				<table border="1"> <tr> <td></td> <td>refer CAR#12)</td> </tr> <tr> <td>The local stakeholders were invited using appropriate medium</td> <td>No (Please refer CAR#12)</td> </tr> </table>		refer CAR#12)	The local stakeholders were invited using appropriate medium	No (Please refer CAR#12)					
	refer CAR#12)												
The local stakeholders were invited using appropriate medium	No (Please refer CAR#12)												
E.1.3. Is the undertaken stakeholder process described in a complete and transparent manner?	Para 67, 68 of PS 139 of VVS	PDD	/DR/	<p>CAR#12 has been raised:</p> <p>1) PP is requested to provide the copies of the public notices and the invitation letters sent to invite the local stakeholders.</p> <p>2) PP is requested to provide the copy of the minutes of meeting of the local stakeholder consultation as mentioned in section E.1 of the PDD.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The local stakeholders were informed appropriately about the project activity to comment</td> <td>No (Please refer CAR#12)</td> </tr> <tr> <td>Summary of comments as included in the PDD is complete</td> <td>No (Please refer CAR#12)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The local stakeholders were informed appropriately about the project activity to comment	No (Please refer CAR#12)	Summary of comments as included in the PDD is complete	No (Please refer CAR#12)	CAR#12 OK		
Validation Criteria	Yes/No												
The local stakeholders were informed appropriately about the project activity to comment	No (Please refer CAR#12)												
Summary of comments as included in the PDD is complete	No (Please refer CAR#12)												
E.1.4. Has due account been taken of any stakeholder comments received?	Para 139, 140 of VVS E of PDD	PDD	/DR/	<p>CAR#12 has been raised:</p> <p>1) PP is requested to provide the copies of the public notices and the invitation letters sent to invite the local stakeholders.</p> <p>2) PP is requested to provide the copy of the minutes of meeting of the local stakeholder consultation as mentioned in section E.1 of the PDD.</p> <table border="1"> <thead> <tr> <th>Validation Criteria</th> <th>Yes/No</th> </tr> </thead> <tbody> <tr> <td>The comments received from local stakeholders have been considered for due account</td> <td>No (Please refer CAR#12)</td> </tr> <tr> <td>The due account taken of all comments is adequate</td> <td>No (Please refer CAR#12)</td> </tr> <tr> <td>The information contained in PDD with regard to local stakeholder consultation is adequate.</td> <td>No (Please refer CAR#12)</td> </tr> </tbody> </table>	Validation Criteria	Yes/No	The comments received from local stakeholders have been considered for due account	No (Please refer CAR#12)	The due account taken of all comments is adequate	No (Please refer CAR#12)	The information contained in PDD with regard to local stakeholder consultation is adequate.	No (Please refer CAR#12)	CAR#12 OK
Validation Criteria	Yes/No												
The comments received from local stakeholders have been considered for due account	No (Please refer CAR#12)												
The due account taken of all comments is adequate	No (Please refer CAR#12)												
The information contained in PDD with regard to local stakeholder consultation is adequate.	No (Please refer CAR#12)												



Checklist Question(s)	Ref	Cross ref/ comment	MoV*	Validation Assessment	Conclusion
<b>SECTION F. Approval and authorization</b>					
F.1.1 Has the approval and authorization is indicated correctly?	Para 70, 71 of PS F of PDD	PDD	/DR/	PP is requested to submit the host country approval letter for the project activity as per the requirement of para 44 & 45 of VVM ver 1.2.	CAR#01-OK
				Validation Criteria	Yes/No
				The letter of approval at GSP of PDD is available	No (Please refer CAR#01)
				The information in this regard is included in the PDD	Yes
				The letter of approval(s) at Request for Registration is available from all identified Parties in the PDD	Yes



**Table 3 - Resolution of Corrective Action Requests and Clarification:**

Summary of Findings	CAR	CL	FAR
	19	2	0

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan	
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#01	<b>Reference</b>
<b>Details of the Finding:</b>	30-04-2012			
PP is requested to submit the host country approval letter for the project activity as per the requirement of para 44 & 45 of VVM ver 1.2.				
<b>Project Participant Response</b>	04/05/2012			
Host Country Approval could not be obtained. But it is expected to come soon and then it will be sent.				
<b>Documents/ information provided by the Project Participant:</b>				
(List of the evidences/ documents provided by Project participant)				
<b>Evidences verified by Lead Assessor/ Assessor:</b>				
(List of the evidences/ documents verified by Lead Assessor/ Assessor)				
<b>Reasoning for acceptance or non-acceptance:</b>	25/05/2012			
The host country approval letter is awaited. Hence, the CAR#01 is still open.				
<b>Project Participant Response</b>	21/07/2012			
Host Country Approval could not be obtained. But it is expected to come soon and then it will be sent.				
<b>Documents/ information provided by the Project Participant:</b>				
<b>Reasoning for acceptance or non-acceptance:</b>	30/07/2012			
The host country approval letter is awaited. Hence, the CAR#01 is still open.				
<b>Project Participant Response</b>	24/09/2012			



The HCA has been obtained and submitted.	
<b>Documents/ information provided by the Project Participant:</b>	
Host Country Approval dated 14/09/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	01/12/2012
PP has submitted the host country approval of the project activity.	
CAR has been opened due to ITR comments	
The information provided in HCA is not consistent with information provided in section A 4.1.3 of PDD. Please clarify the same.	
<b>Project Participant Response</b>	01/12/2012
There was typographical error in HCA. The same was communicated to DNA with all the supporting documents. DNA has issued the revised HCA and talukas name is correctly mentioned in revised host country approval.	
<b>Documents/information provided by the Project participant.</b>	
Revised Host country approval.	
<b>Reason for acceptance or non-acceptance</b>	01/12/2012
Ok, Revised host country approval letter has been provided by PP. The talukas name have been corrected in revised HCA and they are in line with commissioning certificate. The HCA is consistent with information in section A 4.1.3 of PDD. The letter of approval confirms that Government of India has ratified the Kyoto Protocol and the HCA is an approval of voluntary participation in the proposed CDM project activity. Also the project contributes to Sustainable Development in India. The HCA refers to the precise proposed CDM project activity title as mentioned in the PDD being submitted for registration The HCA is in line with para 45-48 of VVM ver 1.2.	
The CAR is opened due to ITR comment:	
VVM is no longer applicable. PP is requested to justify how the same is in line with the VVS version 7.0.	
<b>Project Participant Response</b>	05/11/2014
HCA is already submitted to the DOE which is in line with VVS version 7.0.	
<b>Documents/information provided by the Project participant.</b>	
Host Country Approval (HCA)	
<b>Reason for acceptance or non-acceptance</b>	08/11/2014



Validation team has checked the letter of HCA dated 30/10/2012.

- (a) The Government of India has ratified the Kyoto Protocol on 26<sup>th</sup> August 2002 and hence is a Party to the Kyoto Protocol
- (b) The HCA is an approval of voluntary participation in the proposed CDM project activity
- (c) The project contributes to Sustainable Development in India
- (d) The HCA refers to the precise proposed CDM project activity title – ‘Wind Energy Project in Gujarat by Enn Enn Corp Limited.’ – mentioned in the PDD being submitted for registration

The HCA issued by National CDM authority is in line with para 38 to 42 of the VVS version 7.0.

Thus, CAR#01 is closed now.

<b>Close out by Lead Assessor</b>	08/11/2014
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<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#02
<b>Reference</b>	EB 45, Annex 59		
<b>Details of the Finding:</b>	30-04-2012		
PP is requested to provide the modalities of the communication for the proposed CDM project activity as per EB 45, Annex 59.			
<b>Project Participant Response:</b>	04/05/2012		
Modalities of the communication for the proposed CDM project activity as per EB 45, Annex 59.is provided now.			
<b>Documents/ information provided by the Project Participant:</b>			
1. Signed MoC			
<b>Evidences verified by Lead Assessor/ Assessor:</b>			
1. Signed MoC dated 16/05/2012			
<b>Reasoning for acceptance or non-acceptance:</b>	25/05/2012		



PP has provided the modalities of communication in version 2.0 of the MOC form.	
However, the project activity will be submitted for registration under VVM track and hence the PP is requested to use the previous version 1.4 for the Modalities of Communication.	
Hence, the CAR#02 is still open.	
<b>Project Participant Response</b>	18/06/2012
MoC in the version 1.4 is submitted now.	
<b>Documents/ information provided by the Project Participant:</b>	
Modalities of communication dated 09/06/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	25/06/2012
OK, PP has submitted the Modalities of the communications dated 09/06/2012. However, the dates are not consistent on page 1 and page 3 of the MOC. Furthermore the dates on page 1 and page 4 of the MOC are not legible. Kindly submit the revised MOC form.	
The CAR#02 is still open.	
	14/07/2012
MoC in the version 1.4 is submitted now. And also the dates are matching now.	
<b>Documents/ information provided by the Project Participant:</b>	
Modalities of communication dated 13/07/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	30/07/2012
Ok, PP has provided the Modalities of Communication dated 13/07/2012. MOC has been filled in correctly and it uses the latest MOC form available on UNFCCC for VVM track. This has been found to be appropriate.	
The CAR is opened due to ITR comment:	
VVM is no longer applicable. PP is requested to justify how the same is in line with the VVS version 7.0.	
<b>Project Participant Response</b>	05/11/2014
Revised MoC along with declaration are already submitted to the DOE which is in line with VVS version 7.0	
<b>Documents/information provided by the Project participant.</b>	
Revised MoC dated 20/05/2014	



<b>Reason for acceptance or non-acceptance</b>	08/11/2014
Validation team confirms that the MoC statement provided by the PP is in accordance with the requirements in para 53-55 as well it is in accordance with the requirements in para 60 of the CDM-VVS. In line with para 60 of VVS version 7.0, validation team confirms that MoC statement has been furnished in the latest applicable MOC form F-CDM-MOC version 2.1. The information required as per the F-CDM-MOC, including its annex-1, is correctly completed. The project participant's authorized signatories signing the F-CDM-MOC correspond to the project participant's authorized signatories included in F-CDM-MOC, annex 1. Same is acceptable to the validation team. Thus, CAR#02 is closed.	
<b>Close out by Lead Assessor</b>	08/11/2014

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan		
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#03	<b>Reference</b>	EB 34, Annex 9 & EB 54, Annex 3
<b>Details of the Finding:</b>		30-04-2012			
<ol style="list-style-type: none"> <li>PP is requested to submit all the statutory clearance and ownership documents of the proposed CDM project activity.</li> <li>PP is requested to provide the reference /source for the technical specifications of the WTGs as mentioned in the table in section A.4.2 of the webhosted PDD.</li> <li>PP is requested to provide the copy of the standards for Wind Turbine Safety and Design, Noise level and Mechanical Load as mentioned in section A.4.2 of the PDD.</li> <li>PP is requested to provide an undertaking confirming that no public funding has been used for the proposed CDM project activity as mentioned in section A.4.4 of the PDD.</li> <li>PP is requested to confirm that the proposed CDM project activity is not a debundled component of a large-scale project activity in accordance with EB 54, Annex 3. in section A.4.5 of the webhosted PDD.</li> <li>PP is also requested to mention the name and version of the tools used for the project activity in accordance with the applied baseline and monitoring methodology.</li> <li>The location numbers of the WTGs are not mentioned in the table in section A.4.1.4 of the webhosted PDD. PP is requested to provide the location number of the WTGs in section A.4.1.4 of the webhosted PDD as per the commissioning certificates of the project activity.</li> </ol>					
<b>Project Participant Response</b>		21/05/2012			
<ol style="list-style-type: none"> <li>All the documents such as evacuation permission and power purchase agreements and commissioning certificates are submitted now.</li> <li>A document on technical specification is provided now.</li> <li>The portion on "Wind Turbine Safety and Design, Noise level and Mechanical Load" is removed now from section A.4.2 of the PDD.</li> <li>Undertaking confirming that no public funding has been used for the proposed CDM project activity is provided now.</li> <li>It is confirmed in the section A.4.5</li> <li>Applicable tool is mentioned in section B.1</li> <li>Location numbers are now mentioned.</li> </ol>					
<b>Documents/ information provided by the Project Participant:</b>					
1. Evacuation permission					



<ol style="list-style-type: none"> <li>2. Commissioning certificates.</li> <li>3. PPA</li> <li>4. Technical specification sheet.</li> </ol>	
<b>Evidences verified by Lead Assessor/ Assessor:</b>	
<ol style="list-style-type: none"> <li>1. Evacuation permission</li> <li>2. Commissioning certificates.</li> <li>3. PPA</li> <li>4. Technical specification sheet.</li> </ol>	
<b>Reasoning for acceptance or non-acceptance:</b>	01/06/2012
<ol style="list-style-type: none"> <li>1. PP has submitted the commissioning certificates for all the WTGs and the power evacuation permits issued to the technology supplier M/s. Suzlon Power Infrastructure Pvt. Ltd. Dated 16/12/2009 and 16/11/2010. However, the PPA for the WTG no. JSD 51 has not been submitted. PP is requested to submit the same. Open</li> <li>2. The reference /source for the technical specifications of the WTGs as mentioned in the table in section A.4.2 have not been provided in section A.4.2 of the PDD. PP is requested to provide the same. Furthermore, PP has provided a documentary evidence for the technical specifications, however all the technical specifications in the PDD are not inline with technical specifications provided in the PDD. Please correct appropriately. Open.</li> <li>3. OK, PP has removed the portion on “Wind Turbine Safety and Design, Noise level and Mechanical Load” is removed now from section A.4.2 of the PDD , which is accepted and hence this issue has been closed.</li> <li>4. OK, the PP has submitted an undertaking dated 18/05/2011 confirming that no public funding has been used for the proposed CDM wind power project activity.</li> <li>5. OK, PP has confirmed in section A.4.5 of the PDD that the proposed CDM project activity is not a debundled component of a large scale project activity. However, the reference of the latest relevant guideline has not been provided. PP is requested to provide the same.</li> <li>6. OK, PP has provided the reference of the applicable tool i. e. Tool to calculate the emission factor for an electricity system, Version 2.2.1, in section B.1 of the PDD.</li> <li>7. The location numbers provided by the technology supplier are mentioned in section A.4.1.4 of the PDD. However, the unique identification numbers of the WTGs and the commissioning date of the WTGs as per the commissioning certificates have not been provided in section A.4.1.4 of the PDD. PP is requested to provide the same.</li> </ol> <p>So, the CAR#03 is still open.</p>	
<b>Project Participant Response</b>	18/06/2012
<ol style="list-style-type: none"> <li>1. PPA for JSD-51 is submitted now.</li> <li>2. It has been corrected and source is also mentioned now.</li> <li>5. Reference of latest guideline is provided now.</li> <li>7. Commissioning date is mentioned as well as unique identification.</li> </ol>	
<b>Documents/ information provided by the Project Participant:</b>	
1. PPA JSD-51 submitted.	
<b>Reasoning for acceptance or non-acceptance:</b>	18/06/2012
<ol style="list-style-type: none"> <li>1. The PPA provided for the WTG number JSD – 51 does not contain all the pages. Please provide the complete copy of this PPA. Open.</li> <li>2. OK, the correct weblink i.e. <a href="http://www.suzlon.com/pdf/S88%20product%20brochure.pdf">http://www.suzlon.com/pdf/S88%20product%20brochure.pdf</a> has been provided in section 4.2 of the PDD for the technical specification of the</li> </ol>	



project activity. It is found to be correct and hence acceptable.

5. The reference of the latest guideline is provided in section A.4.5 of the PDD for demonstrating that the project activity is not a debundled component of a large scale project activity. However, the reference is not correct. Please provide the correct references. Open.
7. Ok, the unique identification numbers and the commissioning dates of the WTGs are provided in section A.4.1.4 of the PDD. However, the location of the WTGs (village, taluka and district ) mentioned in the PDD are not inline with same mentioned in the commissioning certificates. PP is requested to correct the same in the PDD. Open.

The CAR#03 is still open.

<b>Project Participant Response</b>	14/07/2012
<ol style="list-style-type: none"> <li>1. Now JSD-51 PPA contains the missing pages (page 17 to page 20)</li> <li>5. Correct reference is provided now.</li> <li>7. This has been corrected now.</li> </ol>	
<b>Documents/ information provided by the Project Participant:</b>	
1. PPA JSD-51	
<b>Reasoning for acceptance or non-acceptance:</b>	30/07/2012
<ol style="list-style-type: none"> <li>1. OK, PP has provided the complete copy of the PPA dated 29<sup>th</sup> March, 2012 for the WTG JSD – 51.</li> <li>5. OK, the correct reference of the latest guideline i. e. "GUIDELINES ON ASSESSMENT OF DEBUNDLING FOR SSC PROJECT ACTIVITIES version 03. has been provided in section A.4.5 of the PDD for demonstrating that the project activity is not a debundled component of a large scale project activity.</li> <li>7. Ok, the location of the WTGs (village, taluka and district ) have been corrected in section A.4.1.3 &amp; A.4.1.4 of the PDD, which has been found to be inline with the commissioning certificates of the WTGs.</li> </ol>	
The CAR is opened due to ITR comment:	
1) Status of other projects of PP (under CDM scheme) is not updated in section A.6 of PDD	
<b>Project Participant Response</b>	05/11/2014
One project of PP titled as "13.3 MW grid connected bundled wind electricity generation project at Rajasthan and Karnataka, India" is now registered and same is now updated in the section A.6 of the PDD.	
<b>Documents/information provided by the Project participant.</b>	
Revised PDD	



<b>Reason for acceptance or non-acceptance</b>	08/11/2014
<p>Validation team has checked the revised PDD and found that PP has now updated the status of other projects of PP and both the projects are registered with UNFCCC. The two projects are “Wind Energy Project at Jaisalmer district, Rajasthan by Enn Enn Corp Limited” (UNFCCC Ref no 8347) and “13.3 MW grid connected bundled wind electricity generation project at Rajasthan and Karnataka, India” (UNFCCC Ref no 7527). These are located in two different states, Rajasthan and Karnataka respectively. Hence the project boundaries of these projects are not within 1 km of the project boundary of the proposed small-scale activity at the closest point. Thus project is not de-bundled part of a large scale CDM registered project.          Hence, the CAR#03 has been closed satisfactory.</p>	
<b>Close out by Lead Assessor</b>	08/11/2014

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan		
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#04	<b>Reference</b>	AMS I. D. Version 17
<b>Details of the Finding:</b>		30-04-2012			
<ol style="list-style-type: none"> <li>PP is also requested to mention the name and version of the tools used for the project activity in accordance with the applied baseline and monitoring methodology.</li> <li>The applicability condition in the 2<sup>nd</sup> row of the table in section B.2 of the webhosted PDD is not completely inline with the applicability condition mentioned in the applied baseline and monitoring methodology AMS I. D. version 17. PP is requested to correct the same.</li> <li>PP is requested to mention the name of the grid in which the generated electricity will be supplied/ injected in the justification for the applicability condition 1 of the baseline and monitoring methodology AMS I. D.version 17 as mentioned in the table in section B.2 of the webhosted PDD.</li> <li>The applicability condition 2 of the methodology AMS I. D. version 17 has not been discussed in the table in section B.2 of the webhosted PDD. PP is requested to discuss the same.</li> </ol>					
<b>Project Participant Response</b>		22/05/2012			
<ol style="list-style-type: none"> <li>Name and version of the tool used for the project activity is mentioned in section B.1</li> <li>Applicability conditions are revised now and is inline with AMS I. D. version 17.</li> <li>Name of the grid is NEWNE and that is now mentioned in applicability condition-1.</li> <li>Applicability condition-2 is also now described in section B.2</li> </ol>					
<b>Documents/ information provided by the Project Participant:</b>					
Not Applicable					
<b>Evidences verified by Lead Assessor/ Assessor:</b>					
Revised PDD dated 22/05/2012					
<b>Reasoning for acceptance or non-acceptance:</b>		05/06/2012			



<ol style="list-style-type: none"> <li>OK, PP has provided the name and reference of the applicable tool i. e. Tool to calculate the emission factor for an electricity system, Version 2.2.1, in section B.1 of the PDD.</li> <li>OK, the applicability condition 2 of the methodology AMS I. D. version 17 has been corrected in section B.1 of the PDD.</li> <li>The electricity generated by the WTGs of the proposed CDM project activity will be fed to the NEWNE grid and the justification for the applicability condition 1 of the methodology AMS I. D. version 17 has been corrected to include the same.</li> <li>The table 2 as per the applied methodology AMS I. D. version 17 has not been provided and discussed in the PDD. PP is requested to discuss the table 2 of the methodology AMS I. D. version 17 in the PDD.</li> <li>The justification against the applicability condition 5 of the methodology in section B.2 of the PDD is not correct. PP is requested to correct the same.</li> </ol>	
<b>Project Participant Response</b>	18/06/2012
<ol style="list-style-type: none"> <li>Table-2 is presented and discussed now.</li> <li>Justification for applicability condition 5 of the methodology in section B.2 is revised now.</li> </ol>	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD version 3 dated 18/06/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	25/06/2012
<ol style="list-style-type: none"> <li>Ok the table 2 as per the applied methodology AMS I. D. version 17 has been provided and discussed in the section B.2 of the PDD. The validation team has checked the justification and as the project activity supplies electricity to grid as verified from PPA, hence accepted.</li> <li>Ok, the justification against the applicability condition 5 of the methodology in section B.2 of the PDD has been corrected and it is found to be project specific and is found to be accordance with applied methodology AMS I. D. version 17.</li> </ol> <p>Hence, the CAR#04 has been closed satisfactorily.</p>	
<b>Close out by Lead Assessor</b>	25/06/2012

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan
<b>Type of Finding</b>	CL	<b>No. of Finding</b>	#05
<b>Reference</b>	AMS I. D. Version 17		
<b>Details of the Finding:</b>	30-04-2012		
<ol style="list-style-type: none"> <li>PP is requested to mention in section B.4 of the PDD the reason for not considering the leakage due to the project activity.</li> </ol>			
<b>Project Participant Response</b>	22/05/2012		
<ol style="list-style-type: none"> <li>The reason for not considering the leakage is now described in the section B.4</li> </ol>			
<b>Documents/ information provided by the Project Participant:</b>			
Revised PDD			



<b>Evidences verified by Lead Assessor/ Assessor:</b>	
Revised PDD dated 22/05/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	05/06/2012
1. Ok, the implementation of the wind power project activity is a new project and the energy generating equipments have not been transferred from another activity. So, the leakage has not been considered for this project activity. The same has been described in section B.4 of the PDD. The CL#05 has been closed satisfactorily.	
<b>Close out by Lead Assessor</b>	05/06/2012

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan		
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#06	<b>Reference</b>	Attachment A to Appendix B & EB 62, Annex 5

<b>Details of the Finding:</b>	30-04-2012
<ol style="list-style-type: none"> <li>1. Please mention the latest version of Attachment A to Appendix B of the simplified Modalities and Procedures for small-scale project activities in section B.5 of the PDD.</li> <li>2. Please also clarify regarding the default value for expected return on equity calculated after taxes.</li> <li>3. PP is requested to incorporate transparently all the input values for the calculation of the IRR of the project activity along with the sources of all the input values in section B.5 of the PDD.</li> <li>4. PP is requested to explain whether all the input values used for the calculation of the IRR of the project activity were available and applicable at the time of investment decision taken for the implementation of the project activity.</li> <li>5. PP is requested to provide the detailed IRR calculation sheet of the project activity in excel format.</li> <li>6. The benchmark under para 8, page 7 of EB 62, Annex 5, is provided in the real terms however the financial analysis of the project activity is conducted on the nominal terms. Thus, the PP is requested to explain the same.</li> </ol>	

<b>Project Participant Response</b>	04/05/2012
<ol style="list-style-type: none"> <li>1. Latest version of Attachment A to Appendix B of the simplified Modalities and Procedures for small-scale project activities is mentioned in section B.5 of the PDD</li> <li>2. That has been revised as per the requirement.</li> <li>3. All the input values have been incorporated transparently now in section B.5 of the PDD.</li> <li>4. Sources mentioned for all the input values exhibit that all the input values are at the time of investment decision.</li> <li>5. Detailed IRR calculation sheet is provided.</li> <li>6. The benchmark has been converted to nominal term from the real term and it has been described in section B.5 of the PDD.</li> </ol>	

<b>Documents/ information provided by the Project Participant:</b>
1. Offer letter from Suzlon



2. Board resolution 3. IRR sheet 4. PLF report	
<b>Evidences verified by Lead Assessor/ Assessor:</b>	
1. Offer letter from Suzlon 2. Board resolution 3. IRR sheet 4. PLF report	
<b>Reasoning for acceptance or non-acceptance:</b>	05/06/2012
<p>1. OK, PP has applied the latest version 8 of Attachment A to Appendix B of the simplified Modalities and Procedures for small-scale project activities in section B.5 of the PDD for the demonstration of the additionality of the project activity.</p> <p>2. Ok, the name of the relevant host country i. e. India has been mentioned in section B.5 of the PDD for expected return on equity calculated after taxes.</p> <p>3. The source of all the input values used for the calculation of IRR of the project activity has not been provided in IRR calculation sheet and the section B.5 of the PDD. PP is requested to provide the same. Open.</p> <p>4. The source of all the input values have not been presented in the IRR calculation sheet and the section B.5 of the PDD. PP is requested to present the same. Furthermore, address the following issues raised on the calculation of the IRR of the project activity:</p> <ol style="list-style-type: none"> <li>i. The source of the transmission losses of 1% is not provided in the IRR sheet</li> <li>ii. Insurance charges of 0.10% is not provided in the IRR sheet</li> <li>iii. As per the Combined Summary of CERC &amp; SERCs regulations, the escalation in the O &amp; M cost is 5 % for the state of Gujarat. PP is requested to correct the same.</li> <li>iv. Land lease charged of Rs. 0.060 million is not provided in the IRR sheet</li> <li>v. The PPA has been signed under REC mechanism and have considered APPC as tariff. So, PP is requested clarify whether RECs have been considered at the time of investment decision by documentary evidences such as the 'letter of intent' from SEB for the applicable tariff.</li> <li>vi. The cost of land arrangement is not inline with the value provided in the offer letter. PP is requested to correct the same.</li> <li>vii. The cost of electrical supply and installation is not inline with the value provided in the offer letter, PP is requested to correct the same.</li> <li>viii. The cost of erection. Installation and commissioning is not inline with the value provided in the offer letter, PP is requested to correct the same</li> <li>ix. The cost of civil work and foundation is not inline with the value provided in the offer letter, PP is requested to correct the same.</li> <li>x. The evacuation charges are not in line with value provided in the offer letter, PP is requested to correct the same.</li> <li>xi. Please provide the weblink of the documents for the applicable income tax rate and minimum alternate tax rate in the IRR calculation sheet.</li> <li>xii. The escalation rate on O &amp; M cost in cell no. H16 of the 'P&amp;L' worksheet of the IRR calculation sheet is not as per the assumptions taken in the assumption worksheet. PP is requested to correct the same. PP is also requested to ensure that all the cells are interlinked and the input values are taken only from the worksheet titled "assumptions".</li> <li>xiii. Depreciation of Income tax has not been charged on Civil Work &amp; Foundation and Evacuation Charges etc. Please correct.</li> <li>xiv. Depreciation of S.L.M. of Companies Act has not been charged on Civil Work &amp; Foundation and Evacuation Charges etc. Please correct.</li> <li>xv. Depreciation charged on land arrangement is not correct. Please correct.</li> </ol> <p>5. Ok, PP has provided the detailed IRR calculation sheet for the project activity.</p>	



6. OK, the benchmark has been converted to nominal terms from the real term for a 10 year crediting period. The mean WPI inflation rate is 5.4% (expected inflation rate for 10 years) as published by Reserve Bank of India has been considered for the same. The WPI inflation rate has been added to the default value of the expected return on equity of 11.75%. Thus, the benchmark for the project activity is calculated to be 17.15%.

**Project Participant Response**

18/06/2012

3. Source of all the input values are provided now.

4.

- i. Transmission loss is removed now
- ii. Value of insurance charges has been revised to 0.15% and corresponding source is also mentioned.
- iii. The escalation on O and M cost is now revised to 5%
- iv. Land lease charge are removed now as no source could be obtained.
- v. REC was considered at the time of investment decision.
- vi. Cost of land arrangement is revised now.
- vii. The cost of electrical supply and installation is corrected now.
- viii. The cost of erection. Installation and commissioning is corrected now.
- ix. The cost of civil work and foundation is corrected now
- x. The evacuation charges are corrected now.
- xi. Weblinks are provided now.
- xii. It has been corrected now and each cell is checked to be linked with assumption sheet.
- xiii. It has been revised now.
- xiv. It has been revised now.
- xv. It has been revised and corrected now.

**Documents/ information provided by the Project Participant:**

Revised IRR calculation sheet dated 18/06/2012

**Reasoning for acceptance or non-acceptance:**

25/06/2012

3. OK, the source of all the input values have been provided in the IRR calculation sheet dated 18/06/2012.

4.

- i. Ok, the transmission losses have been removed from the IRR calculation sheet.
- ii. The weblink provided to substantiate the insurance charges belongs to tariff advisory committee Mumbai. Please clarify how it is applicable to Wind Power project in Gujarat. Open.
- iii. Ok, the escalation on O & M cost has been taken as 5% per annum as per the CERC tariff order, which is found to be acceptable. However, the O & M cost considered for the project activity i.e. Rs. 10 Lakhs/ Annum/ MW is much higher than the value considered in the GERC tariff order 2010 which is Rs. 6.50 lakhs/ MW for the first year and then an escalation of 5% per annum from 2<sup>nd</sup> year onwards. Please clarify why there is so much of difference . Open.



- iv. OK, the land lease charges have been removed from the IRR calculation of the project activity.
- v. The PPAs for the sale of electricity to the grid are based on the REC tariff. Please clarify and substantiate the response with the help of the documentary evidences such as letter of intent from SEBs on the tariff of the project activity. Open.
- vi. Ok, the cost of the land arrangement has been corrected now in the IRR calculation sheet as per the offer letter dated 11/04/2011 for the project activity.
- vii. OK, the cost of electrical supply and installation has been corrected now in the IRR calculation sheet as per the offer letter dated 11/04/2011 for the project activity.
- viii. The cost of erection, installation and commissioning in the IRR calculation sheet is still not inline with the value mentioned in the offer letter dated 11/04/2011 . Please correct.
- ix. The cost of civil work and foundation is still not inline with the value mentioned in the offer letter dated 11/04/2011 . Please correct.
- x. The evacuation charges are still not inline with the value mentioned in the offer letter dated 11/04/2011 . Please correct.
- xi. OK, the weblink of the documents for the applicable income tax rate and minimum alternate tax rate have been provided in the IRR calculation sheet. However, the income tax rate and the MAT considered in the IRR calculation sheet is not inline with the same considered in the GERC tariff order dated 2010. Please correct appropriately. Open.
- xii. The escalation rate on O & M cost in cell no. H16 of the 'P&L' worksheet of the IRR calculation sheet has been corrected as per the assumptions taken in the assumption worksheet and it is found to be correct.
- xiii. OK, the depreciation of Income tax has been charged on Civil Work & Foundation and Evacuation Charges etc. It is found to be correct and hence accepted.
- xiv. Ok, the depreciation of S.L.M. of Companies Act has not been charged on Civil Work & Foundation and Evacuation Charges etc. It is found to be correct and hence accepted.
- xv. OK, the depreciation charged on land arrangement is has been corrected.
- xvi. The book depreciation value considered in the IRR calculation sheet is not inline with the commission's ruling on page 24 of the GERC tariff order, 2010. Please correct. Open.

**Project Participant Response**

21/07/2012

4 ii. This is the standard TAC rate which can be applied to all projects.

iii. 6.5 lacs INR/MW is considered for tariff determination purpose by State regulatory board. But the investment analysis is done by the project proponent on the basis of actual offer submitted to the project proponent. IRR has been checked for an O&M cost at the rate of Rs. 0.65 mn INR MW. The IRR thus obtained was 8.20% which is again lower than the benchmark.

v. Please find a letter attached sent to state nodal agency.

viii. The cost of erection, installation and commissioning is now presented clearly where service tax of 10.3% is shown explicitly

ix. The cost of civil work and foundation is now presented clearly showing the tax component separately.

x. Evacuation charges are now presented clearly showing the tax component separately.



xi. The income tax rate and MAT rate is not inline with GERC tariff order but these rates are considered on the basis of actual rates applicable for year 2011-2012 which is more appropriate.

Income tax is calculated as 30% plus 7.5%(surcharge) plus 3%(education cess). All these values are for FY 2011-2012. In the same way, the MAT rate is also used for FY 2011-2012 which is 18%.

xvi. The depreciation value mentioned in the GERC tariff order is the one which is considered by the state government for tariff determination and hence the standard one. While IRR analysis uses the actual depreciation hence more appropriate and conservative too.

**Documents/ information provided by the Project Participant:**

Letter to GEDA

**Reasoning for acceptance or non-acceptance:**

30/07/2012

4. ii. The insurance charges are provided by the 'Insurance Information Bureau' which is an independent body under the Insurance Regulatory and Development Authority of India. Thus, the insurance charges provided by the PP has been applicable to the project activity in Gujarat.

4. iii. The O & M cost has been considered from the proposals of the project activity available at the time of investment decision of the project activity, which is at the rate of Rs. 10 Lakhs/ MW/ Annum. Since, the rate of O & M cost in the GERC tariff order is Rs. 6.5 Lakhs/ MW/ Annum, so a sensitivity on O & Cost of the project activity was conducted till Rs. 6.5 Lakhs/ MW/ Annum, which resulted in 8.30% IRR of the project activity, which is still lower than the benchmark of the project activity. Thus, the considered O & M cost of the project activity does not affect the additionality of the project activity.

v. The submitted letter which was sent to GEDA does not discuss anything on the tariff of the electricity to be generated by the project activity. So, it is not possible to reach at any conclusion on the basis of this letter. Furthermore, the PPAs of the project activity are also signed under the REC mechanism. So, PP is requested to clarify why the preferential tariff has been considered in the IRR calculation sheet in place of the APPC and why the REC benefits have not been considered in the calculation of the IRR calculation sheet. Open.

viii. Ok, now the service tax has been corrected to 10.3% for the cost of erection, installation and commissioning in the IRR calculation sheet and it is found to be correct now.

ix. Ok, the cost of civil work and foundation has been corrected now and is found to be inline with the value mentioned in the offer letter dated 11/04/2011 .

x. OK, the evacuation charges have now been presented clearly showing the applied service tax. This is found to be inline with the value mentioned in the offer letter dated 11/04/2011.

xi. The income tax rate and minimum alternate tax rate have been provided in the IRR calculation sheet for the assessment year 2011-12, however, PP is requested to provide the values for the financial year 2011-12 as the investment decision date for the project activity is 18/04/2011. Please correct appropriately. Open.

xvi. Ok, the depreciation of the project activity has been corrected in the IRR sheet and in the revised PDD as per the commission's ruling on page 24 of the GERC tariff order, This has been found to be correct and hence accepted.



<b>Project Participant Response</b>	22/08/2012
v. The REC policy has been launched in November 2010 which is clearly adopted after 11 Nov 2001 and hence comes under the category of E- (E minus) policy. Therefore in accordance to EB-16, Annex-3, for this project, financial analysis has to be considered in such a way that no such policy was into the existence.  Therefore the tariff for the project activity is considered as if there is no REC policy. And hence, the preferential tariff is considered not the APPC price.  xi. Now the income tax rate and minimum alternative tax rate for financial year 2011-12 is used.	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD version 06 dated 17/08/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	28/08/2012
v. The REC policy is to promote the renewable energy projects in India. Thus, it is a E- policy. This policy has come into existence after the adoption of the CDM M & P by COP i.e. after 11 November, 2001. Thus, the preferential tariff has been used for the assessment of the additionality instead of the Average Power Purchase Cost of electricity as per the REC policy. This is found to be inline with the para 7 (b) of EB 22, Annex 3.  xi. OK, PP has corrected the income tax rate and minimum alternate tax rate in the IRR calculation sheet as per the financial year 2011-12. However, provision for tax from 4 <sup>th</sup> year onwards is incorrect as there are brought forwards losses are exists. Provision for Tax as per MAT under section 115JB of Income Tax Act to be made in the case of availability of taxable profit.  xvi Depreciation has been charged on total cost of assets while depreciation to be charged on total cost less salvage value of assets. Open.  xvii. The attachment A to Appendix B has been used in section B.5 of the PDD for the demonstration of the additionality of the project activity. PP is requested to apply the latest 'Guidelines on the demonstration of additionality of small-scale project activities, Version 09', EB 68, Annex 27 in place of Attachment A to Appendix B'. Open.  Thus, the CAR#06 is still open.	
<b>Project Participant Response</b>	14/09/2012
xi. This is the standard method of calculating tax. MAT is applied on the project activity and if you observe maximum of the two, income tax and MAT is considered which means both are not considered simultaneously.  xvi: If the calculation is observed carefully, it reveals that the depreciation as per company's act is charged on total cost less salvage value. Because for the first 10 years, it is 6% and for the last 10 years, it is 2% which aggregates to 80% of the total project cost. 20% is the salvage value.  xvii. Now thw latest "Guidelines on the demonstration of additionality of small-scale project activities, Version 09', EB 68, Annex 27" is applied.	



<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD version 07 dated 28/08/2012 Revised IRR Calculation sheet dated 28/08/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	14/09/2012
xi. Ok, the MAT and income tax has not been applied simultaneously for the calculation of the IRR of the project activity, however Income tax rate is different for calculation of provision for tax in Profit & Loss account and calculation of tax shield in cash flow statement. PP is requested to correct the same and to link all the input parameters with the values provided in 'assumptions' work sheet. Open.	
xvi. Depreciation as per SLM has been charged in according to GERC tariff order while Depreciation as per SLM to be charged as per companies Act,1956 being EECL a private limited company. Open.	
xvii. OK, the PP has now applied the latest "Guidelines on the demonstration of additionality of small-scale project activities, Version 09", EB 68, Annex 27" fro the demonstration of the additionality.	
Thus, the CAR#06 is still open.	
<b>Project Participant Response</b>	14/09/2012
xi. It has been revised and all the input parameters are connected with the assumption sheet now.	
xvi. Now depreciation is considered as per companies act, 1956.	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD version 08 dated 14/09/2012 Revised IRR calculation sheet dated 14/09/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	01/12/2012



xi. OK, the income tax rate for calculation of provision for tax in Profit & Loss account and calculation of tax shield in cash flow statement has been made consistent and it has also been linked with the value provided in the assumptions sheet.

xvi. The depreciation considered in the investment analysis of the project activity is as per Schedule XIV of the Companies Act. This has been verified with the Schedule XIV of The Companies Act, which is authentic source for this information and found to be applicable to the project activity at the time of investment decision/65/.

CAR has been opened due to ITR comments

- (a) PP is requested to clarify how default benchmark has been used as it was not available at the time of decision making.
- (b) All the input parameters used in IRR calculations are not mentioned in section B.5 of PDD.
- (c) PP is requested to clarify regarding insurance.
- (d) Source mentioned for IT depreciation and interest rate are not clear.
- (e) PP has considered REC benefits in the project but details of the same are not mentioned in PDD
- (f) Sensitivity range is not justified as per actual parameters.

<b>Project Participant Response</b>	01/12/2012
<ul style="list-style-type: none"> <li>(a) PP had calculated return on equity based on CAPM at the time of decision making. The detailed calculations are provided to the validation team. The return on equity as per CAPM works out to be 16.24%. PP has also compared this return on equity with the default value as per EB-62, Annex-5. The default return on equity after considering the inflation works out to be 17.78%. As the return on equity using CAPM is conservative, the same is considered as benchmark for the project activity.</li> <li>(b) All the input parameters have been mentioned in section B.5 of the PDD including debt/equity ratio, lifetime, MAT and salvage value.</li> <li>(c) In the revised IRR sheet, insurance has been removed now.</li> <li>(d) The source for IT depreciation has been corrected and source mention is income tax rules. The interest rate has been taken from RBI and it is correctly mentioned in the revised PDD.</li> <li>(e) The details on REC is now included in section B.5 of the PDD. REC mechanism is E- policy as it came into existence after 11 Nov 2001 and it provides comparative advantage to less carbon intensive technologies over more carbon intensive technologies.</li> <li>(f) CA certificate for actual project cost has been provided to the validation team. Actual cost is 8.5% lower and sensitivity has been done upto -10% of project cost which covers actual cost also. All the wind mills were commissioned by 29/03/2012 hence 1 year PLF data is not available for all the machines. O&amp;M contract for the machines have not been signed and are in the process. Though we have carried out sensitivity for the value of O&amp;M expense given in the GERC tariff order 2010 (0.65mn INR per MW) and IRR comes out to be 10.57% which is still below the benchmark. Actual Interest rate is 13% while interest rate considered in IRR calculation is 9.5%, thus conservative.</li> </ul>	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD and revised IRR sheet	
<b>Reasoning for acceptance or non-acceptance:</b>	01/12/2012



PP is requested to explain following

1. Book depreciation rate as per Company's Act as used is not correct.
2. MAT rate applied is not correct..
3. Deductions U/S 80 IA is not correct.
4. PP is requested to clarify regarding the service tax in Capital cost
5. Debt percentage mentioned is not correct and total capital cost are not correct
6. CER price is not mentioned and date for which exchange rate is taken is not mentioned
7. IRR vales for Sensitivity analysis are not mentioned.

CAR #06 is still open

**Project Participant Response**

02/12/2012

1. Book depreciation rate has been corrected as per Schedule XIV of Company's act
2. MAT rate has been corrected as per Income Tax Act, FY 2011-12
3. Deductions U/S 80 IA is corrected now.
4. Service tax is removed from all parameters in IRR sheet.
5. Debt equity ratio has been corrected to 70:30 and capital cost is also corrected.
6. CER price is mentioned and date of exchange rate is taken is also mentioned as 7<sup>th</sup> March 2011 which is applicable at the time of decision making.
7. IRR vales for Sensitivity analysis are now mentioned in the IRR sheet.

**Documents/ information provided by the Project Participant:**

Revised PDD, IRR

**Reasoning for acceptance or non-acceptance:**

02/12/2012

1. Book depreciation has been corrected to 4.75% which is in line with Schedule XIV of The Company Act, hence accepted.
2. MAT rate has been corrected to 20.01% which is as per Income Tax Act for FY 2011-12, hence accepted.
3. Deductions under section 80 IA have been corrected in revised IRR excel spreadsheet and hence accepted.
4. Service tax has been removed from various parameters in IRR which is conservative, hence accepted
5. Debt equity ratio has been corrected to 70:30 which is taken from GERC tariff order which is applicable at the time of decision making, hence accepted.
6. CER price is mention in IRR calculation and link has been provided and the same has been checked by the validation team. Exchange rate has also been provided for 7/03/2012 and source has been checked by validation team and found to be correct. CER price and exchange rate are applicable at the time of decision making hence accepted.
7. IRR values for sensitivity are mentioned in IRR sheet and same has been checked by validation team and found to be correct.

The CAR is opened due to ITR comment:

- 1) Justification for likelihood of breaching cross-over points in sensitivity analysis is not mentioned in PDD.



<b>Project Participant Response</b>	05/11/2014
Now, justifications for likelihood of breaching cross-over points for all the parameters in sensitivity analysis are explicitly mentioned in the PDD.	
<b>Documents/information provided by the Project participant.</b>	
Revised PDD	
<b>Reason for acceptance or non-acceptance</b>	08/11/2014
<p>Validation team has checked the revised PDD and found that PP has now incorporated the justifications for likelihood of breaching cross-over points for all the parameters considered sensitivity analysis. Further, validation team has checked the revised IRR sheet (with REC and without REC) and found that the IRR will not cross the benchmark in any circumstance.</p> <p>a) Equity IRR without REC: The actual project cost is 7.5 % lower than the cost considered at the time of decision making equity IRR would cross the benchmark if the project cost decreased by -26.44%. As actual project cost has already been incurred, the cost cannot go any further down. Equity IRR would cross the benchmark if the O&amp;M cost decreased by -154.90% which is not a realistic scenario. The actual PLF for April 2012 to March 2013 is 21.33% and actual PLF for April 2013 to March 2014 is 17.21% which are lower than PLF considered at the time of decision making. Hence increase of 29.12% is not realistic. The validation team also checked registered project ref no 9924 and found that PP has also considered electricity tariff at the rate of INR 3.56 per kWh the wind projects which is the same value as considered by EEPL. Thus, validation team concludes that PP has appropriately considered the electricity tariff for IRR calculation and increase of 29.12% is not realistic.</p> <p>b) Equity IRR with REC: The actual project cost is 7.5 % lower than the cost considered at the time of decision making. equity IRR would cross the benchmark if the project cost decreased by -11.06%. As actual project cost has already been incurred, the cost cannot go any further down. The actual O&amp;M cost is 9.52% lower than O&amp;M cost considered at the time of decision making and equity IRR would cross the benchmark if the O&amp;M cost decreased by -64.50% which is not a realistic scenario. The actual PLF for April 2012 to March 2013 is 21.33% and actual PLF for April 2013 to March 2014 is 17.21% which are lower than PLF considered at the time of decision making. Hence increase of 10.39% is not realistic. Project participant has signed PPA at APPC tariff of INR 2.64/KWh. The actual REC traded price by PP in various trading sessions from 26/12/2012 to 30/10/2013 at power exchange was INR 1.5/ kWh. The actual tariff (non preferential tariff as per PPA and actual REC price) works out to be INR 4.14 /KWh which is less than the tariff considered at the time of decision making and increase of 10.3% is not realistic.</p> <p>As the above mentioned correction has been made by PP and the same has been checked by validation team and they are found to be correct,</p> <p>Hence the CAR #06 is closed satisfactorily</p>	
<b>Close out by Lead Assessor</b>	08/11/2014



<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan		
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#07	<b>Reference</b>	EB 62, Annex 13
<b>Details of the Finding:</b>		30-04-2012			
1. PP is requested to provide the evidences for all the milestones achieved for the prior CDM consideration for the proposed CDM project activity as mentioned in section B.5 of the PDD and in accordance with the requirement of EB 62, Annex 13.					
<b>Project Participant Response</b>		04/05/2012			
Intimation has been sent to UNFCCC as well as MOEF, India to seek CDM status within six months of start date and is in accordance with the requirement of EB 62, Annex 13 . Copies of these intimation emails are provided.					
<b>Documents/ information provided by the Project Participant:</b>					
Intimation emails					
<b>Reasoning for acceptance or non-acceptance:</b>		05/06/2012			
PP has provided the copy of the intimation e-mail sent to the UNFCCC. However, the intimation e-mail sent to the Indian DNA has not been provided. PP is requested to provide the copy of the intimation e-mail sent to the host country DNA and standardized form F-CDM-Prior Consideration sent to UNFCCC and Indian DNA. Open.					
<b>Project Participant Response</b>		18/06/2012			
Intimation email sent to DNA and F-CDM form is also provided now.					
<b>Documents/ information provided by the Project Participant:</b>					
Intimation e-mail dated 11/10/2011 sent to NCDMA of India					
<b>Reasoning for acceptance or non-acceptance:</b>		27/06/2012			
OK, PP has provided the e-mail evidence dated 11/10/2011 notifying the National CDM Authority of India regarding the implementation of the 12.6 MW wind Power Project in Gujarat. It is found to be correct and hence accepted.					
Thus, it has been verified with the UNFCCC CDM website <a href="http://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html">http://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html</a> and the e-mail sent to the NCDMA by the PP that the CDM was duly considered for the project activity prior to the implementation of the wind power project activity.					
Thus, the CAR#07 has been closed satisfactorily.					
<b>Close out by Lead Assessor</b>		27/06/2012			



<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan		
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#08	<b>Reference</b>	EB 63, Annex 19
<b>Details of the Finding:</b>		30-04-2012			
<ol style="list-style-type: none"> <li>1. PP is requested to apply the latest available version of tool to calculate the emission factor for an electricity system for the calculation of the emission factor for the project activity.</li> <li>2. Please provide the source/ weblink for the CO2 Baseline database version 6 as mentioned in section B.6. 1 of the webhosted PDD.</li> <li>3. Please provide the emission reduction calculation sheet and emission factor calculation sheet for the project activity.</li> <li>4. Please mention the source/ weblink of the CEA CO2 Baseline Database in the table in section B.6.2 of the PDD. Furthermore, please ensure that the CO2 Baseline Database used for the determination of emission factor of the project activity was the latest data available at the time of PDD provided to the DOE for the validation as per the requirement of 'tool to calculate the emission factor of an electricity system'.</li> </ol>					
<b>Project Participant Response</b>		04/05/2012			
<ol style="list-style-type: none"> <li>1. Latest version of tool is applied now and it is now , "Tool to calculate the emission factor for an electricity system, Version 2.2.1"</li> <li>2. It is provided now in the section B.4</li> <li>3. Emission reduction sheet along with emission factor calculation sheet is provided now.</li> <li>4. It has been mentioned in section B.4 and the CO2 Baseline Database and is the latest available.</li> </ol>					
<b>Documents/ information provided by the Project Participant:</b>					
<ol style="list-style-type: none"> <li>2. <a href="http://www.cea.nic.in/reports/planning/cdm_co2/user_guide_ver6.pdf">http://www.cea.nic.in/reports/planning/cdm_co2/user_guide_ver6.pdf</a></li> <li>3. ER-sheet</li> </ol>					
<b>Evidences verified by Lead Assessor/ Assessor:</b>					
<ol style="list-style-type: none"> <li>2. <a href="http://www.cea.nic.in/reports/planning/cdm_co2/user_guide_ver6.pdf">http://www.cea.nic.in/reports/planning/cdm_co2/user_guide_ver6.pdf</a></li> <li>3. ER-sheet</li> </ol>					
<b>Reasoning for acceptance or non-acceptance:</b>		05/06/2012			
<ol style="list-style-type: none"> <li>1. The latest applicable version of the 'tool to calculate the emission factor of an electricity system' has not been applied in all the places of the PDD. Furthermore, the calculation of the emission factor is not inline with the requirement of the 'tool to calculate the emission factor of an electricity system'. So, PP is requested to calculate the emission factor as per the 'tool to calculate the emission factor of an electricity system' in the ER calculation sheet and in the PDD. Open.</li> <li>2. The reference of the latest CEA database at the time of submission of the PDD to DOE has not been mentioned in section B.6.1 of the PDD. PP is requested to correct the same. Open.</li> <li>3. Ok, PP has provided the emission reduction and emission factor calculation sheet. However, the calculation of emission factor in the ER calculation sheet is not correct. PP is requested to correct it as per the latest applicable emission factor calculation tool for an electricity system. Open.</li> <li>4. The weblink for the CEA CO2 Baseline Database in the table in section B.6.2 of the PDD has not been mentioned. Please mention. Open.</li> </ol>					



<b>Project Participant Response</b>	18/06/2012
<ol style="list-style-type: none"><li>1. Now only the latest version of the tool “Tool to calculate the emission factor of an electricity system version 0.2.2.1” is used. It has been corrected at all places in PDD. The emission factor is calculated in accordance to this latest tool</li><li>2. Reference of latest CEA database is provided now.</li><li>3. Emission reduction sheet is revised as per the latest CEA database</li><li>4. Weblink for CEA database is mentioned now.</li></ol>	
<b>Documents/ information provided by the Project Participant:</b>	
<ol style="list-style-type: none"><li>1. Revised PDD version 3 dated 18/06/2012</li><li>2. Revised ER calculation sheet dated 18/06/2012</li></ol>	
<b>Reasoning for acceptance or non-acceptance:</b>	27/06/2012
<ol style="list-style-type: none"><li>1. OK, PP has applied the latest version 2.2.1 of the ‘tool to calculate the emission factor of an electricity system’. However, the calculation of the emission factor is still not correct and not inline with the requirement of the ‘tool’. Please correct. Open.</li><li>2. Ok, the reference of the latest CEA database available at the time of submission of the PDD to DOE has now been mentioned in section B.6.1 of the PDD. It is found to be correct and hence accepted.</li><li>3. The calculation of emission factor in the ER calculation sheet is still not correct. PP is requested to correct it as per the latest applicable emission factor calculation tool for an electricity system. Open.</li><li>4. The weblink for the CEA CO2 Baseline Database in the table in section B.6.2 of the PDD has now been provided. It is found to be correct and hence accepted..</li></ol> <p>The CAR#08 is still open.</p>	
<b>Project Participant Response</b>	30/07/2012
<ol style="list-style-type: none"><li>1. This has been revised in the ER sheet.</li><li>3. This has been revised in the ER sheet.</li></ol>	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD version 4 dated 14/07/2012 and the revised IRR calculation sheet	
<b>Reasoning for acceptance or non-acceptance:</b>	18/08/2012
<ol style="list-style-type: none"><li>1. &amp; 3 OK, the ex- ante emission factor for the project activity has been calculated correctly in accordance with the version 2.2.1 of the ‘tool to calculate the emission factor of an electricity system’. However, the value has been rounded up. PP is requested to use the round down value to be conservative. The PP is also requested to consider the rounded down value of the emission reductions and to revise the ER calculation sheet and the PDD.</li></ol>	



The CAR#08 is still open.	
<b>Project Participant Response</b>	22/08/2012
Value of emission factor is rounded down now to maintain the conservativeness.	
<b>Documents/ information provided by the Project Participant:</b>	
1. Revised PDD version 06 dated 17/08/2012 2. Revised ER calculation sheet	
<b>Reasoning for acceptance or non-acceptance:</b>	28/08/2012
1. The emission reductions have now been rounded down in the revised ER calculation sheet to be conservative. The final value of the ER calculation is 21085 t CO <sub>2</sub> , the same has also been corrected in the revised PDD.	
Thus, the CAR#08 has been closed satisfactorily.	
<b>Close out by Lead Assessor</b>	28/08/2012

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan		
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#09	<b>Reference</b>	AMS I. D. Version 19
<b>Details of the Finding:</b>	30-04-2012				
<ol style="list-style-type: none"> <li>As per the project boundary diagram mentioned in section B.3 of the webhosted PDD and during the site visit of the project activity it was noted that other WTGs which are not part this proposed CDM project activity are connected to the same substation meter. So, PP is requested to provide a proper apportioning procedure for the measurement of the electricity generated by the proposed CDM project activity in the PDD and to revise the monitoring plan accordingly.</li> <li>PP is also requested to provide the supporting document for the apportioning procedure applied to monitor the net electricity exported to the grid by the proposed CDM project activity.</li> <li>During the site visit of the project activity it was also noted that one 'ABT meter' was also installed along with the main meter and the check meter at the substation. PP is requested to clarify what exactly the ABT meter is and why it has been installed and please provide the suitable evidences to support the same.</li> </ol>					
<b>Project Participant Response</b>	04/05/2012				
<ol style="list-style-type: none"> <li>The apportioning method is explicitly discussed in the section B.7.2</li> <li>The apportioning method is explicitly discussed in the section B.7.2</li> <li>ABT (<b>Availability-based Tariff</b>) is a commercial tariff regime designed to inculcate grid discipline and to provide a system for commercial settlement for pricing 'unscheduled' transactions at grid level. The information required by participants of the scheme in India, using data from each of the 15-minute blocks that are used in managing the grid. The specially-developed software calculates, in real time, the projected financial impact for participants for each 15-minute block, based on the amount of energy drawn from or supplied to the grid. Reports generated by the software can be used for day-ahead forecasting and for balancing the conflicting</li> </ol>					



demands of generators and large consumers.

**Documents/ information provided by the Project Participant:**

3. <http://www.securetogether.com/Availability-based-Tariff-%28ABT%29-Accounting-and-Management-Service.aspx>

**Evidences verified by Lead Assessor/ Assessor:**

3. <http://www.securetogether.com/Availability-based-Tariff-%28ABT%29-Accounting-and-Management-Service.aspx>

**Reasoning for acceptance or non-acceptance:**

05/06/2012

1. The monitoring procedure provided in section B.7.1 of the PDD is not inline with the requirement of para 24 (point 5) of the applied methodology AMS I. D. version 17, which requires the monitoring plan to be of continuous monitoring, hourly measurement and at least monthly recording. Furthermore, please ensure that the monitoring plan in section B.7.1 of the PDD complies with requirement of para 17 of EB 61, Annex 21. Open.
2. The parameters/ abbreviations for the parameters used in section B.7.2 of the PDD are not consisting with the parameters used in section B.7.1 of the PDD. PP is requested make the monitoring plan consistent in section B.7.1 and B.7.2 of the PDD. Open.
3. During site visit of the project activity it was found that the intra state ABT meters have already been implemented at the project activity site. So, PP is requested to clarify how readings of the ABT meters will be taken in account as the clause 5.4 of the PPA of the project activity states that "The other provisions of Intra State ABT and Open Access Regulations appearing in this agreement shall also be applicable only after the intra-state ABT is implemented." Open.

**Project Participant Response**

18/06/2012

1. Monitoring procedure is revised now and is inline with the requirement of para 24 (point 5) of the applied methodology AMS I. D. version 17
2. Now parameters/abbreviation are consistent
3. The ABT meters are used to download data directly by State Load Dispatch Center (SLDC) and hence the data hence obtained is used for forecasting by SLDC.

**Documents/ information provided by the Project Participant:**

1. Revised PDD version 3 dated 18/06/2012
2. Revised ER calculation sheet dated 18/06/2012

**Reasoning for acceptance or non-acceptance:**

27/06/2012

1. The monitoring procedure provided in section B.7.1 of the PDD is still not inline with the requirement of para 24 (point 5) of the applied methodology AMS I. D. version 17, which requires the monitoring plan to be of continuous monitoring, hourly measurement and at least monthly recording. Please correct. Open
2. The parameters/ abbreviations for the parameters used in section B.7.2 of the PDD have been made consistent with the parameters used in section B.7.1 of the PDD. The same has been checked and found to be correct.
3. The above explanation regarding the implementation of the ABT meters and their use as mentioned in section Article 5 of the PPA is not clear. Please clarify it further and provide the supporting documents to substantiate the same. Open
4. Please provide the complete copies of the all the PPAs. The PPAs submitted till date do not have all the pages. Open.

The CAR#09 is still open.



<b>Project Participant Response</b>	30/07/2012
<p>1. This has been revised in the PDD now.</p> <p>3. ABT meters are used to provide continuous data which can be monitored by government officials for load profiling and load management. While main meter and backup meters are used to take the readings for monitoring electricity</p> <p>4. JSD-51 didn't contain the missing pages 17-20. These pages are now included and JSD-51 PPA is being sent again.</p>	
<b>Documents/ information provided by the Project Participant:</b>	
<b>Reasoning for acceptance or non-acceptance:</b>	18/08/2011
<p>1. The monitoring procedure provided in section B.7.1 of the PDD has been made inline with the requirement of para 24 (point 5) of the applied methodology AMS I. D. version 17, which requires the monitoring plan to be of continuous monitoring, hourly measurement and at least monthly recording. However, PP is also requested to amend the monitoring plan in section B.7 to be inline with the requirement of para 14 of EB 66, Annex 23 and para 97 of EB 65, Annex 5. Open.</p> <p>3. As per the clause no. 5.4 of the ABT meter which states that 'till the ABT meter is implemented, the certificate issued by GEDA for generation share of wind turbine shall be acceptable for monthly energy bill.' This means after the implementation of the ABT meters the monitoring procedure will be different than the described monitoring procedure in the section B.7 of the PDD, which includes the main meter and the check meters installed at the substation. PP is requested to further clarify the same. Open.</p> <p>4. OK, the complete copies of the PPAs have been provided.</p>	
<b>Project Participant Response</b>	22/08/2012
<p>1. The monitoring plan is amended in accordance to para-14 of EB-66, Annex 23 and para 97 of EB 65, Annex 5.</p> <p>3. As mentioned earlier, ABT meters are used to provide continuous data which can be monitored by government officials for load profiling and load management. While main meter and backup meters are used to take the readings for monitoring electricity.</p>	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD version 06 dated 17/ 08/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	28/08/2012
<p>1. OK, the monitoring plan covers all the aspects of the para 97 of EB 65, Annex 5. However, the calibration frequency of the energy meters in section B.7.1 and B.7.2 of the PDD is not same. PP is requested to correct it. Open.</p> <p>3. Ok, the main meter and check meters installed at the substation will be used for the monitoring of the electricity. However, the ABT meters installed at the substation will be used to provide continuous data which can be monitored by government officials for load profiling and load management.</p>	



Thus, the CAR#09 is still open.	
<b>Project Participant Response</b>	28/08/2012
1. Now, the consistency in calibration is maintained in both the sections B.7.1 and B.7.2. Calibration frequency is now considered once in a three year throughout.	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD version 07 dated 28/08/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	01/12/2012
<p>1. Ok, the calibration frequency of the energy meters has been made consistent in section B.7.1 and B.7.2.</p> <p>CAR has been opened due to ITR comments</p> <p>Source of data mentioned in Table B 7.1 for parameter EGy is not clear. Measurement methods and procedures to be applied for EGy are also not clear.</p> <p>Methodology requires continuous monitoring, hourly measurements and monthly recording which is not clearly mentioned in PDD.</p> <p>PP is requested to clarify on the apportioning details as mentioned in section B 7.2 of PDD. Also clarify regarding ABT meter.</p>	
<b>Project Participant Response</b>	01/12/2012
<p>The source of data for parameter EGy is certificate for share of electricity generated/issued by SLDC. The measurement methods and procedures have been revised in section B.7.1 of revised PDD inline with actual monitoring being carried out at site.</p> <p>Continuous monitoring , hourly measurements and monthly recording is mentioned in the revised PDD.</p> <p>Apportioning of net electricity supplied to grid by WTGs of project activity is being carried out. Apportioning is being carried out based on reading of meters at substation and meter at WTG. Apportioning is not under the control of PP and data is not shared with PP. SLDC issues certificate of share of electricity generated which provides net electricity exported to grid by WTGs of PP and this forms basis of emission reduction calculations. The apportioning details are accordingly revised in the updated PDD.</p> <p>ABT meter is used for the purpose of monitoring the net electricity exported to grid at the substation. The details are discussed now in section B.7.1 and B.7.2</p>	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD	
<b>Reasoning for acceptance or non-acceptance:</b>	01/12/2012
<p>Section B.7.1 has been revised correctly in revised PDD in line with actual monitoring being carried out at site. Source of data for EGy has been corrected and it is found to be correct. Revised PDD has been updated in regard to continuous monitoring, hourly measurement and monthly recording, section B.7.2 has been revised correctly. PP has clarified that apportioning is not under the control of PP and SLDC (statutory body) issues certificate of share of electricity which forms basis of emission reduction which is found to be correct. PP has also clarified that electricity is measured by ABT meter at sub-station which is correct. As above mentioned corrections have been made and found</p>	



to be correct, hence CAR #09 has been closed.			
<b>Close out by Lead Assessor</b>		01/12/2012	
<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#10
<b>Reference</b>	PDD, section B.7.2		
<b>Details of the Finding:</b>		30-04-2012	
PP is requested to provide the copy of Operations and Maintenance Agreement signed between Suzlon & EECL as mentioned in section B.7.2 of the webhosted PDD.			
<b>Project Participant Response</b>		04/05/2012	
It has not been signed yet hence this statement is also revised in action B.7.2			
<b>Documents/ information provided by the Project Participant:</b>			
Not Applicable			
<b>Evidences verified by Lead Assessor/ Assessor:</b>			
Not Applicable			
<b>Reasoning for acceptance or non-acceptance:</b>		05/06/2012	
Ok, the Operations and Maintenance Agreement has not been signed between Suzlon & EECL yet and the statement in section B.7.2 of the PDD has been corrected accordingly. Hence, the CAR#10 has been closed satisfactorily.			
<b>Close out by Lead Assessor</b>		05/06/2012	

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan	
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#11	<b>Reference</b>
Attachment A to Appendix B, EB 41, para 67 & EB 62, Annex 5				
<b>Details of the Finding:</b>		30-04-2012		
1. PP is requested to provide the copies of the purchase orders of the project activity to substantiate the start date of the project activity as mentioned in section C.1.1 of the webhosted PDD.				
2. PP is requested to provide evidences to substantiate the expected operational life of the project activity as mentioned in section C.1.2 of the webhosted PDD.				
<b>Project Participant Response</b>		04/05/2012		
1. Purchase order is submitted now.				
2. Operational life is mentioned in the Technical specification sheet which is provided now.				



<b>Documents/ information provided by the Project Participant:</b>	
<ol style="list-style-type: none"> <li>Purchase orders.</li> <li>Technical specification</li> </ol>	
<b>Evidences verified by Lead Assessor/ Assessor:</b>	
<ol style="list-style-type: none"> <li>Purchase orders.</li> <li>Technical specification</li> </ol>	
<b>Reasoning for acceptance or non-acceptance:</b>	05/06/2012
<ol style="list-style-type: none"> <li>The PP has provided the copies of the purchase orders of the 6 nos. of 2.1 WTGs to be installed at Jasdan site in Gujarat. The date of the purchase orders is 20<sup>th</sup>, April, 2011. Thus, the start date of the project activity is 20/04/2011 as per para 67 of EB 41.</li> <li>The expected operational lifetime of the project activity is 20 years. This has been confirmed with the technical specifications of the project activity.</li> </ol> <p>The CAR is opened due to ITR comment:</p> <p>1) Start date of crediting period has expired. Correction is required.</p>	
<b>Project Participant Response</b>	05/11/2014
Start date of crediting period is now revised in the section C.2.2 of the PDD.	
<b>Documents/information provided by the Project participant.</b>	
Revised PDD	
<b>Reason for acceptance or non-acceptance</b>	08/11/2014
Validation team has checked the revised PDD and found that PP has now considered 01/12/2014 or the date of registration whichever is later as the start date of the crediting period which is realistic considering the progress of the validation. Thus, the CAR#11 has been closed satisfactorily.	
<b>Close out by Lead Assessor</b>	08/11/2014

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan		
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#12	<b>Reference</b>	VVM Ver. 1.2 Para 128
<b>Details of the Finding:</b>		30-04-2012			
<ol style="list-style-type: none"> <li>PP is requested to provide the copies of the public notices and the invitation letters sent to invite the local stakeholders.</li> </ol>					



2. PP is requested to provide the copy of the minutes of meeting of the local stakeholder consultation as mentioned in section E.1 of the PDD.	
<b>Project Participant Response</b>	04/05/2012
1. Public notice as well as invitation letters is provided. 2. Minutes of meeting is submitted.	
<b>Documents/ information provided by the Project Participant:</b>	
1. Public Notice 2. Invitation letter 3. Minutes of meeting	
<b>Evidences verified by Lead Assessor/ Assessor:</b>	
1. Public Notice	
<b>Reasoning for acceptance or non-acceptance:</b>	05/06/2012
1. OK, PP has provided the copy of the public notice published in local news paper dated 18/10/2011 for the local stakeholder consultation meeting to be held at Rajpara substation, Taluka Chotila, District – Surendranagar on 24/10/2012. However, the copy of the invitation letter has not been submitted. PP is requested to submit the same. Open. 2. The minutes of meetings of local stakeholder consultation meeting held at Rajpara substation, Taluka Chotila, District – Surendranagar on 24/10/2012 has not been submitted. PP is requested to submit the same. Open.	
<b>Project Participant Response</b>	18/06/2012
2. Copy of invitation letter is submitted now. 3. Minutes of meeting is also submitted now.	
<b>Documents/ information provided by the Project Participant:</b>	
Invitation letter Minutes of meeting	
<b>Reasoning for acceptance or non-acceptance:</b>	27/06/2012



1. There is only one stakeholder invitation letter submitted which was sent to NCDMA of India. PP is requested to submit the copies of all the invitation letters sent to the stakeholders as mentioned in section E.1 of the PDD. Open.
2. The minutes of meeting dated 24<sup>th</sup> October, 2011 does not contain the signatures of all the attendees of the local stakeholder consultation meeting. Please clarify how it is confirmed that the local stakeholder consultation meeting was attended by the stakeholders mentioned in the submitted 'minutes of meeting' dated 24<sup>th</sup> October, 2011. Open.

The CAR#12 is still open.

<b>Project Participant Response</b>	21/07/2012
<ol style="list-style-type: none"> <li>1. The sample letter is submitted.</li> <li>2. Attendance sheet is separately submitted now which contains signature of all the attendees</li> </ol>	
<b>Documents/ information provided by the Project Participant:</b>	
Attendance sheet	
<b>Reasoning for acceptance or non-acceptance:</b>	18/08/2012
<ol style="list-style-type: none"> <li>1. PP has submitted the sample copy of invitation letter sent to NCDMA of India as an evidence that the local stakeholders as identified in section E.1 of the PDD have been invited through invitation letters.</li> <li>2. OK, PP has submitted a separate copy of the attendance sheet of the local stakeholders, who have attended the local stake holder consultation meeting., Which is found to be appropriate.</li> </ol>	
Thus, the CAR#12 has been closed satisfactorily.	
<b>Close out by Lead Assessor</b>	18/08/2012

<b>Date:</b>	30-04-2012	<b>Raised by:</b>	Rakesh Chouhan		
<b>Type of Finding</b>	CAR	<b>No. of Finding</b>	#13	<b>Reference</b>	VVM Version 1.2, para 131
<b>Details of the Finding:</b>		30-04-2012			
PP has used the Ministry of Environment and Forests (MoEF), Government of India notification dated September 14th, 2006 regarding the requirement of EIA studies as per the Environment Protection Rule, 1986 (MoEF, 2002). However, the PP is requested to provide the reference of the latest notification issued by Govt. of India for the requirement of the EIA clearance of the project activities.					
<b>Project Participant Response</b>		04/05/2012			
This has been corrected now as per the latest notification dated December,1, 2009					
<b>Documents/ information provided by the Project Participant:</b>					



Revised PDD dated 22/05/2012	
<b>Evidences verified by Lead Assessor/ Assessor:</b>	
Revised PDD dated 22/05/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	05/06/2012
Ok, PP has considered the latest notification dated December 1, 2009 issued by Govt. of India for the requirement of the EIA clearance of the project activity. However, PP is also requested to provide the weblink of this notification in section D.1 of the PDD. Open.  Hence, the CAR#13 is still open.	
<b>Project Participant Response</b>	18/06/2012
Weblink of latest notification dated December 1, 2009 issued by Govt. of India for the requirement of the EIA clearance of the project activity is provided now.	
<b>Documents/ information provided by the Project Participant:</b>	
Revised PDD version 3 dated 18/06/2012	
<b>Reasoning for acceptance or non-acceptance:</b>	27/06/2012
OK, PP has provided the weblink <a href="http://moef.nic.in/downloads/rules-and-regulations/3067.pdf">http://moef.nic.in/downloads/rules-and-regulations/3067.pdf</a> of the latest notification dated December 1, 2009 issued by Govt. of India in section D.1 of the PDD for the requirement of the EIA clearance of the project activity. It is found to be correct and hence accepted.  Thus, the CAR#13 has been closed satisfactorily.	
<b>Close out by Lead Assessor</b>	27/06/2012

<b>Date:</b>	29/10/2012	<b>Raised by:</b>	Rakesh Chouhan Manoj Kumar Srivastava		
<b>Type of Finding</b>	CAR	<b>S. No. of Finding</b>	#14	<b>Reference</b>	VVM/PDD
<b>Details of the Finding:</b>		29/10/2012			
1. The host party identified is in section A.3 of web hosted PDD is not clear Please clarify the same.					
<b>Project Participant Response</b>		3/11/2012			
Host Party is India and the same is mentioned in the revised PDD.					
<b>Documents/ information provided by the Project Participant:</b>					



Revised PDD received with correction in section A.3 and host party stands identified correctly.	
<b>Reasoning for acceptance or non-acceptance:</b>	01/12/2012
Ok, Revised PDD incorporates the correct name of host party in the section A.3. The host party name is mentioned as India which is correct. The response is appropriate and hence CAR #14 has been closed.	
<b>Close out by Lead Assessor</b>	01/12/2012

<b>Date:</b>	29/10/2012	<b>Raised by:</b>	Rakesh Chouhan Manoj Kumar Srivastava
<b>Type of Finding</b>	CAR	<b>S. No. of Finding</b>	#15
<b>Reference</b>	VVM/PDD		
<b>Details of the Finding:</b>		29/10/2012	
1. Project boundary description is not mentioned in section B.3 of PDD.			
<b>Project Participant Response</b>	3/11/2012		
Now, project boundary description has been added in the section B.3 of the revised PDD as per the methodology AMS I.D. version-17			
<b>Documents/ information provided by the Project Participant:</b>			
Revised PDD			
<b>Reasoning for acceptance or non-acceptance:</b>	3/11/2012		
Project boundary description has been added in the section B.3 of revised PDD which meets the requirement as per methodology AMS I.D version 17 hence the CAR #15 has been closed.			
CAR has been opened during ITR			
1) Monitoring parameters mentioned in section B.3 are not same as mentioned in section B 7.1			
<b>Project Participant Response</b>	05/11/2014		
Monitoring parameters in section B.3 are revised such it is now consistent with those of monitoring parameters in section B.7.1			
<b>Documents/information provided by the Project participant.</b>			
Revised PDD			
<b>Reason for acceptance or non-acceptance</b>	08/11/2014		



Validation team checked the revised PDD and found that PP has now consistently revised the notation of the monitoring parameters (EG <sub>SS, Export</sub> , EG <sub>SS, Import</sub> , EG <sub>yard,y</sub> and EG <sub>y</sub> ) in section B.3 which is in line with section B.7.1 of the revised PDD. Same has been checked and found correct. Thus, CAR#15 has been closed.	
<b>Reason for acceptance or non-acceptance</b>	08/11/2014

<b>Date:</b>	29/10/2012	<b>Raised by:</b>	Rakesh Chouhan Manoj Kumar Srivastava
<b>Type of Finding</b>	CAR	<b>S. No. of Finding</b>	#16
<b>Reference</b>	VVM/PDD		
<b>Details of the Finding:</b>		29/11/2012	
<ol style="list-style-type: none"> <li>Complete steps for calculating emission factor are not mentioned in PDD.</li> <li>Emission reductions are not mentioned correctly in section B 6.3 of PDD</li> <li>Years mentioned in tables in Section 6.4 are not consistent with table provided in section section A.3</li> </ol>			
<b>Project Participant Response</b>		3/11/2012	
<ol style="list-style-type: none"> <li>Complete steps for calculating emission factor have been added in the revised PDD inline with "Tools to calculate emission factor for electricity system"</li> <li>Emission reductions have been corrected in the revised PDD in the section B.6.3. The corrected emission reductions are 21085 tCO<sub>2</sub>e per annum.</li> <li>Years have been made consistent in section B.6.4 and A.3</li> </ol>			
<b>Documents/ information provided by the Project Participant:</b>			
Revised PDD			
<b>Reasoning for acceptance or non-acceptance:</b>		3/11/2012	
Steps for calculation of emission factor has been correctly added in the revised PDD which is in line with "Tools to calculate emission factor for electricity system", emission reduction has been corrected in the section B 6.3 of revised PDD. Emission reductions has been corrected in section B 6.3 of PDD and the same has been checked by the validation team and found to be correct. Years has been made consistent in the section B 6.4 and A.3 of revised PDD. As the above mentioned corrections have been made and found to be correct, hence the CAR # 16 has been closed.			
<b>Close out by Lead Assessor</b>		3/11/2012.	



<b>Date:</b>	29/10/2012	<b>Raised by:</b>	Rakesh Chouhan Manoj Kumar Srivastava		
<b>Type of Finding</b>	CL	<b>S. No. of Finding</b>	#17	<b>Reference</b>	VVM/PDD
<b>Details of the Finding:</b>					
<ol style="list-style-type: none"> <li>1. PP is requested to provide actual debt/equity ratio and copy of loan sanction letter</li> <li>2. PP is requested to provide copy of O&amp;M letter.</li> </ol>					
<b>Project Participant Response</b>			29/10/2012		
<ol style="list-style-type: none"> <li>1. Actual debt equity ratio for the project activity is 71:29. The IRR at actual debt equity ratio is 7.24% which is lower than the benchmark. Loan sanction letter is also provided to the validation team.</li> <li>2. O and M contract is not signed yet.</li> </ol>					
<b>Documents/ information provided by the Project Participant:</b>					
Revised PDD, IRR Sheet					
<b>Reasoning for acceptance or non-acceptance:</b>			3/11/2012		
PP has provided loan sanction letter and actual debt equity is 71:29 and IRR at actual; debt equity is less than benchmark. PP has clarified that O&M contract has not been signed as yet. One year free O&M is provided by WTG supplier. Hence CL #17 has been closed.					
<b>Close out by Lead Assessor</b>			3/11/2012		

<b>Date:</b>	26/07/2014	<b>Raised by:</b>	Rakesh Chouhan Manoj Kumar Srivastava		
<b>Type of Finding</b>	CAR	<b>S. No. of Finding</b>	18	<b>Reference</b>	VVS/PDD
<b>Details of the Finding:</b>					
The PPA of the project activity has been signed under REC mechanism, however investment analysis of the project activity has been demonstrated by considering the preferential tariff. REC benefits have not been considering in equity IRR calculations. Please explain the same.					
<b>Project Participant Response</b>			29/07/2014		
<p>Now the REC benefits are considered in the project activity.</p> <p>As per REC mechanism in India, renewable power producer is benefitted in two ways, one by selling power (at APPC) and other by selling RECs. In this project activity, PP is selling power to discom at APPC (Average Power Pooled Cost) price and RECs are being sold on power exchange. Both these components are detailed as following:</p>					



**(i) APPC or Pooled cost of power purchase rate:**

The pooled cost of power purchase is specified by the Gujarat Electricity Regulatory Commission as Rs. 2.1 is the APPC price in the state of Gujarat as per the latest data<sup>1</sup> available at the time of decision making.

**(ii) Price of REC:**

Under the Renewable Purchase Obligation (RPO), the state electricity distribution companies are required to commit a fixed percent of their power purchase from renewable energy sources. For this, the state distribution companies can implement renewable energy sources or buy Renewable Energy Certificates, which are granted to renewable energy projects developed under REC. The REC component can be sold on approved power exchanges and is driven by the market. For each MWh of energy generated using renewable technology, the generator gets a Renewable energy Certificate (REC) which can be traded in power exchange.

Thus, Rs. 2.225 per unit is the REC trading price on the power exchange PXIL at the time of decision making.

Total tariff thus becomes Rs. 2.1+ Rs. 2.225 = Rs. 4.325 per unit.

Fee	INR per account	PP's accounts (3 nos.) (INR)	Frequency	Source of Values
Processing fee+ Accreditation charges	(30000+5000)+ST	105000	One time	CERC petition no. 230/2010
Annual accreditation charges(SLDC)	10000+ST	30000	Annual	CERC petition no. 230/2010
Revalidation charges-accreditation	15000+ST	45000	At the end of five years	CERC petition no. 230/2010
Registration fee+ Registration charges	(1000+5000)+ST	18000	One time	CERC petition no. 230/2010
Annual registration charges(NLDC)	1000+ST	3000	Annual	CERC petition no. 230/2010
Revalidation charges-registration	5000+ST	15000	At the end of five years	CERC petition no. 230/2010
Issuance (Rs./REC)	10+ST		Every transaction	CERC petition no. 230/2010
Fee for registration on exchange	100000+ST	300000	Annual	Manikaran Power Limited (MPL) Proposal
Exchange charges (Rs./REC)	20+ST		Every transaction	Manikaran Power Limited (MPL) Proposal
Brokerage (% of total amount through REC sale)	5%+ST		Every transaction	Manikaran Power Limited (MPL) Proposal

Thus the tariff is revised accordingly and then investment analysis has been carried out with revised assumptions as mentioned in the PDD.

Thus following are the revised equity IRRs :

Equity IRR (without CDM revenue)	11.74%
Equity IRR (with CDM revenue)	18.84%

<sup>1</sup>[https://www.recregistryindia.nic.in/pdf/REC\\_Regulation/Final\\_Order\\_on\\_Forbearance\\_and\\_Floor\\_Price\\_for\\_REC.pdf](https://www.recregistryindia.nic.in/pdf/REC_Regulation/Final_Order_on_Forbearance_and_Floor_Price_for_REC.pdf)



On conducting sensitivity analysis, following equity IRRs figures were obtained:

Variation in parameters	-10%	10%
Power generation	7.30%	16.26%
O&M cost	12.53%	10.91%
Project cost	15.96%	8.43%
Tariff	7.27%	16.29%

And they are below the benchmark of 16.42% confirming the additionality.

**Documents/ information provided by the Project Participant:**

Revised IRR  
Revised PDD

**Reasoning for acceptance or non-acceptance:**

26/08/2014

Validation team has checked the revised IRR sheet and found that PP has now considered REC revenue in the electricity tariff calculation. The tariff in the IRR calculations is taken as sum of Average Power Purchase Cost (APPC) tariff and REC price. APPC tariff has been considered as per CERC petition no. 230/2010 dated 01/06/2012 ([https://www.recregistryindia.nic.in/pdf/REC\\_Regulation/Final\\_Order\\_on\\_Forbearance\\_and\\_Floor\\_Price\\_for\\_REC.pdf](https://www.recregistryindia.nic.in/pdf/REC_Regulation/Final_Order_on_Forbearance_and_Floor_Price_for_REC.pdf)) is INR 2.1/kWh for 2009-10 which was applicable at the time of decision making. The project is under Renewable Energy Certificate (REC) scheme and REC trading price at the time of decision making was INR 2.225/kWh which is the prevailing trading price of REC at power exchange for March 2011. Thus the total tariff considered in IRR calculation is INR 4.325/kWh. As the APPC tariff as per CERC order dated 01/06/2012 and REC trading prices from PXIL were applicable at the time of decision making, hence, it is in line with para 6 of EB 62 Annex 5.

Validation team has checked the Renewable Energy Certificate Registry of India ([https://www.recregistryindia.nic.in/index.php/general/publics/accredited\\_regens](https://www.recregistryindia.nic.in/index.php/general/publics/accredited_regens)) and found that the project proponent is holding 3 trading accounts which details are given below:

Sr. No.	State	Energy Source	RE Generator	Project No.	Capacity (MW)	Date of Accreditation	Date of Registration
1	Gujarat	Wind	Enn Enn Corp Limited	003	2.1	18-01-2012	29-03-2012
2	Gujarat	Wind	Enn Enn Corp Limited	001	4.2	20-10-2011	18-01-2012
3	Gujarat	Wind	Enn Enn Corp Limited	002	6.3	20-10-2011	18-01-2012

Further, validation team has checked the Accreditation and Registration fees required to registered the project from CERC tariff order dated 21/09/2010



([https://www.recregistryindia.nic.in/pdf/REC\\_Regulation/fees\\_and\\_charges\\_of\\_REC.pdf](https://www.recregistryindia.nic.in/pdf/REC_Regulation/fees_and_charges_of_REC.pdf)) and the brokerage fee from the offer letter from Manikaran Power Limited dated 12/04/2011. During assessment of para 25, 26 & 27 of the CERC tariff order dated 21/09/2010, validation team found the following:

Fees And Charges For Registration

25. The Commission hereby specifies the following fees and charges for Registration:

- i. An application for Registration of Renewable Energy (RE) Generating Company as 'Eligible Entity' for its RE Generation Projects shall be made to the Central Agency.
- ii. The application for Registration of RE Generating Company as 'Eligible Entity' shall be accompanied by a non-refundable 'One-time Application Processing Fees' at the rate of Rs. 1000/- per application.
- iii. The Eligible Entity shall pay the 'One-time Registration Charge' at the rate of Rs.5000/- per application once the registration is granted by the Central Agency.
- iv. The Eligible Entity shall also pay an 'Annual Charge' at the rate of Rs. 1000/- per application. The 'Annual Charges' shall be payable by April 10 of each year.
- v. The Eligible Entity shall pay charges towards Revalidation/Extension of Validity at the rate of Rs. 5000/- per application at the time of revalidation/extension of validity of existing registration at the end of five (5) years, or any such period as determined by the Commission from time to time, from the date of initial registration unless otherwise revoked prior to such validity period.

Fees For Issuance Of Renewable Energy Certificate To The Eligible Entity

26. The Commission specifies fees and charges for Issuance of Renewable Energy Certificate as under:

- i. An application for Issuance of Certificates shall be made by the Eligible Entity to the Central Agency. The application for issuance of Renewable Energy Certificate shall be accompanied by a fee payable at the rate of Rs.10 per Certificate only.
- ii. The taxes and duties on fee and charges shall be applicable as per prevailing norms.

Fees And Charges For Accreditation Of Re Generation Project

27. The Commission determines the fees and charges for accreditation of RE project(s) which will apply till such fees and charges are specified by State Commissions for the State Agency:

- i. An application for Accreditation of RE Generation Projects shall be made to the State Agency by the Renewable Energy (RE) Generating Company. The application for Accreditation of RE Generation Projects shall be accompanied by a non-refundable 'One - time Application Processing Fees' at the rate of Rs.5000/- per application.
- ii. The Eligible Entity shall pay the 'One-time Accreditation Charge' at the rate of Rs.30000/- per application once the 'Certificate of Accreditation' is granted by the State Agency.
- iii. The Eligible Entity shall also pay an 'Annual Charge' at the rate of Rs.10000/- per application. The 'Annual Charges' shall be payable by April 10 of each year.
- iv. The Eligible Entity shall pay charges towards Revalidation/Extension of Validity at the rate of Rs.15000/- per application at the time of revalidation/extension of validity of existing Accreditation at the end of five (5) years, or any such period as determined by the Commission from time to time, from the date of initial Accreditation unless otherwise revoked prior to such validity period.
- v. The taxes and duties on fee and charges shall be applicable as per prevailing norms

Thus, validation team concluded that PP has appropriately considered the input parameters for REC trading in the IRR calculation. Considering the same, equity IRR is coming out 11.74% which is found to be correct.

Further, validation team has observed that the RECs are tradable in power exchange and their price varies depending on the demand from the buyers which are mainly state own utilities and REC can be traded once in a month in the power exchange. Moreover, due to lesser demand in the market, price of REC has not shown a positive growth



after inception of the market. However, due to lesser demand in the market, Central electricity Regulatory Commission has extended the validity of the RECs from 365 days to 730 days from the date of issuance of REC on 11/02/2013 ([https://www.recregistryindia.nic.in/pdf/REC\\_Regulation/CERC\\_Order\\_dated\\_11.02\\_2013\\_.pdf](https://www.recregistryindia.nic.in/pdf/REC_Regulation/CERC_Order_dated_11.02_2013_.pdf)) to safeguard the interest of renewable energy generators which shows the uncertainty involved in the REC mechanism in India and its cash realization in the project. Thus, the price of RECs at the time of investment decision (March-2011) was INR 2.225/kWh and same was considered in the financial analysis. Thus, considering the values of REC and APPC, electricity tariff is worked out INR 4.325 per kWh. The project has been commissioned and issuing the RECs. Further, validation team has checked the sensitivity analysis and found that with +10% (very unlikely scenario) of electricity tariff equity IRR is 16.29% which is less than the benchmark. Thus, validation team concludes that PP has appropriately considered the REC price in IRR calculation and equity IRR with REC revenues is also less than the benchmark..

The CAR is opened due to ITR comment:

- 1) Complete details of fees involved in REC scheme are not mentioned in section B 5 of PDD and in excel spreadsheet of IRR with REC.
- 2) Complete details of sources for tariff are not mentioned in IRR with REC excel spreadsheet.

<b>Project Participant Response</b>	05/11/2014
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1) Complete details of fees involved in REC scheme is now provided in section B.5 of the PDD.

2) Tariff is estimated on the basis of the data from the two sources, one is CERC order June-2010 and other is data of power exchange. These details are now included in the spreadsheet.

<b>Documents/information provided by the Project participant.</b>	
Revised PDD Revised IRR	

<b>Reason for acceptance or non-acceptance</b>	08/11/2014
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1) Validation team has checked the revised IRR and revised PDD and found that PP has now incorporated the details of the fees involved in REC scheme. REC also includes additional charges which are to be paid to state agency and central agency and there are charges involved for trading on power exchange. Thus these additional costs are included in IRR with REC. PP has clarified that followings fees are involved in this project:

- a) Processing fee and Accreditation charges payable to State Agency. This fee needs to be paid one time during the project cycle
- b) Annual accreditation charges payable to state agency. This fees needs to be paid annually.
- c) Revalidation charges of accreditation payable to State Agency. This fee needs to be paid at the end of the five years.
- d) Processing fee and Registration charges payable to central agency. These fees need to be paid one time
- e) Annual registration charges payable to central agency. This fee needs to be paid annually.



f) Revalidation charges for registration payable to central agency (National Load Dispatch Center). This fee needs to be paid at the end of the five years.  
 g) REC issuance fee to be paid to central agency. This needs to be paid for every transaction.

Validation team has checked the CERC order dated June-2010 and found that above mentioned fees are correct and applicable at the time of decision making. In addition to above charges there is fees for registration on power exchange, power exchange charges and facilitation charges (brokerage) for trading on power exchange to be paid which are taken from proposal of Manikaran Power Limited which is applicable at the time of decision making. Thus, same is acceptable to the validation team. This point of the CAR is closed.

2) Validation team has checked the revised IRR and found that PP has now appropriately incorporated the details of the constituents of the tariff (i.e. APPC and REC). The APPC tariff as per CERC order is INR 2.1/KWh and REC price as per data on power exchange applicable at the time of decision making is INR 2.225/KWh. The same has been checked and found to be correct and the same is acceptable to the validation team. Thus, this point of the CAR is closed.

Thus, CAR#18 has been closed successfully.

<b>Close out by Lead Assessor</b>	08/11/2014
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<b>Date:</b>	04/08/2014	<b>Raised by:</b>	Rakesh Chouhan Manoj Kumar Srivastava
<b>Type of Finding</b>	CAR	<b>S. No. of Finding</b>	19
<b>Reference</b>	VVS/PDD		
<b>Details of the Finding:</b>			
In section B.5 of the PDD version 10 under sensitivity analysis, equity IRR at PLF as per GERC tariff order was also mentioned. However in current PDD ver 11, equity IRR at actual PLF is mentioned and equity IRR at PLF as per GERC tariff order is not mentioned under sensitivity analysis. Please explain the same.			
<b>Project Participant Response</b>		02/09/2014	
GERC tariff order was used because at that time the project had not completed one year of actual generation. Hence, GERC tariff was the only option available with which PLF could be cross-checked.			
But now, since the project has already completed one cycle of annual generation therefore it is more appropriate to crosscheck the PLF value with the actual project data instead of PLF figures given by GERC. Reason being GERC gives a PLF figure for whole of Gujarat considering wind turbines of different manufacturers.			
<b>Documents/ information provided by the Project Participant:</b>			
Revised PDD			
<b>Reasoning for acceptance or non-acceptance:</b>		03/09/2014	



As during initial submission of project to UNFCCC, electricity generation for one year was not available. Thus, PP has considered the PLF from GERC tariff order for cross checking of PLF value. However, in present scenario, actual generation from the project is provided to assessment team.

Validation team checked the electricity generation data for 12.6 MW wind firm from April-2012 to March 2014 and found that from April-2012 to March-2013 and from April-2013 to March-2014, the project activity has exported 23,547.92 MWh and 19,000.53 MWh respectively. Thus, the PLFs are coming out 21.33% and 17.21% respectively for these durations.

Thus, considering the same PLF, equity IRR without REC revenue and with REC revenue are mentioned below:

Parameters	Equity IRR without REC Revenue	Equity IRR with REC Revenue
Considering actual PLF for FY 2012-13 i.e. 21.33%	7.77%	14.59%
Considering actual PLF for FY 2013-14 i.e. 17.21%	1.29%	5.53%

Thus, from the above analysis, validation team found that equity IRR of the project is below the benchmark value considering the actual PLF achieved during April-2012 to March 2014.

Further, validation team checked “India Wind Energy Outlook, 2012” published by Global Wind Energy Council, World Institute of Sustainable energy and Indian Wind Turbine Manufacturing Association (<http://www.gwec.net/wp-content/uploads/2012/11/India-Wind-Energy-Outlook-2012.pdf>) to cross check the appropriateness of the PLF value considered in the project. In this regard, validation team found that actual PLF achieved for Gujarat for the year 2009, 2010 and 2011 were 18.02%, 20.78% and 15.63% respectively which are similar to actual PLF values achieved during April-2012 to March 2014.

Thus, validation team has accepted the justification provided by the PP regarding the cross checking of PLF in the sensitivity analysis. Validation team has also checked the revised PDD and found that PP has now revised the justification of the PLF consideration in sensitivity analysis.

Thus, this CAR is closed.

<b>Close out by Lead Assessor</b>	03/09/2014
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<b>Date:</b>	04/08/2014	<b>Raised by:</b>	Rakesh Chouhan Manoj Kumar Srivastava		
<b>Type of Finding</b>	CAR	<b>S. No. of Finding</b>	20	<b>Reference</b>	VVS/PDD
<b>Details of the Finding:</b>					
In the equity IRR calculated earlier without considering REC benefits, equity cost was considered in year 1 in ‘Cash Flow’ worksheet of IRR excel spreadsheet while computing IRR. However in the equity IRR calculations submitted now, equity cost is considered in year 0 in ‘Cash Flow’ worksheet of IRR excel spreadsheet. PP is requested to explain					



the same as considering equity cost in year 0 is not conservative.	
<b>Project Participant Response</b>	02/09/2014
<p>Initially, considering capital cost in the year 1 of the equity IRR was incorrect. As the investment is done in year 0 and the actual revenue starts coming in after one year or it starts in year 1. This is also a usual practice that investment is done in the year 0 and the revenue starts getting generated in the year 1. This is also a usual practice that investment is done in the year 0 and the revenue starts getting generated in the year 1 and the same is substantiated by the book "Financial Management" written by M.Y. Khan and P.K. Jain. Section of this book on "Capital Budgeting I: Principles and Techniques" discusses the same.</p> <p>Further, same is also evidenced in the actual scenario. During the actual project implementation, purchase order was released in FY 2010-2011 while project was commissioned in FY 2011-2012. Hence, the actual scenario also justifies it to consider the investment in the year 0 and revenue in the year 1.</p> <p>During decision making, capital cost was considered in 0<sup>th</sup> year followed by the cash inflow from 1<sup>st</sup> year. However, in the initial submission to UNFCCC, capital investment and case inflow were wrongly incorporated 1<sup>st</sup> in the IRR sheet. Same has been corrected and revised IRR sheet now submitted to DOE for assessment.</p>	
<b>Documents/ information provided by the Project Participant:</b>	
Financial Management Book written by M.Y. Khan and P.K. Jain	
<b>Reasoning for acceptance or non-acceptance:</b>	03/09/2014
<p>Validation team has checked the chapter "Capital Budgeting I: Principles and Techniques" of Financial Management Book written by M.Y. Khan and P.K. Jain (pg no 10.7) and found that author has clearly mentioned that in conventional cash flow pattern initial cash outlay followed by a series of case inflows and capital expenditure needs to be included in year 0 and case inflow would start from year 1 onwards.</p> <p>Further, validation team has also cross checked the purchase order and found that same was released in FY 2010-2011 while project was commissioned and cash inflow (i.e. sale of electricity to NEWNE grid as per Power Purchase Agreement) was started from in FY 2011-2012.</p> <p>The CAR is opened due to ITR comment:</p> <p>IRR considering capital cost in year one was submitted to UNFCCC earlier and now in revised IRR, capital cost is considered in year zero. Thus revised IRR is less than the earlier submitted IRR. Adequate justification is not there as to why capital cost was considered in year one earlier and now considered in year zero. Please provide supporting documents as to when the actual capital cost was disbursed in the project.</p>	
<b>Project Participant Response</b>	05/11/2014
Revised IRR is less than the earlier IRR. This is because in the earlier PDD, the capital cost was included in year-1 which was actually incorrect as per the basic principles of capital budgeting in financial management. Though in the actual IRR estimation, capital cost was considered in the year-0 only but while writing the earlier PDD, inadvertently, the capital cost was considered in the year-1. This is corrected in the revised PDD and capital cost is considered in the year-0 now. A declaration on the same is provided.	



Moreover the payment receipts from WTG supplier (i.e. Suzlon) dated 15/06/2011 and 29/04/2011 are provided which clearly shows that payment was made in year 0 and prior to commissioning of WTGs. Thus in actual project scenario also payment has been made in year 0.

In the earlier submitted PDD, base rate given by RBI was considered as interest rate which was not correct. From 1<sup>st</sup> July 2010 onwards Reserve Bank of India (RBI) replaced the Benchmark Prime Lending Rate (BPLR) system with base rate. As per RBI, banks may determine actual lending rate on loans with reference to base rate and by including customer specific charges. Banks determine lending interest rate by adding items like credit risk premium, tenor premium etc to the base rate and loans are not given at base rate. The actual interest rate for this project is also 13.5% which is much above the base rate of 9.5% considered in IRR calculations. However the interest rate is not changed from earlier submission due to conservativeness.

**Documents/information provided by the Project participant.**

Payment receipts from WTG supplier dated 15/06/2011 and dated 29/04/2011.  
Declaration from PP regarding the consideration of capital in year-0

**Reason for acceptance or non-acceptance**

08/11/2014

In the earlier submission to UNFCCC, PP has considered the capital cost of the project in year-1 in cash flow statement while calculating equity IRR. However, in the revised submission PP has considered the same in 0<sup>th</sup> Year in cash flow statement. PP has provided a declaration that capital cost was considered in year 0 only at decision making and inadvertently it was considered in year 1 in earlier submission. PP has also provided details of chapter on “Capital Budgeting I: Principles and Techniques” of Financial Management Book written by M.Y. Khan and P.K. Jain (pg no 10.7) and wherein it is mentioned that conventional cash flow consist of initial cash outlay in year 0 followed by series of cash inflows. The validation team has checked the chapter on “Capital Budgeting I: Principles and Techniques” of Financial Management Book written by M.Y. Khan and P.K. Jain (pg no 10.7) and observed that in conventional cash flow patterns, initial cash outflow is considered in year 0 only. Further PP has provided the payment receipts from WTG supplier dated 15/06/2011 and 29/04/2011 which are made in year 0 i.e. prior to commissioning of WTGs. Thus in actual practice also capital cost is disbursed in year 0. Thus the same was accepted by the validation team.

PP has also clarified that in earlier submission base rate was considered as interest rate which was not correct. From 1<sup>st</sup> July 2010 onwards Reserve Bank of India (RBI) replaced the Benchmark Prime Lending Rate (BPLR) system with base rate. As per RBI, banks may determine actual lending rate on loans with reference to base rate and by including customer specific charges. Banks determine lending interest rate by adding items like credit risk premium, tenor premium etc to the base rate and loans are not given at base rate. The actual interest rate for this project has also been checked and it is 13.5% which is much above the base rate of 9.5% considered in IRR calculations. PP has not changed interest rate from earlier submission as it is conservative and same is accepted.

Thus, this CAR 20 is closed.

**Reason for acceptance or non-acceptance**

08/11/2014



<b>Date:</b>	04/08/2014	<b>Raised by:</b>	Rakesh Chouhan Manoj Kumar Srivastava		
<b>Type of Finding</b>	CAR	<b>S. No. of Finding</b>	21	<b>Reference</b>	VVS/PDD
<b>Details of the Finding:</b>					
Version of the PDD has been revised. Corrective action is requested.					
<b>Project Participant Response</b>			02/09/2014		
PDD is now revised as per the latest version 5.0.					
<b>Documents/ information provided by the Project Participant:</b>					
Revised PDD					
<b>Reasoning for acceptance or non-acceptance:</b>			03/09/2014		
Validation team checked the revised PDD and found that PP has now considered the PDD in ver 5.0 which is the latest template available in UNFCCC. Validation team has checked the same and found to be correct. Thus, same is acceptable to the validation team.					
The CAR is opened due to ITR comment:					
1) It is not mentioned in section B 7.4 whether entity is project participant					
<b>Project Participant Response</b>			05/11/2014		
Now, it is explicitly mentioned in section B.7.4 that the entity is project participant. Also please note that Tool to calculate emission factor for an electricity system has been revised to latest version 4.0 and reference to Guidelines for prior consideration which has been withdrawn in VVS track has been removed.					
<b>Documents/information provided by the Project participant.</b>					
Revised PDD.					
<b>Reason for acceptance or non-acceptance</b>			08/11/2014		



Validation team has checked the revised PDD and found that PP has now clearly mentioned in section B7.4 that the entity is the Project Proponent of this project. Same is found correct and acceptable to the validation team. The PDD has been revised and latest version 4.0 of Tool to calculate emission factor for an electricity system has been referred and reference of Guidelines for prior consideration which has been withdrawn in VVS track has been removed and prior consideration has been demonstrated as per requirement in VVS. The same has been checked and found to be correct.

Thus, CAR#21 is closed.

**Reason for acceptance or non-acceptance**

08/11/2014



## APPENDIX 2

### QUALIFICATION CERTIFICATE

We declare that Mr. Manoj K. Srivastava

is qualified as Validator/Verifier

for the Technical Area 1.2

Technical Area	Technical Area Description	Sectoral Scope
1.2	Energy generation from renewable energy sources	1

He is also qualified as Team Leader for validation/verification functions

\_\_\_\_\_  
CEO



## QUALIFICATION CERTIFICATE

We declare that Mr. Rakesh Chouhan  
is qualified as Validator/Verifier  
for the Technical Area 1.2

Technical Area	Technical Area Description	Sectoral Scope
1.2	Energy generation from renewable energy sources	1

He is also qualified as Team Leader for validation/verification functions

\_\_\_\_\_  
CEO



### QUALIFICATION CERTIFICATE

We declare that Mr. Rajeev Singhal

is qualified as Financial expert

for the Technical Area -

Technical Area	Technical Area Description	Sectoral Scope
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CEO



### QUALIFICATION CERTIFICATE

We declare that Mr. Naresh Badhwar  
is qualified as Validator/Verifier, Technical Reviewer  
for the Technical Area 1.2 and 13.1

Technical Area	Technical Area Description	Sectoral Scope
1.2	Energy generation from renewable energy sources	1
13.1	Waste handling and disposal	13

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CEO