



VALIDATION REPORT


Final

**“Bundled Wind Power Project by EKI Energy Services
Limited (EKIESL- CDM.January-14-04)”
in
India**

Report N° 2014-IQ-18-MD

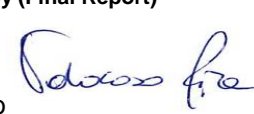
Revision N° 1.2 Aa

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Project Title: Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)		Country: India	Estimated CERs (tCO₂e): 16,078 annual average	
Client: ReXchange Global Solutions (P73)		Client contact: Mr. Manish Dabkara		
Report No.: 2014-IQ-18-MD		Revision: 1.2 Aa	Date of this report: 10/04/2015	
Approved by (Final Report - Authorized officer signing for the DOE):  Laura Severino			Date of approval: 15/04/2015	
Methodology				
Number: AMS-I.D.	Version: 17 of 03/06/2011	Title: Grid connected renewable electricity generation	Scale Small	SS(s): 01
<p>RINA Services S.p.A. (RINA), commissioned by ReXchange Global Solutions (P73), has performed the validation of the project activity "Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)" in India, with regard to the relevant requirements for CDM activities.</p> <p>In conclusion, it is RINA's opinion that the project activity "Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)", in "India", as described in the PDD version 04 of 17/11/2014, meets all relevant requirements for CDM activities and all relevant host Party criteria and correctly applies the baseline and monitoring methodology "AMS-I.D.", "Grid connected renewable electricity generation", version 17 of 03/06/2011. Hence RINA requests the registration of the project as a CDM project activity.</p>				

Work carried out by: Cyril Augustus Arokiasamy Shruti Kudtarkar Karthika Varma
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Work verified by (Final Report)  Rita Valoroso
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Keywords: Climate Change, Kyoto Protocol, Clean Development Mechanism, Validation

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Abbreviations

BE	Baseline Emissions
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM M&P	Modalities and Procedures CDM
CDM-PCP	Clean Development Mechanism Project Cycle Procedure
CDM-PS	Clean Development Mechanism Project Standard
CDM-VVS	Clean Development Mechanism Validation and Verification Standard
CER(s)	Certified Emission Reduction(s)
CL	Clarification Request
CM	Combined Margin
CO ₂	Carbon dioxide
CO _{2e}	Carbon dioxide equivalent
CRT	Coordination and Technical Control Staff
D/E	Debt to Equity ratio
DCI	Certification Division of RINA Services Spa
DNA	Designated National Authority
DOE	Designated Operational Entity
EB	Executive Board
EIA	Environmental Impact assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG(s)	Greenhouse gas(es)
GWP	Global Warming Potential
IRR	Internal Rate of Return
IPCC	Intergovernmental Panel on Climate Change
LoA	Letter of Approval
MAT	Minimum Alternate Tax
MoV	Means of Verification
MOC	Modalities of Communication Statement
MP	Monitoring Plan
MR	Monitoring Report
NGO	Non-governmental Organization
O&M	Operation and Maintenance
OM	Operating Margin
ODA	Official Development Assistance
PDD	Project Design Document
PLF	Plant Load Factor
PE	Project Emission
PP(s)	Project Participant(s)
Ref.	Document Reference
RINA	RINA Services Spa
SS(s)	Sectoral Scope(s)

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TA(s)	Technical Area(s)
SSC	Small Scale
UNFCCC	United Nations Framework Convention on Climate Change

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1 INTRODUCTION

ReXchange Global Solutions (P73) has commissioned RINA to carry out the validation of the “Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)” project in India.

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

1.1 Objective

The objective of the Validation is to have an independent evaluation of a project activity by a designated operational entity against the requirements of the CDM as set out in decision 3/CMP.1, its annex and relevant decisions of the COP/MOP, on the basis of the project design document. In particular, the project's baseline, monitoring plan, and the project's compliance with relevant UNFCCC requirements and host Party criteria are validated in order to confirm that the project design, as documented, is sound and reasonable and meets the identified criteria. Validation is a requirement for all CDM projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of certified emission reductions (CERs).

1.2 Scope

The validation scope is to review the PDD against the UNFCCC criteria for CDM.

UNFCCC criteria for CDM refer to Article 12 of the Kyoto Protocol, the simplified modalities and procedures for small-scale CDM project activities and the subsequent decisions by the CDM Executive Board.

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

2 METHODOLOGY

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

The validation consisted of the following three phases:

- Document review;
- Follow-up actions;
- The resolution of outstanding issues and the issuance of the final validation report.

The following sections outline each step in more detail.

2.1 Document Review

The PDD, version 04 of 17/11/2014, version 03 of 23/09/2014, version 02 of 26/06/2014, version 01 of 20/02/2013 /1/, in particular the applicability of the methodology, the baseline determination, the additionality of the project activity, the starting date of the project, the monitoring plan, the emission reduction calculations provided in the form of a spreadsheet, “ER Sheet_Ver P73.xlsx” dated 17/11/2014 and “ER Sheet_Ver9.0_DJ.xlsx” dated 01/04/2014 /2/, the financial and benchmark calculations provided in the form of spreadsheets, “Surbhi Textile Mills Pvt. Ltd._Maharashtra.xlsx” dated 01/04/2014, “Surbhi Textile Mills Pvt. Ltd._Gujarat.xlsx” dated 01/04/2014, “SJP Constructions Pvt. Ltd._Maharashtra.xlsx” dated 01/04/2014 /3/ were assessed as part of the validation. Also, all documents listed in the table below were reviewed during the validation of this project.

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

/1/	ReXchange Global Solutions (P73): CDM-SSC-PDD for project activity “Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)” in India, version 04 of 17/11/2014, version 03 of 23/09/2014, version 02 of 26/06/2014, version 01 of 20/02/2013
/2/	ReXchange Global Solutions (P73): Emission reduction calculation worksheet titled “ER Sheet_Ver9.0_DJ.xlsx” dated 01/04/2014 and “ER Sheet_Ver P73.xlsx” dated 17/11/2014
/3/	ReXchange Global Solutions (P73): IRR and Benchmark calculation worksheet titled “Surbhi Textile Mills Pvt. Ltd._Maharashtra.xlsx” dated 01/04/2014, “Surbhi Textile Mills Pvt. Ltd._Gujarat.xlsx” dated 01/04/2014, “SJP Constructions Pvt. Ltd._Maharashtra.xlsx” dated 01/04/2014 and date 17/11/2014
/4/	CDM Executive Board: Clean Development Mechanism Project Cycle Procedure, version 07 of 01/06/2014
/5/	CDM Executive Board: Clean Development Mechanism Project Standard, version 07 of 01/06/2014
/6/	CDM Executive Board: Clean Development Mechanism Validation and Verification Standard, version 07 of 01/06/2014
/7/	CDM Executive Board: Baseline and monitoring methodology “AMS-I.D., “Grid connected renewable electricity generation”, Annex 17 of EB 61, version 17 of 03/06/2011
/8/	CDM Executive Board: Tool to calculate the emission factor for an electricity system, version 04.0, Annex 15, EB 75 dated 04/10/2013
/9/	CDM Executive Board: Guidelines on the demonstration of additionality of small-scale project activities, version 09.0, Annex 27, EB 68 dated 20/07/2012
/10/	CDM Executive Board: Guidelines on the assessment of investment analysis, version 05, Annex 5, EB 62 dated 15/07/2011
/11/	CDM Executive Board: Guidelines on assessment of debundling for SSC project activities, version 03, Annex 13, EB 54 dated 28/05/2010
/12/	CDM Executive Board: Guidelines for the reporting and validation of plant load factors, version 01, EB 48, Annex 11 dated 17/07/2009
/13/	CDM Executive Board: General guidelines for SSC CDM methodologies, version 20.0, Annex 11, EB 76 dated 08/11/2013
/14/	CDM Executive Board: Glossary CDM terms, version 07.0, Annex 7, EB 70 dated 23/11/2012
/15/	CDM Executive Board: Guidelines for completing the project design document and project design document form for small-scale CDM project activities, version 05 dated 25/06/2014
/16/	CDM Executive Board: Project design document form for small-scale CDM project activities (F-CDM-SSC-PDD) Version 05 dated 25/06/ 2014
/17/	CDM Executive Board: Prior consideration of the CDM form, Version 02.0, EB 66 dated 13/03/2012
/18/	Website: http://www.cea.nic.in/reports/planning/cdm_co2/database_9.zip Argument: Central Electricity Authority CO ₂ baseline database version 09.0 Language: English Retrieved on: 15/04/2014
/19/	Website: http://unfccc.int/kyoto_protocol/status_of_ratification/items/2613.php Argument: Status of ratification of the host country i.e. India as displayed on UNFCCC web site Language: English Retrieved on: 15/04/2014
/20/	Website: http://cdm.unfccc.int/DNA/index.html

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	Argument: DNA of the host country i.e. India as displayed on UNFCCC web site Language: English Retrieved on: 15/04/2014
/21/	Website: http://www.cdmindia.gov.in/ Argument: Official web site of DNA of India i.e. Ministry of Environment and Forests, Government of India Language: English Retrieved on: 15/04/2014
/22/	Inox Wind Ltd: Project proposal for 4 MW wind power project, project location: Maharashtra, submitted to: SJP Constructions Pvt. Ltd. dated 20/10/2013
/23/	SJP Constructions Pvt. Ltd.: 1. Work order for occupation of land on lease/sublease/ownership basis along with the right of free access of surrounding land suitable for 2 no. INOX model WT2000DF of 2000kW rating WTG at Maharashtra dated 19/11/2013 2. Work order for arrangement of shared facilities such as power evacuation, central monitoring station, 132 kV line for 2 no. of 2000kW WTG at Maharashtra dated 19/11/2013 3. Work order for civil work, unit substation, erection, installation and commissioning of 2 no. of 2000kW WTG at Maharashtra dated 19/11/2013 4. Purchase order for supply of nacelle, rotor blades, tubular tower and any other material required to complete WTG dated 19/11/2013
/24/	Dena Bank: Conveying of sanction terms and conditions for term loan to SJP Constructions Pvt. Ltd. dated 23/01/2014
/25/	Inox Wind Ltd: Project proposal for 4 MW wind power project, project location: Maharashtra, submitted to: Surbhi Textile Mills Pvt. Ltd. dated 25/10/2013
/26/	Wind World (India) Limited: Proposal for 0.8 MW wind power project for captive use, project location: Gujarat, submitted to: Surbhi Textile Mills Pvt. Ltd dated 22/08/2013
/27/	Surbhi Textile Mills Pvt. Ltd: 1. Purchase order for supply of 1 no. of 800 kW type- E53 WTG to Wind World (India) Ltd dated 30/08/2013 2. Purchase order for civil works, erection, testing and commissioning of 1 no. of 800kW and of 33 kV internal electrical lines at site Mahidad in Gujarat state to Wind World (India) Ltd dated 30/08/2013 3. Order for reimbursement of expenses incurred for transportation of 800kW WTG at Gujarat farm site to Wind World (India) Ltd dated 30/08/2013 4. Order for the transfer of development right for the setting up 0.8 MW of wind energy project at Mahidad site, Gujarat to Wind World (India) Ltd dated 30/08/2013 5. Purchase order for supply of nacelle, rotor blades, tubular tower and any other material required to complete WTG (1 no. of 2000kW) at Maharashtra to Inox Wind Ltd dated 19/11/2013 6. Work order for arrangement of shared facilities such as power evacuation, central monitoring station, 132 kV line for 1 no. of 2000kW WTG at Maharashtra to Inox Wind Ltd dated 19/11/2013 7. Work order for occupation of land on lease/sublease/ownership basis along with the right of free access of surrounding land suitable for 1 no. INOX model WT2000DF of 2000kW rating WTG at Maharashtra to Inox Wind Ltd dated 19/11/2013
/28/	Wheeling agreement between Surbhi Textile Mills Pvt. Ltd and Gujarat Energy Transmission Corporation Ltd. dated 24/01/2014
/29/	Bank of Baroda: Term loan sanction letter to Surbhi Textile Mills Pvt. Ltd dated 24/12/2013
/30/	Dena Bank: Sanction of term loan to Surbhi Textile Mills Pvt. Ltd dated 19/11/2013

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/31/	ReXchange Global Solutions (P73): Request for validation of a greenhouse gas project activity proposed to RINA dated 12/03/2014
/32/	CDM Executive Board: Non-binding best practice examples to demonstrate additionality for SSC project activities, Annex 34 of EB 35 dated 19/10/2007
/33/	CDM Executive Board: Guidelines for completing the small-scale CDM project activities bundling form, version 02.0, Annex 22 of EB 66 dated 02/03/2012
/34/	Website: https://cdm.unfccc.int/methodologies/DB/R SCTZ8SKT4F7N1CFDXCSA7BDQ7FU1X Argument: Reference to AMS-I.D. as displayed on UNFCCC web site Language: English Retrieved on: 05/05/2014
/35/	ReXchange Global Solutions (P73): Host Country Approval from National CDM Authority, Ministry of Environment & Forest, Government of India to Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)" Ref. No. 4/1/2014-CCC dated 03/09/2014
/36/	CDM Executive Board: http://cdm.unfccc.int/Projects/Validation/index.html Argument: Reference link for the project cycle search from UNFCCC site. Language: English Retrieved on: 26/08/2014.
/37/	CDM Executive Board: Modalities of communication statement (CDM-MOC-FORM), version 02.2 dated 17/03/2015.
/38/	ReXchange Global Solutions (P73): Modalities of communication statement signed by the PP dated 17/11/2014
/39/	ReXchange Global Solutions (P73): Identity proof of the authorized primary signatory (PAN) of the proprietor Mr. Manish Kumar Dabkara
/40/	ReXchange Global Solutions (P73): Undertaking letter submitted to National CDM Authority, Ministry of Environment & Forest, Government of India for Host Country Approval to "Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)" Submitted on 12/02/2015.
/41/	Maharashtra State Electricity Distribution Co. Limited: Commissioning certificates issued to Surbhi Textile Mills Pvt. Ltd by Sangli circle office of Maharashtra State Electricity Distribution Co. Limited for 2 X 2000 kW WEGs of the project activity dated 15/05/2014. Maharashtra State Electricity Distribution Co. Limited: Commissioning certificates issued to SJP Constructions Pvt. Ltd. by Sangli circle office of Maharashtra State Electricity Distribution Co. Limited for 2 X 2000 kW WEGs of the project activity dated 15/05/2014.
/42/	Gujarat Energy Development Agency: Commissioning certificates issued to Surbhi Textile Mills Pvt. Ltd by Gujarat Energy Development Agency (Ref No. GEDA/PWF/STMP/LMahidad/2014-15/5/533 for 1 X 800 kW WEGs of the project activity dated 20/05/2014.
/43/	Centre for wind energy technology: http://niwe.res.in/Docu/RLMM_Addendum-I%20List_9.01.2015.pdf The website was in English language and last retrieved on 22/02/2015
/44/	Progressive Certification: Determination and Certification of plant load factor for the client Surbhi Textile Mills Pvt. Ltd assignment no. PC/RE/SD/146 dated 28/10/2013
/45/	Progressive Certification: Determination and Certification of plant load factor for the client Surbhi Textile Mills Pvt. Ltd assignment no. PC/RE/SD/144 dated 25/08/2013
/46/	Progressive Certification: Determination and Certification of plant load factor for the client SJP Constructions Pvt. Ltd assignment no. PC/RE/SD/147 dated 28/10/2013
/47/	Inox Wind: Technical Specification of Inox wind WT 2000 DF make wind turbine generator submitted on dated 26/06/2014

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/48/	Wind World (India) Ltd: Technical Specification of wind world WW 53, make 800 kW wind turbine generator submitted on dated 26/06/2014
/49/	Inox Wind: Designed life certified by the technology provider for the wind turbine WT 2000 DF dated 24/03/2014. Wind World (India) Ltd: Designed life certified by the technology provider for the wind turbine 800 kw WTG dated 16/05/2008
/50/	Gujarat Energy Transmission Corporation Limited: Approval and execution of an agreement for Wind Farm Generation to M/s Surbhi Textile Mills Pvt Ltd, Ref. No. SE(RC) /EE-/C 183 dated 29/01/2014
/51/	Ministry of Environment & Forest (MoEF); Notification under Environment (Protection) Rules, 1986, dated 14/09/2006 and further amendment on 01/12/2009
/52/	National CDM Authority, Ministry of Environment and Forests (Govt. of India): Host country approval process website " http://www.cdmindia.gov.in/detail_news.php?id=3 " in English language retrieved on 14/04/2014.
/53/	ReXchange Global Solutions (P73): The copy of invitation letter for inviting local stakeholders to attend stakeholders meeting on 18/02/2014 in the district of Rajkot, state of Gujarat, and in the district of Sangli, state of Maharashtra dated 21/02/2014.
/54/	ReXchange Global Solutions (P73): Minutes of the local stakeholder meeting on 18/02/2014 and 21/02/2014 for Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04) in the district of Rajkot, state of Gujarat dated 18/02/2014 and in the district of Sangli, state of Maharashtra dated 21/02/2014.
/55/	ReXchange Global Solutions (P73): Attendance sheet of the stakeholder meeting for Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04) in the district of Rajkot, state of Gujarat dated 18/02/2014. Attendance sheet of the stakeholder meeting for Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04) in the district of Sangli, state of Maharashtra dated 21/02/2014.
/56/	Website: http://cdm.unfccc.int/Projects/Validation/DB/R8FVY4T6D8KE3TXAI0SCG465IRRFLR/view.html Argument: Webhosting of the PDD on UNFCCC web site Language: English Retrieved on: 22/02/2015
/57/	Central Electricity Authority: Central Electricity Authority (Installation and Operation of Meters) Regulations, 2006 dated 17/03/2006
/58/	SJP Construction Pvt. Ltd.: Copy of e-mail sent to NCDMA for prior CDM consideration dated 21/12/2013 Surabhi Textile Mills Pvt. Ltd. : Copy of e-mail sent to NCDMA for prior CDM consideration dated 19/12/2013
/59/	UNFCCC: Copy of e-mail acknowledgement received from UNFCCC for Surabhi Textile Mills Pvt. Ltd and SJP Construction Pvt. Ltd. dated 21/12/2013
/60/	NCDMA: Copy of e-mail acknowledgement received from NCDMA for Surabhi Textile Mills Pvt. Ltd and SJP Construction Pvt. Ltd. dated 26/12/2013
/61/	UNFCCC: Prior consideration of the CDM website " http://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html " in English language retrieved on 14/01/2015
/62/	Reserve Bank of India: http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/01MSPF270713.pdf http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/01MSPF270713.pdf The website was in English language and last retrieved on 29/01/2015

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/63/	Benchmark calculation: "Corporate Finance: Theory and Practice, 2nd Edition" 2nd edition, by Aswath Damodaran (page 320), Published by Wiley, January, 2001
/64/	Maharashtra Electricity Regulatory Commission: Determination of Generic Tariff dated 22/03/2013 http://www.mercindia.org.in/pdf/Order%2058%2042/Order_6_of_2013_22_March_2013.pdf The webpage is in English language retrieved on 14/12/2014
/65/	The Energy and Resources Institute: Wind Energy Information 2005/2006, ENVIS Centre on Renewable Energy and Environment, submitted on 30/05/2014
/66/	Web link for service tax: http://indiabudget.nic.in/ub2013-14/bs/bs.pdf The website was in English language and last retrieved on 19/02/2015
/67/	Web link for TAC order: http://iib.gov.in/IRDA/tac/tariffs/AIFT2001.pdf The website was in English language and last retrieved on 19/02/2015
/68/	Web link for tax depreciation: http://law.incometaxindia.gov.in/DITTaxmann/Notifications/IncomeTaxAct/2010/Notification15_2012.htm The website was in English language and last retrieved on 19/02/2015
/69/	Web link for tax rates: http://indiabudget.nic.in/ub2013-14/fb/bill91.pdf The website was in English language and last retrieved on 19/02/2015
/70/	Surabhi Textile Mills Pvt. Ltd. : Wind Energy Purchase Agreement For - 2.0 MW Wind Power Project (1 Nos. X 2000 KW INOX make) at villages Rawalgunwadi ,District Sangli Between M/s Surbhi Textile Mills Private Limited and Maharashtra State Electricity Distribution Company Limited dated 10/10/2014. Wind Energy Purchase Agreement For - 2.0 MW Wind Power Project (1 Nos. X 2000 KW INOX make) at villages Khojanwadi,,District Sangli Between M/s Surbhi Textile Mills Private Limited and Maharashtra State Electricity Distribution Company Limited dated 10/10/2014.
/71/	SJP Constructions Private Limited: Wind Energy Purchase Agreement For - 4.0 MW Wind Power Project (2 Nos. X 2000 KW INOX make) at villages Rawalgunwadi ,District Sangli Between M/s SJP Constructions Private Limited and Maharashtra State Electricity Distribution Company Limited dated 31/10/2014.
/72/	Maharashtra Electricity Regulatory Commission: Suo-Motu Proceeding on the Policy Review in matters related to Wind Power in Maharashtra, dated 07/04/2014 http://www.mercindia.org.in/pdf/Order%2058%2042/Order%20Case%20No%20%2092%20of%202012.pdf The website was in English language and last retrieved on 19/02/2015
/73/	K SETHIA & ASSOCIATES: Chartered Accountants certificate, certifying the project cost of Surabhi Textile Mills Pvt. Ltd. (4.8 MW) dated 26/06/2014
/74/	Pradeep K. Singhi & Associates: Chartered Accountants certificate, certifying the project cost of SJP Constructions Private Limited (4 MW) dated 17/07/2014
/75/	Gujarat Electricity Regulatory Commission: Tariff order dated 08/08/2012 Gujarat Electricity Regulatory Commission: Tariff order dated 16/04/2013 Gujarat Energy Transmission Corporation Limited: Order dated 18/04/2013
/76/	Surabhi Textile Mills Pvt. Ltd.: Power purchase agreement signed between Surabhi Textile Mills Pvt. Ltd. and Dakshin Gujarat Vij Company Limited dated 10/02/2014
/77/	MNRE: http://mnre.gov.in/file-manager/UserFiles/wp8.htm http://mnre.gov.in/file-manager/UserFiles/wp_installed.htm The website was in English language and last retrieved on 19/02/2015

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/78/	SBI PLR Report: http://in.reuters.com/article/2013/12/23/india-plr-idINL3N0K217Z20131223 The website was in English language and last retrieved on 08/04/2015
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2.2 Follow-up actions

On 09/04/2014 and 10/04/2014, RINA visited sites located in Gujarat and Maharashtra to resolve questions and issues identified during the document review and to perform interviews with relevant stakeholders in the host country.

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

	Date	Name and Role	Organization	Topic
/a/	09/04/2014	Mr. Aakash Kumar Civil Engineer	Inox Wind Ltd.	Project description, technology employed, emission reduction calculations, monitoring of the parameters, environmental impact assessment analysis, Monitoring arrangements, Operation and Maintenance (O&M) arrangements
/b/	09/04/2014	Mr. Dada Bhai	Villager, Local stakeholder	Mode of Invitation for stakeholders meeting, Stakeholders meeting consultation, etc.
/c/	10/04/2014	Mr. Amit Dobariya Asst. Manager	Wind World (India) Infrastructure Pvt. Ltd. (Formerly known as Enercon (India) Ltd.)	Project description, technology employed, emission reduction calculations, monitoring of the parameters, environmental impact assessment analysis, Monitoring arrangements, O&M arrangements
/d/	10/04/2014	Mr. Kaushik B Substation Supervisor	Wind World (India) Infrastructure Pvt. Ltd. (Formerly known as Enercon (India) Ltd.)	Project description, technology employed, emission reduction calculations, monitoring of the parameters, environmental impact assessment analysis, Monitoring arrangements, O&M arrangements
/e/	10/04/2014	Mr. Devayat Operator	Wind World (India) Infrastructure Pvt. Ltd. (Formerly known as Enercon (India) Ltd.)	Project description, technology employed, emission reduction calculations, monitoring of the parameters, environmental impact assessment analysis, Monitoring arrangements, O&M arrangements

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/f/	10/04/2014	Mr. Bhagvanbhai Local stakeholder	Vadali village	Mode of Invitation for stakeholders meeting, Stakeholders meeting consultation, etc.
/g/	10/04/2014	Mr. Rajesh, Local stakeholder	Vadali village	Mode of Invitation for stakeholders meeting, Stakeholders meeting consultation, etc.

2.3 Resolution of outstanding issues

The objective of this phase of the validation is to resolve any outstanding issues which need to be clarified for RINA's positive conclusion on the project design.

To guarantee transparency a validation protocol has been customized for the project. The protocol shows in a transparent manner the requirements, means of validation and the results from validating the identified criteria. The validation protocol consists of four tables; the different columns in these tables are described in the figure below (see Figure 1). The completed validation protocol is enclosed in Appendix A to this report.

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

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

A clarification request (CL) is raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

A forward action request (FAR) is raised during validation to highlight issues related to project implementation that require review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration. CARs, CLs and FARs identified are included in the validation protocol in Appendix A of this report.

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Figure 35 Validation protocol tables

Validation Protocol, Table 1 - Mandatory requirement		
Requirement	Reference	Conclusion
The requirements the project must meet.	Makes reference to the documents where the answer to the requirement is found.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) if a requirement is not met. A request for clarification (CL) is used when the validation team has identified a need for further clarification.

Validation Protocol, Table 2 - Requirement checklist				
Checklist Question	Ref.	MoV	Comments	Conclusion
The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in five different sections.	Makes reference to documents where the answer to the checklist question or item is found.	Explain how conformance with the checklist question is investigated. Examples are document review (DR), interview or any other follow-up actions (I), cross checking (CC) with available information relating to projects, (N/A) means not applicable.	The discussion on how the conclusion is arrived at and the conclusion on the compliance with checklist question so far.	For CAR, CL and FAR see the definitions above. OK is used if the information and evidence provided is adequate to demonstrate compliance with CDM requirements.

Validation Protocol, Table 3 - Resolution of Corrective Action Requests and Clarification			
Corrective action requests and/or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
The CAR and/or CLs raised in table 2 are repeated here.	Reference to the checklist question number in Table 2 where the CAR or CL is explained.	The responses given by the project participants to address the CARs and/or CLs.	The validation team's assessment and final conclusion of the CARs and/or CLs.

Validation Protocol, Table 4 - Forward Action Requests (if no FAR the table 4 is deleted)		
Forward action request	Reference to Table 2	Response by project participants Validation Conclusion
The FAR raised in table 2 is repeated here.	Reference to the checklist question number in Table 2 where the FAR is explained.	Response by the project participants on how forward action request will be addressed prior to first verification.

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2.4 Internal quality control

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

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

2.5 Validation team and the technical reviewer(s)

The validation team and the independent technical reviewer team have the collective competence necessary to perform the validation.

The validation team fulfills the following requirements:

qualification for all technical area/s (TAs) related to the activity;

technical experts who provides specific technical, methodological and sectoral knowledge and/or expertise and qualification for TAs can be involved;

it includes one Team Leader that takes the responsibility to lead the team;

it includes a Validator and in presence of investment analysis a Financial expert;

at least one member who performs the on-site visit is qualified for all TAs related to the activity;

at least one member who performs the on-site visit is qualified as Team Leader, even if he/she does not cover this role for the specific activity;

the same person can cover more than one roles.

The independent technical reviewer team fulfills the following requirements:

qualification for the CDM scheme and attendance to specific training related to the independent technical reviewer activity;

qualification for all technical area/s (TAs) related to the activity in case of Final Report;

The validation team members and the technical reviewers consist of the following personnel (refer to the relevant attachments to see the pertinent qualification certificates):

Role	Last Name	First Name	Site Visit (Yes/No)	Country
Team Leader and technical expert	Augustus Arokiasamy	Cyril	Yes	India
Validator	Kudtarkar	Shruti	Yes	India
Financial Expert	Varma	Karthika	No	India
Technical Reviewer	Valoroso	Rita	No	Italy

3 VALIDATION FINDINGS

The findings of the validation related to the project, as described in the PDD version 04 of 17/11/2014, version 03 of 23/09/2014, version 02 of 26/06/2014, version 01 of 20/02/2013 /01/, are stated in the following sections.

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

3.1 Approval and Participation

The project's host Party is India.

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The project participant is ReXchange Global Solutions (P73) and is a private entity; the project is a unilateral project and hence the host country is the only Party involved in the proposed bundled project activity. India fulfils the requirements to participate in the CDM, having ratified the Kyoto Protocol on 26/08/2002 /19/ and establishing as DNA the National CDM Authority (NCDMA) under Ministry of Environment and Forest, Govt. of India as per the UNFCCC website /20/. The project participant is correctly listed in table A.4 of the PDD and the information is consistent with the contact details provided in Appendix 1 of the PDD /01/.

The NCDMA, i.e. the DNA of India issued a Letter of Approval on 03/09/2014, authorizing ReXchange Global Solutions (P73) as project participant and confirming that the project assists in achieving sustainable development and the CDM project activity contributes to the sustainable development of the Host Country /35/. The Letter of Approval was received from the PP and refers to the project proposed project activity in the PDD submitted for registration /01/. RINA confirms that ReXchange Global Solutions (P73) is the only project participant; and has been authorized by the DNA of the host country /35/.

The authenticity of the letter of approval has been validated by verifying the original LoA document issued by the respective DNA of the Host Party for the specific proposed project activity and RINA has not found reason to doubt their authenticity.

By checking the above documents /35/ RINA considers the LoA in accordance with paragraphs 40-43 of the CDM-VVS /06/.

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 same has been confirmed from the term loan sanction letters submitted by the project investors /24/, /29/, /30/.

Project participants	ReXchange Global Solutions (P73)
Parties involved	India
APPROVAL	
LoA received	Yes/35/
Date of LoA	03/09/2014
LoA received from	Directly received from PP
Validation of authenticity	Checked with the original LoA document/35/.
Validity of LoA	Yes
PARTICIPATION	
Party is party to Kyoto Protocol	Yes
Voluntary participation	Yes
Project contribution to SD	Yes

3.2 Modalities of communication

The MoC dated 17/11/2014 /38/ was provided by ReXchange Global Solutions (P73) with whom RINA has a contractual relationship confirmed by the request of services signed on 12/03/2014 /31/. The corporate identity of all PPs 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 copy of PAN card and Undertaking letter submitted to National CDM

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Authority, Ministry of Environment & Forest, Government of India for Host Country Approval of the project activity /39/,/40/.

RINA confirms that the MoC statement provided by the PP(s) /38/ is based on the currently valid form "Modalities of Communication Statement" (CDM-MOC-FORM) /37/, the information required by the form including its Annex 1 is correctly completed, and the PP(s) authorized signatories signing the MoC correspond to the PP(s) authorized signatories included in Annex 1.

In conclusion, RINA confirms that the MoC statement provided by the PP(s) is in accordance with the requirements in para 54-58 as well it is in accordance with the requirements in para 62 of the CDM-VVS /06/.

3.3 Project design document

The PDD for the project activity "Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)", in "India", version 04 of 17/11/2014, version 03 of 23/09/2014, version 02 of 26/06/2014, version 01 of 20/02/2013 /1/ submitted by the ReXchange Global Solutions (P73) have been the basis for the validation process.

RINA confirms that the above PDD is based on the currently valid PDD template /16/ and is completed in accordance with the applicable guidance document/15/.

The main changes between the PDD version 01 of 20/02/2013 published for GSC and the PDD version 04 of 17/11/2014 submitted for registration are the following:

Section of the PDD	Description and reason for changing the information in that section
A.3	Baseline scenario and current practices has been mentioned in the latest PDD.
B.5	Input values has been detailed for Surbhi Textile Mills Pvt. Ltd. (2X2MW), Surbhi Textile Mills Pvt. Ltd. (1X0.8 MW), SPJ Constructions Pvt. Ltd. (2X2MW).
B.5	Sensitivity analysis has been updated in the latest PDD.
B.6.1	Project emissions and leakage emissions sections has been included in the latest PDD.
B.6.2	Data and parameters fixed ex-ante section is updated.

3.4 Project Design

Purpose and general description of the project activity

The purpose of the project activity is to generate 8.8 MW of electricity through commissioning of 5 numbers of Wind Turbine Generator (WTG) as follows:

WTG owner	Rated capacity (MW)	Number of WTGs	Location of WTGs (State)
Surbhi Textile Mills Pvt. Ltd.	2	1	Maharashtra
Surbhi Textile Mills Pvt. Ltd.	2	1	Maharashtra
Surbhi Textile Mills Pvt. Ltd.	0.8	1	Gujarat
SJP Constructions Pvt. Ltd.	2	1	Maharashtra
SJP Constructions Pvt. Ltd.	2	1	Maharashtra

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All these windmills are connected to the Northern, Eastern, Western and North-Eastern (NEWNE) regional grid. Of these 5 WTGs, electricity generated from 0.8 MW of WTG owned by Surbhi Textile Mills Pvt. Ltd. is used for captive purpose by wheeling the electricity generated through the NEWNE regional grid, while the balance WTGs supply electricity generated to Northern, Eastern, Western and North-Eastern (NEWNE) regional grid. The project activity is a Greenfield project and involves commissioning of WTGs manufactured by Inox Wind Limited (4 WTGs of 2 MW capacity) and Wind World (India) Limited (1 WTG of 0.8 MW capacity). It is a small scale project with a renewable crediting period of 07 years and annual emission reductions of 16,078 tCO₂e.

Project location

The project is located in Rawalgundwadi wind site of Sangli district in the state of Maharashtra and Khadvavdi wind sites of Rajkot district in the state of Gujarat, India. WTG wise location details are presented below:

WTG Owner	Capacity (MW)	WTG ID	Latitude			Longitude		
			Deg	Min	Sec	Deg	Min	Sec
Surbhi Textile Mills Pvt. Ltd.	2	MV2T-18	16	59	20.04	75	17	47.083
Surbhi Textile Mills Pvt. Ltd.	2	MV2T-61	16	57	25.7	75	16	10.3
Surbhi Textile Mills Pvt. Ltd.	0.8	WWIL/800/13-14/3420	22	7	7.7	71	5	3
SJP Constructions Pvt. Ltd.	2	MV2-T-19	16	59	28.66	75	17	27.92
SJP Constructions Pvt. Ltd.	2	MV2-T-20	16	59	7.85	75	17	15.91

Scenario existing prior to the implementation of the project activity

In the absence of the project activity the equivalent amount of power would have been generated in the fossil fuel dominated NEWNE grid. This is evident from the electricity generation scenario of the host country that the NEWNE is dominated by fossil fuel based power plants /18/. Hence, it is confirmed that electricity equivalent to the project activity would have been generated in NEWNE grid of other power plants added to the NEWNE grid.

Technology(ies) employed

The project activity involves the implementation of 5 wind energy generators (WEGs) /41/, /42/. RINA confirms 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 same has been confirmed from the list of models and manufactures of wind turbines published by Centre for Wind Energy Technology /43/. 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 WEC during the site visit and cross verifying with the commissioning certificates /41/, /42/. The annual gross energy generation of the project is estimated to be 16,490 MWh/year based on the PLF of 21.42%. The PLF has been verified by RINA against the independent third party report prepared by Progressive certification /44/, /45/, /46/. RINA could confirm that the PLF considered by PP is reasonable and in line with the requirement of CDM EB "guideline for the reporting and validation of plant load factors" /12/.

As per the technical details provided from the manufacturer the life of the plant is considered as 20 years /47/, /48/.

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WTG Owner	Capacity (MW)	Machine Manufacturer	Machine Make
Surbhi Textile Mills Pvt. Ltd.	2	Inox Wind Limited	WT 2000 DF
Surbhi Textile Mills Pvt. Ltd.	2	Inox Wind Limited	WT 2000 DF
Surbhi Textile Mills Pvt. Ltd.	0.8	Wind World India Private Limited	E - 53
SJP Constructions Pvt. Ltd.	2	Inox Wind Limited	WT 2000 DF
SJP Constructions Pvt. Ltd.	2	Inox Wind Limited	WT 2000 DF

Project implementation

The starting date of the project activity is 30/08/2013, when one of the project investor (Surbhi Textile Mills Pvt. Ltd) has issued the purchase order for the supply of 1 no. of 800 kW type- E53 WTG to Wind World (India) Ltd /27/. Validation team has accepted the start date since this is the earliest date on which the PP has committed itself to the expenditures related to the implementation of the project activity as per the Glossary of CDM Terms /14/. During the site visits on 09/04/2014 and 10/04/2014 it was observed by the validation team that the entire project has been commissioned and connected to NEWNE grid.

Crediting period and estimated Emission Reductions

The expected operational lifetime of the project activity is 20 years and this has been confirmed from the project life mentioned in the by the declaration provided by technology supplier (Inox Wind) for its WT 2000 DF wind turbine dated 24/03/2014 /49/. A renewal crediting period is chosen for the project activity and the length of the first crediting period is 7 years starting from 01/03/2015, or the date of registration of the project activity under UNFCCC, whichever is later. The GHG emission reductions are estimated to be average 16,078 tCO₂e per year and 112,546 tCO₂e over the 7 years crediting period.

Contribution to sustainable development

The contribution towards sustainable development by project activity is explained under the title of social well being, economic well being, environment well being, and technological well being in section A.1. of the latest PDD /01/. The same has been cross-checked with the official web site /21/ of National CDM authority under Ministry of Environment and Forests (MoEF), India and it is found to be in line with sustainable indicators derived by the host country (India). It is confirmed from the site visit and interview with the Local stakeholders that Project activity provides employment opportunities to the local people. Further, the proposed project activity contributes towards sustainable development as confirmed through the HCA /35/.

RINA was able to verify all the documented evidence listed above during the validation process and can confirm that data and considerations are complete and accurate. Moreover RINA confirms that the description of the proposed CDM project activity, as contained in the PDD 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.

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3.5 Application of selected baseline and monitoring methodology

The project correctly applies the approved baseline and monitoring methodology “AMS-I.D”, “Grid Connected Renewable Electricity Generation”, version 17 of 03/06/2011 /07/. The proposed project activity meets the criteria defined in the baseline methodology as it ensures that:

- The project activity is the green field renewable project activity using the wind power resources for the generation of electricity. The project activity is connected to the NEWNE grid, which is the regional grid. The same is confirmed by the site visit observation, purchase orders, third party agreement and commissioning reports /23/, /27/, /28/, /41/, /42/. Both the conditions 1(a) and 1(b) of the methodology /07/ are applicable to the project activity.
- With respect to the condition 2 of the methodology, the project activity supplies electricity to a regional grid as well as displaces grid electricity consumption of the regional grid i.e. NEWNE grid as confirmed by the site visit observation, purchase orders, third party agreement and commissioning reports /23/, /27/, /28/, /41/, /42/. Hence, option 1 and 2 of Table 2 of AMS-I.D version 17 is applicable for this project activity /07/.
- Project activity involves the installation of new wind energy generators at the project site where there was no renewable energy generation unit operating prior to the proposed project activity (green field project activity). The same has been confirmed by site visit observation and discussion with the PP. Thus, condition 3(a) of the methodology /07/ is applicable to this project activity. As project activity comes under the condition 3(a), other options such as 3(b), 3(c) and 3(d) are not applicable to this project activity.
- The project activity is the green field wind power project; hence applicability condition 4 of the methodology AMS-I.D is not relevant to this project activity.
- The project activity is the green field wind power project activity with a total capacity of 8.8 MW, which is a small-scale CDM project activity and there is no non-renewable component or co-firing involved in the project activity, as confirmed by site visit observation, purchase orders, third party agreement and commissioning reports /23/, /27/, /28/, /41/, /42/.
- As project activity is the green field wind power project activity, the applicability conditions 6, 7 and 8 of the approved methodology is not relevant to the project activity.

The project activity applies the following methodological tools:

- Methodological tool “Tool to calculate the emission factor for an electricity system, version 04 of 04/10/2013 /08/ and meets the defined criteria as it ensures that:
 - Calculation of the emission factor has been done for the proposed project activity as per the steps stipulated in the tool.
 - Data used in the calculation of emission factor is publicly available from CEA data base version 9.0, January 2014, published by Ministry of power, India and it is noted that this is latest version available with the CEA data base /18/ at the time of submission of PDD to the DOE. The same is accepted by the validation team.

Debundling

The proposed project activity is not a de-bundled component of a large scale project activity since the PP does not have any registered small-scale CDM project activity or an application to register another CDM project activity in the same project category and technology, within 1 km of the project boundary of the proposed small scale project activity and within the previous 2 years. This has been confirmed during validation site visit and from the databank of UNFCCC /21/.

RINA 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 and the selected version is valid at the time of submission of the proposed project activity for registration. It is also confirmed that the methodology is correctly applied by comparing it with the actual text of the applicable version of the methodology.

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3.6 Project boundary

According to the approved baseline and monitoring methodology “AMS I.D”, “Grid connected renewable electricity generation”, version 17 of 03/06/2011/07/ the project boundary includes 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 /07/.

Hence, the project boundary includes the WTGs, metering/substation system and regional grid (NEWNE grid).

The physical boundary of the project activity identified by the PP has been cross-verified by site visit observation, purchase orders, third party agreement and commissioning reports /23/, /27/, /28/, /41/, /42/.

Emissions sources included in the project boundary are shown in the table below:

	GHGs involved	Description
Baseline emissions	CO ₂	Electricity that would have been generated by the fossil fuel based power plants connected to NEWNE grid. The same was verified with the purchase orders, third party agreement and commissioning reports /23/, /27/, /28/, /41/, /42/ and found to be inline.
Project emissions	Nil	As the wind power project doesn't use fossil fuel for their operation, no project emissions are envisaged.
Leakage	Nil	As the energy generation equipment is not transferred from another activity.

Emission sources which are not addressed by the applied methodology and which are expected to contribute more than 1% of the overall expected average annual emissions reduction have not been identified because the project activity is a Greenfield wind power project and involves only the assembly of various components of the wind turbine generator over the cement concrete basement.

By checking the information and evidences available /23/, /27/, /28/, /41/, /42/ and by the physical site, RINA can confirm that all the emission sources and gases have been included in the project boundary and the description in the PDD is accurate and complete, and also that the selected sources and gases are justified for the proposed project activity.

3.7 Baseline scenario identification

According to the approved baseline methodology AMS-I.D /07/, the 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 into the grid.

Project activity involves generation of electricity using wind power and is connected to NEWNE grid; which is cross-verified by site visit observation, purchase orders, third party agreement and commissioning reports /23/, /27/, /28/, /41/, /42/. In the absence of this project activity, same amount of electricity would have been generated by the operation of existing/proposed grid connected fossil fuel based power plants. The same was cross checked and confirmed by referring the CO₂ Baseline Database for the Indian Power Sector, User Guide (Version 9.0, January 2014) issued by Central Electricity Authority /18/. The CEA data base used by the PP is accepted by the team as this is the latest version available at the time of submission of PDD to DOE as per the “tool to calculate the emission factor for an electricity system”/08/.

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Since the approved methodology that is applied prescribes the baseline scenario, no further analysis is required, according to paragraph 122 of the CDM-VVS, version 07.0 /06/.

RINA was able to verify all the documented evidence listed above during the validation process and can confirm that:

The approved baseline methodology “AMS I.D.”, “Grid connected renewable electricity generation”, version 17 of 03/06/2011/07/ 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.

3.8 Additionality

The additionality of the proposed project activity is demonstrated by guidelines on the demonstration of additionality of small-scale project activities, version 09.0, dated 20/07/2012 /09/ and the investment barrier analysis has been selected.

The above opinion of RINA to the additionality of the proposed project is further explicitly explained in the following steps.

3.9 Prior consideration of the clean development mechanism

Project starting date

The project start date is 30/08/2013, when one of the project investor (Surbhi Textile Mills Pvt. Ltd) has issued the purchase order for the supply of 1 no. of 800 kW type- E53 WTG to Wind World (India) Ltd /27/. During the site visits on 09/04/2014 and 10/04/2014 it was observed by the validation team that the entire project has been commissioned and connected to NEWNE grid. The commissioning dates were also verified from the commissioning certificates issued by the respective nodal agency to the project activity /41/,/42/ and confirmed that the start date selected is appropriate.

Prior consideration of CDM

Since, the project start date is after 02/08/2008 and the identified start date is prior to 25/03/2014 when the PDD was published for global stakeholder consultation /56/, the PP needs to demonstrate that the CDM was seriously considered in the decision to implement the project activity, that the benefits of CDM were a decisive factor in the decision to proceed with the project and that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation. To confirm the prior consideration of CDM, RINA noted that the project investors had duly sent a notification letter of prior CDM consideration to both the DNA of India and the UNFCCC secretariat of the commencement of the project activity and of their intention to seek CDM status, using the standardized form F-CDM-Prior Consideration. The notification letters to Indian DNA and to the UNFCCC secretariat were sent on 19/12/2013, 21/12/2013 /58/ and the acknowledgement e-mails were received from UNFCCC on 21/12/2013 /59/ and from Indian DNA on 26/12/2013 /60/. Further, the notification is available at UNFCCC website indicating the receiving date of prior CDM consideration notification /61/. Such notifications were made within six months of the project activity start date.

In conclusion, in accordance with paragraph 33 of the “Clean development mechanism project standard”, version 07 /05/ and paragraph 113 Clean development mechanism validation and verification standard, version 07 /06/, RINA can confirm that the CDM was considered necessary in the decision to implement the project activity.

3.10 Identification of alternatives

The project activity is a grid connected electricity generation project by wind power, as per the approved simplified baseline methodology AMS-I.D, version 17,/07/ the most realistic baseline

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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. Since the methodology has already defined the baseline scenario, no further analysis is required as according to the paragraph 122 of VVS version 07/06/. The project proponent has justified the selection of the baseline scenario in line with the applied methodology and the same is deemed reasonable.

3.11 Investment analysis

Choice of approach

The PP has chosen to apply investment analysis to demonstrate the additionality of the project activity using the benchmark analysis method. PP has identified post tax equity IRR as the most suitable financial indicator. The project cannot apply simple cost analysis since the project brings revenue from the sale of electricity; also investment comparison analysis cannot be applied as the alternative to the project activity is the electricity generated by new and existing grid connected power plants. The choice of benchmark is as per the Guidelines on the demonstration of additionality of small-scale project activities (ver. 09 EB 68 Annex 27)/09/ of the simplified modalities and procedures for small scale CDM project activities. Considering the fact that the alternative to the project is the supply of electricity from the grid (mentioned in para 11 of methodology) & the choice of the developer is to invest or not to invest, benchmark analysis has been considered appropriate for demonstration of additionality, which is in conformity with guidance 19 Annex 5 EB 62.

Benchmark selection

As per paragraph 12 of the Guidelines on investment analysis, required/expected returns on equity are appropriate benchmarks for an equity IRR.

Following is stated in para 15 of Guidelines on the Assessment of Investment Analysis, version 05 /10/,

‘If the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in Appendix A; or by (b) calculating the cost of equity using best financial practices, based on data sources which can be clearly validated by the DOE, while properly justifying all underlying factors. The values in the table in Appendix A may also be used, as a simple default option, if a company internal benchmark is used.’

In line with above, required/expected return on equity is an appropriate benchmark for equity IRR. Accordingly, project participant considered default values for the expected return on equity of 11.75% as given in para 1 and para 6 of Appendix A of Guidelines on the Assessment of Investment Analysis, version 05 /10/, which is expressed in real terms. It was also noted that these default values were available to the PP at the time of this investment decision. 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’, 2nd edition, by ‘Aswath Damodaran’ /63/. In page 320 of the book, 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.

$$\text{Nominal Benchmark estimated} = (1 + 11.75\%) * (1 + 5.60\%) - 1 = 18.01\%$$

As per the para 7 of Appendix A of Guidelines on the Assessment of Investment Analysis, version 05 /10/, states that “the inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period. If this information is not available, the target

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inflation rate of the central bank shall be used. If this information is also not available, then the average forecasted inflation rate for the host country published by the IMF (International Monetary Fund World Economic Outlook) or the World Bank for the next five years after the start of the project activity shall be used."

Reserve Bank of India (RBI) 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. The WPI inflation forecasted by RBI for next 5 years is expected to be 6.10% and for next 10 years is expected to be 5.60% /62/. So PP has used the forecasted inflation rate for 10 years published by the Reserve Bank of India (RBI) for the conservative estimation of the benchmark. Thus the validation team considers that RBI inflation forecast for 10 years as appropriate for the project activity. RINA verified all the above said documents and confirmed that the benchmark identified to compare the financial attractiveness of the project activity is appropriate.

Input parameters

RINA has validated the input parameters used in the investment analysis and the following steps have been followed to assess the investment analysis:

- Assessment of the sources used for input parameters. All input parameters used in the financial analysis are taken from offer letter issued by technology provider /22/, /25/, /26/ and third-party state electricity regulatory commission tariff order /64/,/75/ available at the time of decision making and PLF assessment by Progressive Certification (third party assessment report)/44/,/45/,/46/etc. as described in the following table, and can thus considered information provided by independent source.
- Confirmation of the values in the PDD and investment analysis is fully consistent with the values provided in offer letter /22/, /25/, /26/, tariff order /64/,/75/ and PLF assessment by Progressive Certification (third party assessment report)/44/,/45/,/46/. RINA compared the input parameters for the financial analysis included in the latest PDD/01/ and in the investment analysis spreadsheet /03/ with the parameters stated in the documents used and was able to confirm that the values applied are consistent with the values stated in the offer letter mentioned in the following paragraphs.
- Assessment of the period between the time of the offer from technology supplier and the investment decision. The investment decision to proceed with the project activity was taken on 30/08/2013 /27/ which was within the same financial year of offer letter received from the technology supplier, dated 22/08/2013 /26/; thus the value would not have materially changed.
- Cross-check of the input parameters used in the financial analysis. The input parameters used in the financial analysis were cross-checked and all data sources used to cross-check were checked during the validation process. The following is carried out:

Surbhi Textile Mills Pvt. Ltd. - (2 x 2.00 MW)

Parameters	Unit	Value	Validation Assessment and cross checking
Capacity	MW	4.00	Verified against offer letter /25/ and cross verified against the purchase order placed by the Surbhi Textile Mills Pvt. Ltd. to the technology supplier, (INOX Wind Limited) /27/.
No. of WTGs		2	Verified against offer letter /25/ and cross verified against the purchase order placed by the Surbhi Textile Mills Pvt. Ltd. to the technology supplier, (INOX Wind Limited) /27/.

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Parameters	Unit	Value	Validation Assessment and cross checking
Plant load factor	%	21.42	<p>Verified against the PLF MERC order dated 22/03/2013 /64/ and third party assessment report prepared by Progressive Certification dated 28/10/2013 /44/. The plant load factor provided to the government while applying the project activity for implementation approval or the plant load factor determined by a third party contracted by the project participants; the PLF justification is in line with the requirement of "Guidelines for the reporting and validating of Plant Load Factors" version 01 of EB 48 dated 17/07/2009 /12/. The indicative PLF in MERC order is around 20% /64/, while the third party report is approximately 21.42% /44/. Therefore, on a conservative note, PP has considered 21.42% PLF indicated by the third party assessment report /44/. Therefore RINA confirms that the PLF considered for the project activity is conservative and appropriate; hence acceptable.</p>
Deration after 10th year	%	5.00	<p>Verified against the TERI report /65/. As per the report, "The efficiency of any rotating machine reduces due to ageing. A simplified nom of one time de-ration by 5% after 10 years can be considered to estimate net saleable energy". The justification for considering 5% de-ration factor after 10th year is accepted by the DOE. However, an increase in 10% of generation has been covered under sensitivity analysis.</p>
Tariff	INR/kWh	5.81	<p>The values used based on the MERC tariff order available at the time of investment decision. The tariff order is the document through which the State (Maharashtra) Electricity Regulatory Commission determines the tariff rate applicable for wind power projects. The tariff order /64/ is a publicly available document and available at the time of investment decision. As per the MERC tariff order section 3.11 of page 51, states that the tariff rate INR 5.81/kWh tariff shall be valid for a tariff Period of 13 years from the Commercial Operation Date /64/.</p> <p>Further, the validation team has cross checked the MERC order on the Policy Review in matters related to Wind Power in Maharashtra, dated 07/04/2014 /72/. The order states that "the tariff is determined considering the levellisation over the useful life of the Wind Projects, the Commission rules that if such Projects opt to extend the Energy Purchase Agreement (EPA) period from 13 years to 25 years, the tariff determined for Wind Energy Projects for 13 years, considered from the date</p>

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Parameters	Unit	Value	Validation Assessment and cross checking
			<p>of commercial operation of the Wind Project shall also be applicable from 14th year to 25 years.</p> <p>The validation team has also verified the Power Purchase Agreements submitted signed between Surabhi Textile Mills Pvt. Ltd. . and Maharashtra State Electricity Distribution Co. Limited on 10/10/2014 /70/; which is in line with the MERC tariff order /64/. Hence, the value used for the financial analysis is acceptable to the validation team. Further, an increase in 10% of the tariff has been covered under sensitivity analysis. .</p>
Technical life of project activity	Years	20	<p>The technical life of the WTG is 20 years and this has been confirmed from the project life mentioned in the by the declaration provided by technology supplier (Inox Wind) for its WT 2000 DF wind turbine supplied to Surbhi Textile Mills Pvt. Ltd dated 24/03/2014 /49/. Therefore, financial analysis carried for 20 years is acceptable.</p>
Operation and Maintenance Cost	INR million	4.04	<p>Verified the offer letter which mentions the first year operation and maintenance shall be free of charge and from second year onwards the charges will be INR 4.04 million (i.e. INR 1.80 million per WTG and 12.36% service Tax)with 5% p.a. escalation. Ensured that the calculation has been done as per the offer letter /25/. Hence, the value used for the financial analysis is acceptable to the validation team. Further, an increase in 10% of the O&M cost has been covered under sensitivity analysis.</p>
Service tax on O&M cost	%	12.36	<p>The tax rate is cross checked and found to be correct which was applicable at the time of investment decision /66/.</p>
Insurance	INR million	0.36	<p>RINA validation team has ensured that insurance has been calculated as per the TAC order, 2001. /67/</p>
Project cost	INR Million	241.00	<p>The offer letter from technology supplier INOX wind Limited dated 25/10/2013/27/ was available at the time of investment decision. The validation team cross checked verified with the cost mentioned in the purchase orders submitted by PP to the technology supplier; and found that the cost mentioned in the purchase order is consistent with the offer price /27/.Further the same has been cross checked with the Chartered Accountants certificate issued for the project activity /73/; and found the value is consistent. Further, an increase in 10% of the project cost has been</p>

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Parameters	Unit	Value	Validation Assessment and cross checking
			covered under sensitivity analysis. Therefore, project cost was found acceptable as per the offer letter.
Salvage value	%	10.00	Validation team has ensured that the salvage value has been calculated at 10% of the project cost as per the MERC order /64/.
Tax depreciation	%	15.00	Validation team has ensured that tax depreciation is calculated as per the income tax act /68/.
Debt equity ratio	Ratio	70:30	Validation team has ensured that the debt equity ratio of 70:30 has been calculated as per the MERC order /64/. Also, ensured that the interest rate, repayment amount has been calculated as per the MERC order /64/. Verified the loan sanction letter which mentions a loan sanctioned of INR 86.6 million at 12% interest for 8 years /29/, which is found reasonable. However, the parameters debt equity ratio, interest on loan has been subjected to sensitivity analysis; an increase of 10% of equity ratio, interest on loan has been covered under sensitivity analysis.
Interest on loan	%	12.87	
Tenure of loan	Quarters	40	
Installment	INR Million	4.22	
Taxation	%	Corporate tax – 32.45% Minimum alternate tax (MAT) – 20.01%	Validation team has ensured that the tax rate has been calculated as per the tax rate applicable at the time of decision making/69/.

Surbhi Textile Mills Private Limited (1 X 0.80MW)

Parameters	Unit	Value	Validation Assessment and cross checking
Capacity	MW	0.80	Verified against offer letter /26/ and cross verified against the purchase order placed by the Surbhi Textile Mills Pvt. Ltd. to the technology supplier, (Wind World (India) Limited) /27/.
No. of WTGs		1	Verified against offer letter /26/ and cross verified against the purchase order placed by the Surbhi Textile Mills Pvt. Ltd. to the technology supplier, (Wind World (India) Limited) /27/.
Plant load factor	%	23.45	Verified against the PLF GERC tariff order dated 08/08/2012 /75/ and third party assessment report prepared by Progressive Certification dated 28/08/2013 /45/. The plant load factor provided to the government while applying the project activity for implementation approval or the plant load factor determined by a third party contracted by the project participants; the PLF justification is in line with

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Parameters	Unit	Value	Validation Assessment and cross checking
			the requirement of “Guidelines for the reporting and validating of Plant Load Factors” version 01 of EB 48 dated 17/07/2009 /12/. The indicative PLF in GERC order is around 24% /75/, while the third party report is approximately 23.45% /44/; which is only around 2% less than that of GERC value. However, an increase in 10% of in PLF has been covered under sensitivity analysis. Hence, the value is acceptable.
Deration after 10th year	%	5.00	Verified against the TERI report /65/. As per the report, “The efficiency of any rotating machine reduces due to ageing. A simplified nom of one time de-ration by 5% after 10 years can be considered to estimate net saleable energy”. The justification for considering 5% de-ration factor after 10th year is accepted by the DOE. However, an increase in 10% of generation has been covered under sensitivity analysis.
Tariff	INR/kWh	4.93	Verified that the tariff has been considered as per the GERC order/75/. Further the same has been cross checked with the wheeling agreement signed with the Dakshin Gujarat Vij Company Limited, and found that the value considered in the agreement is less than the value used for the financial analysis/76/,/28/. The value used for the financial analysis is acceptable to the validation team. Further, an increase in 10% of the tariff has been covered under sensitivity analysis.
Technical life of project activity	Years	20.00	The technical life of the WTG is 20 years and this has been confirmed from the project life mentioned in the by the declaration provided by technology supplier (Wind World (India) Ltd) for its 800 kW wind turbine supplied to Surbhi Textile Mills Pvt. Ltd/49/. Therefore, financial analysis carried for 20 years is acceptable.
Operation and Maintenance Cost	INR million	0.73	Verified the offer letter which mentions the first year operation and maintenance shall be free of charge and from second year onwards the charges will be INR 0.73 million (i.e. INR 0.65 million per WTG and 12.36% service Tax) per WTG with 6.5% p.a. escalation /26/. Validation team ensured that the calculation has been done as per the offer letter /26/. Further, an increase in 10% of the O&M cost has been covered under sensitivity analysis. Hence, the value used for the financial analysis is acceptable to the validation team.
Service tax on O&M cost	%	12.36	The tax rate is cross checked and found to be correct which was applicable at the time of investment decision /66/.

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Parameters	Unit	Value	Validation Assessment and cross checking
Insurance	INR million	0.07	Validation team has ensured that insurance has been calculated as per the TAC order, 2001 /67/.
Transmission Charges	INR/MW/Day	2,970.00	Validation team ensured that the transmission charges have been calculated as per the tariff order/75/.
Project cost	INR Million	45.00	The offer letter from technology supplier Wind World (India) Ltd dated 22/08/2013 /26/ was available at the time of investment decision. The validation team cross checked verified with the cost mentioned in the purchase orders submitted by PP to the technology supplier; and found that the cost mentioned in the purchase order is consistent with the offer price /27/.Further the same has been cross checked with the Chartered Accountants certificate issued for the project activity /73/; and found the value is consistent. Further, an increase in 10% of the project cost has been covered under sensitivity analysis. Therefore, project cost was found acceptable as per the offer letter.
Salvage value	%	10.00	Validation team has ensured that the salvage value has been calculated at 10% of the project cost as per the GERC order /75/.
Tax depreciation	%	15.00	Validation team has ensured that tax depreciation is calculated as per the income tax act /68/.
Debt equity ratio	Ratio	70:30	Validation team has ensured that the debt equity ratio of 70:30 has been calculated as per the GERC order /75/. Also, ensured that the interest rate, repayment amount has been calculated as per the GERC order /75/.
Interest on loan	%	13.00	
Tenure of loan	Quarters	40	
Installment	INR Million	0.79	
Taxation	%	Corporate tax – 32.45% Minimum alternate tax – 20.01%	Validation team has ensured that the tax rate has been calculated as per the tax rate applicable at the time of decision making/69/.

SJP Constructions Private Limited (2 X 2.00MW)

VALIDATION REPORT

Parameters	Unit	Value	Validation Assessment and cross checking
Capacity	MW	2 & 2.00	Verified against offer letter /22/ and cross verified against the purchase order placed by the SJP Constructions Pvt. Ltd. to the technology supplier, (INOX Wind Limited) /23/.
No. of WTGs		2	Verified against offer letter /22/ and cross verified against the purchase order placed by the SJP Constructions Pvt. Ltd. to the technology supplier, (INOX Wind Limited) /23/.
Plant load factor	%	21.42	<p>Verified against the PLF MERC order dated 22/03/2013 /64/ and third party assessment report prepared by Progressive Certification dated 28/10/2013 /46/. The plant load factor provided to the government while applying the project activity for implementation approval or the plant load factor determined by a third party contracted by the project participants; the PLF justification is in line with the requirement of "Guidelines for the reporting and validating of Plant Load Factors" version 01 of EB 48 dated 17/07/2009 /12/. The indicative PLF in MERC order is around 20% /64/, while the third party report is approximately 21.42% /44/. Therefore, on a conservative note, PP has considered 21.42% PLF indicated by the third party assessment report /46/.</p> <p>Therefore RINA confirms that the PLF considered for the project activity is conservative and appropriate; hence acceptable.</p>
Deration after 10th year	%	5.00	<p>Verified against the TERI report /65/. As per the report, "The efficiency of any rotating machine reduces due to ageing. A simplified nom of one time de-ration by 5% after 10 years can be considered to estimate net saleable energy". The justification for considering 5% de-ration factor after 10th year is accepted by the DOE. However, an increase in 10% of generation has been covered under sensitivity analysis.</p>
Tariff	INR/kWh	5.81	<p>The values used based on the MERC tariff order available at the time of investment decision. The tariff order is the document through which the State (Maharashtra) Electricity Regulatory Commission determines the tariff rate applicable for wind power projects. The tariff order /64/ is a publicly available document and available at the time of investment decision. As per the MERC tariff order section 3.11 of page 51, states that the tariff rate INR 5.81/kWh tariff shall be valid for a tariff Period of 13 years from the Commercial Operation Date /64/.</p> <p>Further, the validation team has cross checked</p>

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Parameters	Unit	Value	Validation Assessment and cross checking
			<p>the MERC order on the Policy Review in matters related to Wind Power in Maharashtra, dated 07/04/2014 /72/. The order states that “the tariff is determined considering the levellisation over the useful life of the Wind Projects, the Commission rules that if such Projects opt to extend the Energy Purchase Agreement (EPA) period from 13 years to 25 years, the tariff determined for Wind Energy Projects for 13 years, considered from the date of commercial operation of the Wind Project shall also be applicable from 14th year to 25 years.</p> <p>The validation team has also verified the Power Purchase Agreements submitted signed between SJP Constructions Pvt. Ltd. and Maharashtra State Electricity Distribution Co. Limited on 10/10/2014 /701; which is in line with the MERC tariff order /64/. Hence, the value used for the financial analysis is acceptable to the validation team. Further, an increase in 10% of the tariff has been covered under sensitivity analysis. .</p>
Technical life of project activity	Years	20	<p>The technical life of the WTG is 20 years and this has been confirmed from the project life mentioned in the by the declaration provided by technology supplier (Inox Wind) for its WT 2000 DF wind turbine supplied to the project investors dated 24/03/2014/49/. Therefore, financial analysis carried for 20 years is acceptable.</p>
Operation and Maintenance Cost	INR million	1.80	<p>Verified the offer letter which mentions the first year operation and maintenance shall be free of charge and from second year onwards the charges will be INR 4.04 million (i.e. INR 1.80 million per WTG and 12.36% service tax) with 5% p.a. escalation. Ensured that the calculation has been done as per the offer letter /25/. Hence, the value used for the financial analysis is acceptable to the validation team. Further, an increase in 10% of the O&M cost has been covered under sensitivity analysis.</p>
Service tax on O&M cost	%	12.36	<p>The tax rate is cross checked and found to be correct which was applicable at the time of investment decision /66/.</p>
Insurance	INR million	0.38	<p>RINA validation team has ensured that insurance has been calculated as per the TAC order, 2001/67/.</p>
Project cost	INR Million	250.00	<p>The offer letter from technology supplier INOX wind Limited dated 20/10/2013/22/ was available at the time of investment decision. The validation team cross checked verified</p>

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Parameters	Unit	Value	Validation Assessment and cross checking
			with the cost mentioned in the purchase orders submitted by PP to the technology supplier; and found that the cost mentioned in the purchase order is about 241 Million INR, i.e. around 3.6% higher than that of the offer price /23/. Further the purchase order value has been cross checked with the Chartered Accountants certificate issued for the project activity /74/; and found the value is consistent. Further, an increase in 10% of the project cost has been covered under sensitivity analysis. Therefore, project cost was found acceptable as per the offer letter.
Salvage value	%	10.00	Validation team has ensured that the salvage value has been calculated at 10% of the project cost as per the MERC order /64/.
Tax depreciation	%	15.00	Validation team has ensured that tax depreciation is calculated as per the income tax act /68/.
Debt equity ratio	Ratio	70:30	Validation team has ensured that the debt equity ratio of 70:30 has been calculated as per the MERC order /64/. Also, ensured that the interest rate, repayment amount has been calculated as per the MERC order /64/. Verified the loan sanction letter which mentions the loan sanction for INR 192 million at 12% interest for 7 years /24/, which is found reasonable. However, the parameters debt equity ratio, interest on loan has been subjected to sensitivity analysis; an increase of 10% of equity ratio, interest on loan has been covered under sensitivity analysis.
Interest on loan	%	12.87	
Tenure of loan	Quarters	40	
Installment	INR Million	4.38	
Taxation	%	Corporate tax – 32.45% Minimum alternate tax – 20.01%	Validation team has ensured that the tax rate has been calculated as per the tax rate applicable at the time of decision making/69/.

Based on the information verified, RINA was able to confirm that the input parameters used in the investment analysis are reasonable and adequately represent the economic situation of the project activity at the time of the investment decision.

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Calculation and conclusion

The IRR calculations were provide in a spreadsheet /03/. The calculation were verified and found to be correct by RINA as well as the assumptions used in the calculation were deemed to be correct. The project IRR without CDM revenues are given below;

Sl. No.	Project	Equity IRR without CDM
1	Surbhi Textile Mills Pvt. Ltd. - (2 x 2.00 MW)	15.63%
2	Surbhi Textile Mills Pvt. Ltd. - (1 x 0.80 MW)	8.61%
3	SJP Constructions Pvt. Ltd. - (2 x 2.00 MW)	14.54%

Which confirms that the proposed project activity in absence of the CDM benefits and compared to the benchmark IRR 18.01% is not financially attractive.

Sensitivity analysis

A sensitivity analysis has been carried out for parameters contributing more than 20% revenues and costs, to demonstrate the robustness of the financial analysis. The parameters for which sensitivity analysis done are annual power generation (PLF), change in tariff, project costs, operational and maintenance cost, interest rate and debt equity ratio. Sensitivity analysis was conducted for $\pm 10\%$ variation. Reasonable variations for these parameters were checked by calculating the variation necessary to reach the benchmark and then discussing the likelihood for that to happen.

Parameter	Equity IRR for Surbhi Textile Mills Pvt. Ltd. - (2 x 2.00 MW)		
Variation in %	-10%	Base Case	+10%
PLF	12.34%	15.63%	18.94%
O & M cost	15.99%	15.63%	15.23%
Project cost	18.91%	15.63%	12.93%
Tariff	12.34%	15.63%	18.94%
Interest Rate	16.36%	15.63%	14.84%
Debt equity Ratio	14.89%	15.63%	16.48%

Parameter	Equity IRR for Surbhi Textile Mills Pvt. Ltd. - (1 x 0.80 MW)		
Variation in %	-10%	Base Case	+10%
PLF	5.31%	8.61%	11.79%
O & M cost	9.13%	8.61%	8.17%
Project cost	11.24%	8.61%	6.49%
Tariff	7.84%	8.61%	9.50%
Interest Rate	9.35%	8.61%	8.00%
Debt equity Ratio	8.62%	8.61%	8.72%

Parameter	Equity IRR for SJP Constructions Pvt. Ltd. - (2 x 2.00 MW)		
Variation in %	-10%	Base Case	+10%
PLF	11.40%	14.54%	11.91%

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O & M cost	14.88%	14.54%	14.20%
Project cost	17.73%	14.54%	12.07%
Tariff	11.40%	14.54%	17.76%
Interest Rate	15.35%	14.54%	13.83%
Debt equity Ratio	14.01%	14.54%	15.30%

Based on the sensitivity analysis the equity IRR does not cross the benchmark under any circumstances. Further review of the sensitivity analysis reveals that for the benchmark to be crossed, one of the following must happen.

Parameter	Percentage variation required to reach the bench mark		
	Surbhi Textile Mills Pvt. Ltd. - (2 x 2.00 MW)	Surbhi Textile Mills Pvt. Ltd. - (1 x 0.80 MW)	SJP Constructions Pvt. Ltd. - (2 x 2.00 MW)
PLF	7.17%	30.09%	10.77%
O & M cost	-66.94%	-238.11%	-101.40%
Project cost	-7.45%	-28.63%	-10.78%
Tariff	7.17%	30.09%	10.77%
Interest Rate	-28.99%	-97.19%	-41.70%
Debt equity Ratio	21.89%	42.86%	30.73%

Parameter	Probability of the situation - Surbhi Textile Mills Pvt. Ltd. - (2 x 2.00 MW)
Generation	The PLF considered by the PP is 21.42% which is based on the indicative PLF as per the third party PLF assessment report prepared by progressive certification /44/. The indicative PLF in MERC order is only around 20% /64/. That is PLF considered for investment analysis is on the higher side. Assessment conducted by the Third Party is based on long term data and hence a PLF fluctuation of more than 7.17% is unlikely to happen. Further, the average PLF observed for the WTGs commissioned in Maharashtra the state reveals that the maximum average PLF observed in the state is 15.27% /77/. Therefore, a further increase of 7.17% in generation is not a realistic scenario.
Project cost	This is not a possible situation. Since, PP has placed Purchase order to INOX Wind Limited, for the supply of 2 numbers of WT 2000 DF, 2000 kW WEC /27/. The cost (as per offer letter) available at the time of investment decision /25/ and is found consistent with the purchase order price /27/. Further the same has been cross checked with the Chartered Accountants certificate issued for the project activity /73/; and found the cost is consistent. Therefore, a further increase of project cost is not a realistic scenario.
O & M cost	As per the offer letter the PP is charging INR 4.04 million and 5% escalation every year from the second year. So it indicates that the O&M cost will be only increasing; and 66.94% reduction in O & M cost is not a practical scenario.
Interest Rate	As per the historical data of Prime lending rate of SBI /78/, India's largest nationalized bank, the PLR has never dipped below 10.25% in the last 20 years. Banks generally charge a premium over the PLR. So the effective interest rate is much higher than the PLR. Moreover, historical data shows that the trend in interest rates has been moving upwards since the last 10 years. For the trend to reverse and reach the current levels (Surbhi Textile has signed the loan agreement at 12% interest rate) and then afterwards fall by a further 28.99% is not possible. Further it is to be noted here that the interest rates should fall by an average 28.99% over the term of the loan to breach the benchmark.

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Debt Equity Ratio	The debt equity ratio as per the bank sanction letter is 80:20, which means that the ratio is approximately 14% more than considered (70:30). Thus a 21.89% change the ratio is not possible.
Tariff rate	<p>The values used based on the MERC tariff order available at the time of investment decision. The tariff order is the document through which the State (Maharashtra) Electricity Regulatory Commission determines the tariff rate applicable for wind power projects. The tariff order /64/ is a publicly available document and available at the time of investment decision. As per the MERC tariff order section 3.11 of page 51, states that the tariff rate INR 5.81/kWh tariff shall be valid for a tariff Period of 13 years from the Commercial Operation Date /64/.</p> <p>Further, the validation team has cross checked the MERC order on the Policy Review in matters related to Wind Power in Maharashtra, dated 07/04/2014 /57/. The order states that "the tariff is determined considering the levellisation over the useful life of the Wind Projects, the Commission rules that if such Projects opt to extend the Energy Purchase Agreement (EPA) period from 13 years to 25 years, the tariff determined for Wind Energy Projects for 13 years, considered from the date of commercial operation of the Wind Project shall also be applicable from 14th year to 25 years.</p> <p>The validation team has also verified the Power Purchase Agreements submitted signed between Surabhi Textile Mills Pvt. Ltd. and Maharashtra State Electricity Distribution Co. Limited on 10/10/2014 /70/; which is in line with the MERC tariff order /64/. Hence, a further increase of the tariff to 7.17% is not a realistic scenario.</p>

Parameter	Probability of the situation - Surbhi Textile Mills Pvt. Ltd. - (1 x 0.80 MW)
Generation	The PLF considered by the PP is 23.45% which is based on the indicative PLF as per the third party PLF assessment report prepared by progressive certification /45/. The indicative PLF in GERC order is only around 24% /75/. Assessment conducted by the Third Party is based on long term data and hence a PLF fluctuation of more than 30.09% is unlikely to happen.
Project cost	This is not a possible situation. Since, PP has placed Purchase order to Wind World (India) Ltd, for the supply of 1 numbers of 800 kW WEC /27/. The cost (as per offer letter) available at the time of investment decision /26/ and is found consistent with the purchase order price /27/. Further the same has been cross checked with the Chartered Accountants certificate issued for the project activity /73/; and found the cost is consistent. Therefore, a further increase of project cost is not a realistic scenario.
O & M cost	238.11% reduction in O & M cost implies that the O&M contractor not just does the O&M for free, but rather pays the client to do the O&M of his WTG. This is not a practical scenario.
Interest Rate	As per the historical data of Prime lending rate of SBI, India's largest nationalized bank, the PLR has never dipped below 10.25% in the last 20 years /78/. Banks generally charge a premium over the PLR. So the effective interest rate is much higher than the PLR. Moreover, historical data shows that the trend in interest rates has been moving upwards since the last 10 years. For the trend to reverse and reach the current levels (Surbhi has signed the loan agreement at 12% interest rate) and then afterwards fall by a further 97.19% is not possible. Further it is to be noted here that the interest rates should fall by an average 97.19% over the term of the loan to breach the benchmark.

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Debt Equity Ratio	The debt equity ratio as per the bank sanction letter is 75:25, which means that the ratio is approximately 7% more than considered (70:30). Thus a 42.86% change the ratio is not possible..
Tariff rate	Verified that the tariff has been considered as per the GERC order/75/. Further the same has been cross checked with the wheeling agreement signed with the Dakshin Gujarat Vij Company Limited, and found that the value considered in the agreement is less than the value used for the financial analysis/76/,/28/. The value used for the financial analysis is acceptable to the validation team. Hence, a further increase of the tariff to 30.09% is not a realistic scenario.

Parameter	Probability of the situation - Surbhi Textile Mills Pvt. Ltd. - (2 x 2.00 MW)
Generation	The PLF considered by the PP is 21.42% which is based on the indicative PLF as per the third party PLF assessment report prepared by progressive certification /46/. The indicative PLF in MERC order is only around 20% /64/. That is PLF considered for investment analysis is on the higher side. Assessment conducted by the Third Party is based on long term data and hence a PLF fluctuation of more than 10.77% is unlikely to happen. Further, the average PLF observed for the WTGs commissioned in Maharashtra the state reveals that the maximum average PLF observed in the state is 15.27% /77/. Therefore, a further increase of 10.77% in generation is not a realistic scenario.
Project cost	This is not a possible situation. Since, PP has placed Purchase order to INOX Wind Limited, for the supply of 2 numbers of WT 2000 DF, 2000 kW WEC /23/. The validation team cross checked verified with the cost mentioned in the purchase orders submitted by PP to the technology supplier; and found that the cost mentioned in the purchase order is about 241 Million INR, i.e. around 3.6% higher than that of the offer price /23/. Further the purchase order value has been cross checked with the Chartered Accountants certificate issued for the project activity /74/; and found the value is consistent. Therefore, a further increase of project cost is not a realistic scenario.
O & M cost	As per the contract between SJP and INOX Wind (being submitted once again), the difference in O&M price as per offer letter and contract is only 11.11%. The O&M period is valid for 10 years. So in any case there will not be reduction in O&M cost by 101.40%..
Interest Rate	As per the historical data of Prime lending rate of SBI, India's largest nationalized bank, the PLR has never dipped below 10.25% in the last 20 years /78/. Banks generally charge a premium over the PLR. So the effective interest rate is much higher than the PLR. Moreover, historical data shows that the trend in interest rates has been moving upwards since the last 10 years. For the trend to reverse and reach the current levels (SJP has signed the loan agreement at 12% interest rate) and then afterwards fall by a further 41.70% is not possible. Further it is to be noted here that the interest rates should fall by an average 41.70% over the term of the loan to breach the benchmark.
Debt Equity Ratio	The debt equity ratio as per the bank sanction letter is 80:20, which means that the ratio is approximately 14% more than considered (70:30). Thus a 30.73% change the ratio is not possible.
Tariff rate	The values used based on the MERC tariff order available at the time of investment decision. The tariff order is the document through which the State (Maharashtra) Electricity Regulatory Commission determines the tariff rate applicable for wind power projects. The tariff order /64/ is a publicly available document and available at the time of investment decision. As per the MERC tariff order section 3.11 of page 51, states that the tariff rate INR 5.81/kWh tariff shall be valid for a tariff Period of 13 years from the Commercial Operation Date /64/.

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	<p>Further, the validation team has cross checked the MERC order on the Policy Review in matters related to Wind Power in Maharashtra, dated 07/04/2014 /57/. The order states that “the tariff is determined considering the levellisation over the useful life of the Wind Projects, the Commission rules that if such Projects opt to extend the Energy Purchase Agreement (EPA) period from 13 years to 25 years, the tariff determined for Wind Energy Projects for 13 years, considered from the date of commercial operation of the Wind Project shall also be applicable from 14th year to 25 years.</p> <p>The validation team has also verified the Power Purchase Agreements submitted signed between SJP Constructions Private Limited and Maharashtra State Electricity Distribution Co. Limited on 10/10/2014 /71/; which is in line with the MERC tariff order /64/. Hence, a further increase of the tariff to 10.77% is not a realistic scenario.</p>
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The result of IRR and sensitivity analysis shows that without the income from CERs sale, the proposed project activity is unlikely to be financially attractive.

3.12 Barrier analysis

This section is not applicable as the PP has not chosen Barrier analysis for demonstration of additionality and the project activity is automatically defined as additional as per the latest version of guidelines on the demonstration of additionality of small-scale project activities /09/, please refer to section 3.8 above.

3.13 Common practice analysis

This section is not applicable as the project activity falls under small scale project activity.

3.14 Conclusion

Conclusion on the additionality assessment: final conclusion on the relevance of presented topics and the project's additionality (e.g. its ability to reduce anthropogenic emissions of GHGs by sources below those that would have occurred in the absence of the registered CDM project activity).

RINA can 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, RINA considers the reasonings 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.

3.15 Monitoring Plan

The approved baseline and monitoring methodology “AMS I.D.” /07/ has been applied.

The monitoring plan is in accordance with the monitoring methodology; the monitoring plan will give opportunity for real measurement of achieved emission reductions.

RINA has checked all the parameters presented in the monitoring plan against the requirements of the methodology; no deviations relevant to the project activity have been found in the plan.

RINA 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

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emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified.

Parameters determined ex-ante

The ex-ante parameters that are mentioned in the methodology are included in the PDD and are provided in compliance with the methodology:

	Data/parameter	Unit	Value applied	Assessment
1	EF _{grid,CM,y} (Combined margin emission factor of the grid)	tCO ₂ /MWh	0.9750 for NEWNE grid	<p>Project participant has used the official published data on operating and build margin emission factors. The version of the data used is as it is the latest version available on 25/03/2014 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 9) /18/ 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 stations in the country. Project participant has applied weightage factors for the OM and BM [75% & 25% respectively] as specified in the tool to arrive at the emission factor for the combined margin /08/.</p> <p>Validation team has checked the emission factor calculations from CEA database version 9 /18/ and the value of EF_{grid,CM,y} is 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> <p>RINA 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.</p>
2	EF _{grid,BM,y} (Build Margin CO ₂ emission factor in year y)	tCO ₂ /MWh	0.9673 for NEWNE grid	<p>Project participant has used the official published data on operating and build margin emission factors. The version of the data used is as it is the latest version available on 25/03/2014 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 9) /18/ who is the sole authority for the</p>

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				<p>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 stations in the country.</p> <p>Validation team has checked the emission factor calculations from CEA database version 9 /18/ and the value of EF_{BM} is 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> <p>RINA 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.</p>
3	$EF_{grid,OM,y}$ (Operating Margin CO ₂ emission factor in year y)	tCO ₂ /MWh	0.9776 NEWNE	<p>for</p> <p>Project participant has used the official published data on operating and build margin emission factors. The version of the data used is as it is the latest version available on 25/03/2014 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 9) /18/ 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 stations in the country.</p> <p>Validation team has checked the emission factor calculations from CEA database version 9 /18/ and the value of EF_{OM} is 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> <p>RINA 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.</p>

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Parameters monitored ex-post

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

	Parameter	Description/Assessment
1	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in a year y $EG_{BL,y, Gujarat}$ (MWh/year)	<p>The electricity generated will be evacuated to NEWNE grid substation and it will be measured by a main energy meter and check meter which will be installed at the interconnection point. The certificate for share of electricity issued by SLDC (State Load Dispatch Center) will be the basis for the estimation of emission reduction calculations.</p> <p>Monthly readings are taken jointly by the representative of GEDA (Gujarat Energy Development Agency) and site in charge of Operator. The net electricity exported to the grid by project activity WTGs will be ascertained on the basis of ABT 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 WTGs have individual meter located in the panel of the WTG monitoring by the O&M operator and based on which apportioning is done.</p> <p>Project participant has chosen renewal crediting period of 7 years. Continuous monitoring will be carried out by energy meters. Continuous measurements and monthly recording will be carried out.</p>
2	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in a year y $EG_{BL,y, MH}$ (MWh/year)	<p>The electricity generated will be evacuated to NEWNE grid at substation and it will be measured by a main energy meter and check meter which will be installed at the interconnection point. The main meter readings will be the basis for the estimation of emission reduction calculations and; the check meter readings will be used for cross checking.</p> <p>Monthly readings are taken jointly by the representative of State Electricity Supply Company Limited and site in charge of Operator and a statement is prepared and signed by the representatives of both the parties for total electricity exported to grid, total electricity imported from the grid and the net electricity supplied. The meters installed are capable of measuring export and import. The net electricity exported will be calculated as difference of export and import meter reading. The same has been cross checked with the monitoring plan provided in final PDD and interview with PP during the site visit /01/. Data will be sourced from Distribution Licensee report on energy delivered to grid (joint meter reading certificates/credit notes issued by MSEDCL). The net electricity exported to the NEWNE grid will be the basis of emission reduction calculations. This reading can be cross verified with the actual invoices presented to State Utility.</p> <p>The WTGs have individual meter located in the panel of the WTG monitoring by the O&M operator and based on which apportioning</p>

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		<p>is done.</p> <p>Project participant has chosen renewal crediting period of 7 years. Continuous monitoring will be carried out by energy meters. Continuous measurements and monthly recording will be carried out.</p>
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Management system and quality assurance

Electricity meter of 0.2S class accuracy is used, which is in line with CEA regulation 2006 /57/. Main electricity meters at Sub-station will be calibrated at least once in three years for the Gujarat site and once in year for Maharashtra site by an accredited institution, which is confirmed in the PDD. Calibration records are maintained by state utility. The O & M of the project activity will be done by the project proponent O&M service provider who has dedicated trained personnel to carry out the day to day operation and maintenance of the project activity so as to monitor the quantity of electricity supplied to the grid. In addition,

The operational and management structure implemented by PP is summarized below:

- The Manager holds complete control over monitoring aspects pertaining to the project.
- The monitoring report will be reviewed and will keep a check on the proper training of staff, etc.
- The O & M team under the shift in-charge monitors continuous electricity generation from individual WTGs and compile so as to calculate the monthly electricity generation.
- The Plant-in-Charge maintains the data records received from shift in-charge and forward to the head of the PP.
- Final data management and invoicing against net electricity generation will be done by the technology provider for the project activity.
- The data will be archived for 2 years after the end of the crediting period by the PP

RINA confirms that the monitoring plan mentioned in the PDD is in accordance with the requirements mentioned in the monitoring methodology and the local regulatory requirements of the state utilities, as well the monitoring arrangements described in the monitoring plan are feasible within the project design. RINA is of the opinion that the monitoring plan will give opportunity for real measurement of achieved emissions reductions for 2 years after the crediting period.

3.16 Estimation of GHG emissions

The emission reduction ER_y by the proposed project activity during the crediting period is the difference between baseline emissions (BE_y), project emission (PE_y) and emissions due to leakage (L_y) as follows.

Baseline emissions

The baseline emissions are calculated as per the paragraph 11 of the approved methodology AMS-I.D, version 17 /07/ and is the best suited for this project activity. Baseline emission is determined as the product of electrical energy baseline $EGBL_y$ expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor. Emission factor can be calculated either by combined margin approach consisting of the combination of operating margin and build margin according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system' or using weighted average emission approach. PP has opted for the combined margin emission factor approach. The operating margin emission factor has been calculated based on Simple OM method as the low cost/ must run resources constitute less than 50% of total grid

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generation. Ex ante data vintage has been opted by PP for calculating Simple OM. Subsequently the generation weighted average from the CEA data base /18/ for the years 2010-11, 2011-12 and 2012-13 for NEWNE grid has been considered. Validation team has accepted the same as it was the most recent data available at the time of submission of the PDD to the DOE for validation. Thus the weighted average simple OM emission factor is determined to be 0.9776 tCO₂/MWh for NEWNE grid/02/. Further, the BM emission factor has been calculated based on option 1 as indicated in the "Tool to calculate the emission factor for an electricity system"/08/. As per the tool, BM emission factor has to be calculated for the set of power plants that comprises the larger annual generation among i) 5 most recent power units, ii) the units that comprise at least 20% of the system generation excluding CDM. PP has opted the latter approach as it yields the larger sample in India. The same was evident in the "CO₂ baseline database for the Indian power sector", user guide, version 09 published in January – 2014 /18/. Validation team has checked the same and confirmed to be appropriate. Accordingly the BM emission factor is determined to be 0.9673 tCO₂e/MWh for NEWNE grid, this is based on most recent year, 2012-13, for which power generation data was available. Thus the combined margin emission factor has been calculated to be 0.9750 tCO₂e / MWh for NEWNE grid. The source of this data is CEA CO₂ baseline Data base; version 9 /18/. The validation team accepted the same as this was the latest version of the database publically available to the project participant at the time of submission of PDD for validation. The power generation at 21.42% PLF has been guaranteed for the project activity/44/, /45/, /46/.

In conclusion, the baseline emissions are only the CO₂ emissions from the electricity displaced in the NEWNE grid and Southern grid due to the project activity and total baseline emissions are estimated to be 16,078 tCO₂e annually.

Project emissions

As per the methodology AMS-I.D, version 17, for the project activity that involves grid connected renewable energy generation from power plants other than geothermal plant and hydro power plant, project emission is considered as zero. Since this project activity involves grid connected renewable electricity generation through the wind turbine generator, the project emissions are considered as zero.

Leakage

Also, it was verified that all the WTGs are new and there is no transfer of equipment from or to other project activity. Hence, no leakage has been considered for this project activity.

Emission Reductions

The emission reduction E_{Ry} by the proposed project activity during the crediting period is the difference between baseline emissions (B_{Ey}), project emissions (P_{Ey}) and emissions due to leakage (L_y) as follows,

The following is the formula used for the same,

$$E_{Ry} = B_{Ey} - P_{Ey} - L_{Ey}$$

E_{Ry} -Emission reductions during the year y.

B_{Ey} -Baseline emissions during the year y.

P_{Ey} -Project emissions during the year y.

L_{Ey} - Leakage emissions during the year y.

Based on the above consideration, the emissions reductions from the project activity will be the baseline emissions and have been determined to be 16,078 tCO₂e per year throughout the renewable crediting period of seven years. Validation team has verified the emission reduction calculation sheet/02/ and found appropriate.

Hence the RINA concludes that the project emissions, baseline emissions, leakage and emission reductions stated in the PDD version 04 of 17/11/2014 /01/ and emission reduction spread sheet, version 02 /02/ are calculated correctly, accurately and conservatively as per the approved methodology AMS-I.D, version 17 /07/. RINA also confirms that all estimates of the emission

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reductions can be replicated using the data and parameter values provided in the PDD and supporting files submitted for registration and concludes that the estimates provided in the PDD are reasonable and the project participant has correctly applied the methodology.

3.17 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/51/, /52/.

RINA has verified all the statutory clearances and commissioning certificates /41/, /42/. The validation team concludes that all the clearances obtained are in accordance with the procedures required by the host party and no significant environmental impacts are expected from the project activity.

3.18 Local stakeholders consultation

The steps taken to assess the adequacy of the local stakeholder consultation are described below. The local stakeholders' consultation meetings were conducted by Project Participant to get their comments and suggestions of the project activity/53/, /54/, /55/. Stakeholders' consultation meeting was held on 18/02/2014 for Surbhi Textile Mills Pvt. Ltd on 21/02/2014 for SJP Constructions Pvt. Ltd /53/, /54/, /55/. The invitation letter was sent to the stakeholders/53/. The stakeholder meeting was conducted prior to publishing the PDD on UNFCCC website from 25/03/2014 to 23/04/2014/56/. 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. The validation team hereby confirms that the process of local stakeholder consultation is observed to be adequate.

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4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

The PDD version 01 of version 01 of 20/02/2013/01/ 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/R8FVY4T6D8KE3TXAI0SCG465IRRFLR/view.html>) invited to provide comments during a 30 days period from 25/03/2014 to 23/04/2014. No public comments were received during that period.

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5 VALIDATION OPINION

The validation opinion shall be provided in the final validation report.

RINA Services Spa (RINA) has performed validation of the project activity “ Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)” in India, with regard to the relevant requirements for CDM activities.

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

The host Party is India and the party fulfil the participation criteria and have approved the project and authorized the project participant ReXchange Global Solutions (P73). The DNA from India confirmed that the project assists in achieving sustainable development.

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

By generating renewable energy from wind power plant the project results in reduction of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the “ Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)” are estimated to be on an average 16,078 tCO_{2e} per year over the selected 7 years renewable 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 RINA's opinion that the project participants are able to implement the monitoring plan.

In conclusion, it is RINA's opinion that the project activity “ Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)” in India, as described in the PDD, version 04 of 17/11/2014, meets all relevant UNFCCC requirements for the CDM and all relevant host Party criteria and correctly applies the baseline and monitoring methodology “AMS-I.D.”, “Grid connected renewable electricity generation”, version 17 of 03/06/2011.

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

APPENDIX A

VALIDATION PROTOCOL

TABLE 1 MANDATORY REQUIREMENTS

Requirement	Reference	Conclusion
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reductions commitment under Art. 3.	Kyoto Protocol Art.12.2	OK
2. The project shall assist non Annex I Parties contributing to the ultimate objective of the UNFCCC.	Kyoto Protocol Art.12.2	OK
3. The project shall have the written approval of voluntary participation from the designated national authority of each Party involved	Kyoto Protocol Art.12.5a CDM Modalities and Procedures §40a	CAR 1 OK
4. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof.	Kyoto Protocol Art.12.2 CDM Modalities and Procedure §40	CAR 1 OK
5. In case public funding from Parties included in Annex I is used for the project activity, these Parties shall provide an affirmation that such funding does not result in a diversion of official development assistance (ODA) and is separate from and is not counted towards the financial obligations of these Parties.	Decision 17/CP.7 CDM Modalities and Procedures Appendix B §2	CAR 11 OK
6. Parties participating in the CDM shall designate a national authority for the CDM	CDM Modalities and Procedures §29	OK
7. The host Party and the participating Annex I Party shall be a Party to the Kyoto Protocol.	CDM Modalities and Procedures §30/31a	OK
8. The participating Annex I Party's assigned amount shall have been calculated and recorded.	CDM Modalities and Procedure §31b	NA
9. The participating Annex I Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7.	CDM Modalities and Procedure §31b	NA
10. Reduction in GHG emissions shall be additional to any that would occur in the absence of the project activity, i.e. a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity.	CDM Modalities and Procedure §43	CAR 12, CAR 13, CAR 14, CAR 15, CAR 16, CL 3, CL 4CL 5, CL 6 OK
11. The emission reductions shall be real, measurable and give long-term benefits related to the mitigation of climate change.	Kyoto Protocol Art.12.5b	CL 4, CAR 4 OK
12. The proposed project activity shall meet the eligibility criteria for small scale CDM project activities set out in § 6 (c) of the Marrakech Accords and shall not be a de-bundled component of a larger project activity.	Simplified Modalities and Procedures for Small Scale CDM Project Activities §12a,c	OK
13. The proposed project activity shall confirm to one of the project categories defined for small scale CDM project activities and use the simplified baseline and monitoring	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22e	OK

Requirement	Reference	Conclusion
methodology for that project category.		
14. If required by the host country, an analysis of the environmental impacts of the project activity is carried out and documented.	Simplified Modalities and Procedures for Small Scale CDM Project Activities §22c	CL 7 OK
15. Comments by local stakeholders shall be invited, a summary of these provided and how due account was taken of any comments received.	CDM Modalities and Procedures §37b	CL 9 OK
16. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30/45 days, and the project design document and comments have been made publicly available.	CDM Modalities and Procedures §40	OK
17. Baseline and monitoring methodology shall be previously approved by the CDM Methodology Panel.	CDM Modalities and Procedures §37e	OK
18. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	CDM Modalities and Procedures §47	OK
19. Provisions for monitoring, verification and reporting shall be in accordance with the modalities described in the Marrakech Accords, and relevant decisions of the COP/MOP.	CDM Modalities and Procedures §37f	CAR 19 OK

TABLE 2 REQUIREMENTS CHECKLIST

Checklist Question		Reference	MoV ¹	Comments	Conclusion
A Description of Project Activity					
A.1 Title of the project activity					
A.1.1.	Does the used project title clearly enable the reader to identify the unique CDM activity? Is there an indication of a revision number and the date of the revision.	/1/	DR	As per the web hosted PDD, the title of the project activity is "Bundled Wind Power Project by EKI Energy Services Limited (EKIESL-CDM.January-14-04)", the version number is 01 and the date of the PDD is 20/02/2013. The project involves generation of electricity using wind energy. Thus, the title of the project clearly enables the reader to identify this CDM activity. However, the Letter of Approval (LoA) has not been submitted by the PP to cross check the title of the project activity. Thus, PP is requested to submit the copy of same.	CAR-1 OK
A.1.2	Does the project comply with the applicable requirements for completing the PDDs (latest version available)?	/1/, /15/	DR	The PDD is incomplete in line with the Guidelines for completing the Project Design Document form version 01.1 with regard to the following points: 1. Section A.1 does not provide the estimate of annual average for the chosen crediting period. 2. Section A.2.4 does not include a map showing physical location of the project activity. 3. Section A.3 lacks description of technology involved in the pre-project and baseline scenario. 4. Section B.6.1 does not explain how the methodological steps for calculating project emissions, leakage emissions and emission reductions are applied. 5. Information provided in appendix 3, 4, 5 is not in line with the PDD completion guidelines. 6. Notations of parameters used in calculation of emission factor are not consistent with the applied tool. 7. Diagram in the section B.3 does not indicate emission	CAR-2 OK

¹ MoV: DR document review, I interview, CC cross checking

Checklist Question	Reference	MoV ¹	Comments	Conclusion
			sources and GHGs included in the project boundary. Further section B.3 and A.3 do not provide description about the monitoring equipments and their location in the project activity.	
A.1.3	Does the PDD comply with the template available (latest version)?	/11, /16/	DR Yes. The PDD has applied the latest template available i.e. Project Design Form for CDM project activities (F-CDM-PDD) version 04.1.	OK
A.2 Description of the proposed project activity				
A.2.1	Does the PDD contain an accurate description of the project activity and provide the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation? How was the design of the project assessed?	/11, /23/ , /27/ , /29/ , /33/	DR/C C/I The project involves installation of 5 WTGs located in the state of Maharashtra and Gujarat. The total installed capacity is 8.8 MW. Out of 5 WTGs, 3 WTGs of 2 X 2MW and 1 X 0.8 MW are installed by Surbhi Textile Mills Pvt. Ltd. while, 2 WTGs of 2 X 2 MW are installed by SJP Constructions. PP has not provided bundling form for the project activity in accordance with Annex 22 of EB 66. The total number of WTGs and installed capacity of each WTG was verified during the on-site visit and from the purchase orders placed by respective developers to the WTG manufacturers. However, PP has not provided purchase order for 1 X 2 MW of WTG developed by Surbhi Textile Mills Pvt. Ltd and commissioning certificates for WTGs. Thus, the total installed capacity of the project activity could not be supported through documentary evidences. Also, PPA for WTGs owned by Surbhi Textile Mills (2 X 2 MW) and SJP Constructions (2 X 2 MW) has not been submitted for verification. As confirmed from the physical verification during site visit, the project activity is a Greenfield project and the installed capacity of the project activity is 8.8 MW which is below 15 MW, the threshold capacity limit of the small scale CDM project, hence the project activity is classified as the small scale. However, this needs to be corroborated through documentary evidences mentioned above. Thus, PP is requested to submit following documents for verification: 1. Purchase order for 1 X 2 MW of WTG developed by Surbhi Textile Mills Ltd	GAR-3 CL-1 OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion	
			<p>2. Power Purchase Agreements for WTGs developed by Surbhi Textile Mills (2 X 2 MW) and SJP Constructions (2 X 2 MW)</p> <p>3. Commissioning certificates for WTGs</p> <p>4. Bundling form for the project activity in accordance with Annex 22 of EB 66</p> <p>As per the webhosted PDD, purpose of the project activity is to generate electrical energy through sustainable means using wind power resources and to utilize the generated output for selling it to the state electricity utility thus displacing the electricity generated at regional grid (NEWNE) which is dominated by fossil fuel based power plants. The purpose of the project was found to be mismatching with the description provided as the power generated by 0.8 MW of WTG owned by Surbhi Textile is used for captive purpose by wheeling through the NEWNE regional grid. The annual average of emission reductions is estimated to be 16,078tCO₂/year.</p> <p>The main technical specifications of the WTGs involved in the project activity have been checked from purchase orders placed to the manufactures. The same were not found to be matching with the respective purchase orders. Please clarify. Also the name of manufacturer and model no. of WTG is not consistent with the purchase order dated 30/08/2013.</p>		
A.2.2	Does the project activity involve alteration of existing installations? If yes, have the differences between pre-project and post-project activity been clearly described in the PDD?	/11,/23/ ,27/	DR/C C/I	The project activity is a Greenfield project as confirmed during the site visit and also from the POs placed by PP. Thus, it does not involve alteration of existing installations. However, PP is requested to furnish commissioning certificates for WTGs.	CAR-3 OK
A.2.3	Is all information provided consistent and in compliance with the actual situation or planning?	/11,/23/ ,27/	DR/C C/I	It was noted that the information provided in the PDD is consistent with the actual situation at site. The same was checked during the physical verification. However, Please refer section A.2.1.	CAR-3 CL-1 OK
A.2.4	Does the project qualify as a small-scale CDM project	/11,/23/	DR/C	It was verified during the site visit, that the total installed	CAR-3

Checklist Question	Reference	MoV ¹	Comments	Conclusion
activity as defined in paragraph 6 (c) of decision 17/CP.7 on the modalities and procedures for the CDM?	/127/	C/I	capacity of the project activity is 8.8 MW. However, PP is required to provide following documents in order to corroborate the same as mentioned in A.2.1 above: 1. Purchase order for 1 X 2 MW of WTG developed by Surbhi Textile Mills Ltd 2. Power Purchase Agreements for WTGs developed by Surbhi Textile Mills (2 X 2 MW) and SJP Constructions (2 X 2 MW) 3. Commissioning certificates for WTGs.	OK
A.2.5 Is the small-scale project activity a debundled component of a larger project activity in accordance with the Guidelines on assessment of debundling for SSC project activities?	/11, /11/	DR/C C	From the database of projects available on the UNFCCC website, the validation team noted that there are projects requesting registration submitted by EKI Energy Services Limited. Thus, PP is requested to clarify how the project activity is not debundled component of a larger project activity in accordance with the Guidelines on assessment of debundling for SSC project activities version 03.	CL-2 OK
A.3 Project participants				
A.3.1 Have the Parties and project participants participating in the project been listed in tabular form in Section A.3 and are they consistent with the information detailed in Annex 1 of the PDD?	/11, /15/	DR	As per section A.4 of PDD version 01, the host Party involved is India and the project participant is ReXchange Global Solutions (P73). The information in the section A.4 is in the proper tabular format as given the "Guidelines for completing the Project Design Document form" version 01.1. The name of the project participant is consistent in both the A.4 and Appendix 1 of the PDD.	OK
A.3.2 Do all participating Parties fulfil the participation requirements as follows: (a) Party has ratified the Kyoto Protocol (b) Party has a Designated National Authority (c) The assigned amount has been determined	/11, /19/	DR	As per section A.3 of PDD version 01, the project activity is a unilateral activity and the host party involved is India. India has ratified the Kyoto Protocol on 26/08/2002. It has established a DNA i.e. National CDM Authority Ministry of Environment & Forests, Government of India. There is no assigned amount for India as it is a non-annex I country.	OK
A.3.3 Have the letters of approval have been issued?	/11/	DR	PP has not submitted Letter of Approval by the host party involved. Thus, PP is requested to furnish the copy of the same.	CAR-1 OK
A.3.4 Do the letters of approval meet the following requirements?	/11/	DR	Please refer A.3.3	CAR-1

Checklist Question	Reference	MoV ¹	Comments	Conclusion
(a) LoA(s) is/are issued by the DNA (b) LoA confirms that the Party has ratified the Kyoto Protocol; (c) LoA confirms that participation is voluntary (d) The LoA confirms that the project contributes to the sustainable development of the Host Country? (e) The LoA is valid for the proposed project activity under validation (f) The LoA was received directly by the DNA or by the PP				OK
A.3.5 Indicate the means of validation employed to assess the authenticity	/1/	DR	Please refer A.3.3	CAR-1 OK
A.3.6 Have all private/public project participants been authorized by a Party to the Kyoto Protocol?	/1/	DR	Please refer A.3.3	CAR-1 OK
A.3.7 Are the entities included in the PDD those authorized as PPs?	/1/	DR	Please refer A.3.3	CAR-1 OK
A.3.8 Do the PP(s) listed in the PDD have a contract with RINA for the project validation?	/1/, /31/	DR	Yes. The PP listed in the PDD i.e. ReXchange Global Solutions (P73) has a contract with RINA for carrying out the validation of the project activity. This was confirmed from the signed copy of the request for validation services issued by PP.	OK
A.4 Modalities of communication				
A.4.1 Does the MoC statement comply with the latest version of the Form F-CDM-MOC available?	/1/	DR	PP needs to provide the MoC statement as per the latest version of the form F-CDM-MOC available on the UNFCCC web site. Also provide supporting documents to cross verify the personal identities, specimen signatures and the employment status of the official signing the MoC and to confirm that the official submitting and signing MoC has got the authority do so on behalf of the PP.	CAR-4 OK
A.4.2 Does the MoC statement is correctly completed including Annex 1?	/1/	DR	Please refer A.4.1.	CAR-5 OK
A.4.3 Does the MoC statement identify all PPs and focal	/1/	DR	Please refer A.4.1.	CAR-6

Checklist Question	Reference	MoV ¹	Comments	Conclusion
points?				OK
A.4.4 How the personal identities, the specimen signatures and the employment status is cross-checked?	/1/	DR	Please refer A.4.1.	CAR-7 OK
A.4.5 Is the official who submitted the MoC statement and the official who signed the written confirmation duly authorized to do so on behalf of the respective PPs?	/1/	DR	Please refer A.4.1.	CAR-8 OK
A.5 Technical description of the project				
A.5.1 Does the information provided on the location of the project activity allow for a clear identification of the site(s)? Are the latitude and longitude of the site indicated (decimal points)?	/1/	DR	As detailed in section A.2 of PDD version 01, the project activity is located in country India, village: Rawalgundwadi, Khadvadi and District: Sangli, Rajkot of State: Maharashtra and Gujarat respectively. Further, the PDD also mentions the geographical co-ordinates of all the WTGs. Thus, the information provided on the location of the project activity allows clear identification of the site. Co-ordinates were checked during the on-site visit and found to be correct.	OK
A.5.2 Is the category(ies) of the project activity correctly identified?	/1/, /34/	DR	The type of the project activity identified in section B.1 of PDD is not consistent with the UNFCCC web site.	CAR-9 OK
A.5.3 Does the project design engineering reflect current good practices? Would the technology result in a significantly better performance than any commonly used technologies in the host Country? Is any transfer of technology from any Annex I Party involved?	/1/, /23/ , /27/	DR/C C	As per section A.1 of PDD version 01, the project activity involves installation of total 5 numbers of WTGs which are supplied by Inox Wind and Wind World. The set of WTGs consists of 2 X 2 MW Inox Wind make and 1 X 0.8 MW Wind World make owned by Surbhi Textile and 2 X 2 MW Inox Wind make owned by SJP Constructions. The design engineering reflects current good practices and is an environmentally friendly technology. It is noted that there are no transfer of technology from Annex 1 party. Section A.3 of the PDD illustrates the technical specifications of each type of WTG. These specifications are not in accordance with the respective purchase orders.	CAR 2 OK
A.5.4 What is the expected operational lifetime of the project activity? Is it reasonable?	/1/	DR	The operational lifetime of the project activity is inconsistent in the webhosted PDD. Please clarify. Further, PP is requested to corroborate it through documentary evidences.	CAR-10 OK
A.6 Public funding				

Checklist Question		Reference	MoV ¹	Comments			Conclusion						
A.6.1	Does the information on public funding provided conform to the actual situation or planning as present by the PPs?	/1/	DR	As per the web hosted PDD, the project activity neither involves public funding nor diversion of ODA. PP is requested to provide audited balance sheets of Surbhi Textile and SJP Constructions for year 2011-12, 2012-13 and 2013-14 to verify the same.			CAR-11 OK						
A.6.2	If public funding from Parties included in Annex I is used for the project activity, have these Parties provided an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of these Parties?	/1/	DR	Please refer A.6.1.			CAR-11 OK						
B. Baseline and monitoring methodology													
B.1 Methodology applied													
B.1.1	Does the project activity apply an approved methodology and the correct version thereof?	/1/, /7/, /8/	DR/C C/I	The project activity applies AMS-I.D. version 17 which is the latest available version of the methodology at the time of webhosting. In line with AMS-I.D, PP has applied the tool below: 1. Tool to calculate the emission factor for an electricity system version 04.0, Annex 15 of EB 75 The same has been confirmed with the UNFCCC web site and found to be correct.			OK						
B.1.2	Is there any specific guidance, including the methodological tools provided by EB and has these guidance been applied?	/1/	DR	As per the EB guidance, there is no specific guidance to be applied in identification of baseline scenario.			OK						
B.1.3	How was it validated that the project activity complies with the applicability criteria?	/1/, /7/, /23/ , /27/ /28/	DR/C C/I	<table><tr><th>Applicability criteria</th><th>Project activity</th><th>Criteria is met?</th></tr><tr><td>This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and</td><td>The project activity involves electricity generation using wind energy as verified during on-site visit and from purchase orders</td><td>The criterion is met.</td></tr></table>			Applicability criteria	Project activity	Criteria is met?	This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and	The project activity involves electricity generation using wind energy as verified during on-site visit and from purchase orders	The criterion is met.	CAR-2 OK
Applicability criteria	Project activity	Criteria is met?											
This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and	The project activity involves electricity generation using wind energy as verified during on-site visit and from purchase orders	The criterion is met.											

Checklist Question	Reference	MoV ¹	Comments	Conclusion
			<p>renewable biomass:</p> <p>a. Supplying electricity to a national or a regional grid; or</p> <p>b. Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.</p>	<p>placed to WTG manufacturers.</p> <p>As per the PDD, out of total 5 WTGs, 4 X 2 MW WTGs owned by Surbhi Textile and SJP Constructions are supplying electricity to NEWNE while 1 X 0.8 MW WTG owned by Surbhi Textile is wheeling electricity for captive purpose governed via wheeling agreement. Thus, both options i.e. a and b are applicable here. However, justification given in the PDD is not clear on exact number and capacities of WTGs involved in selling and wheeling power. Also, PP is required to provide PPA governing sale of power to grid for verification.</p>
			<p>Illustration of respective situations</p>	<p>Checked from the wheeling</p> <p>The criterion is</p>

Checklist Question	Reference	MoV ¹	Comments	Conclusion
			<p>under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2</p> <p>agreement between Surbhi Textile and GETCO dated 24/01/2014 that 1 X 0.8 MW of WTG is wheeling power for captive use using the grid interface of NEWNE. However, supply of electricity to NEWNE by remaining WTGs could not be verified as PP has not provided PPAs signed to sell of electricity.</p>	met.
			<p>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).</p> <p>The project activity is a Greenfield project as checked based on the physical inspection carried out during the on-site visit. However, PP needs to submit commissioning certificates for same for cross verification.</p>	The criterion is met.

Checklist Question	Reference	MoV ¹	Comments	Conclusion		
			<p>Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology:</p> <p>The project activity is implemented in an existing reservoir with no change in the volume of reservoir;</p> <p>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/m²;</p> <p>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/m².</p>	<p>As checked through the physical examination carried out at the time of on-site visit and also verified from the purchase orders, the project activity does not involve installation of hydro power plant.</p>	<p>This criterion is not relevant.</p>	
			<p>If the new unit has both renewable and non-renewable components (e.g. a wind/diesel unit), the</p>	<p>The project involves only renewable component of 8.8 MW which has</p>	<p>The criterion is met.</p>	

Checklist Question	Reference	MoV ¹	Comments	Conclusion
			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.	been confirmed during the site visit and also from the purchase orders. The limit is thus below the threshold of 15 MW.
			Combined heat and power (co-generation) systems are not eligible under this category.	As checked through the physical examination carried out at the time of on-site visit and also verified from the purchase orders, the project activity does not involve installation of combined heat and power plant.
			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	This criterion is not relevant.

Checklist Question		Reference	MoV ¹	Comments			Conclusion
				units.			
				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 project which has been assessed based on the physical inspection carried out during the on-site visit, purchase orders placed.	This criterion is not relevant.	
B.1.4	Is the selected baseline one of the baseline(s) described in the methodology and this hence confirms the applicability of the methodology?	11,17	DR/C C/I	According to AMS-I.D. version 17, paragraph 10, the baseline is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid.			OK
B.2 Project boundary							
B.2.1	Is the project boundary are clearly defined and in accordance with the applied methodology?	11,17	DR/C C/I	According to AMS-I.D. version 17, 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 PDD does not provide precise description and flow diagram of project boundary.			CAR 12 OK
B.2.2	What are the project's system boundaries (components and facilities used to mitigate GHGs)?	11,17	DR/C C/I	Please refer B.2.1			CAR 12 OK
B.2.3	Which sources are identified for the project? Does the identified project boundary cover all possible sources linked to the project activity?	11,17	DR/C C/I	CO ₂ emission from electricity generation in the fossil fuel fired power plants that are displaced due to the project activity is the main emission source. The boundary covers this source. For the Greenfield wind project activities, there are no project and leakage emissions attributable. However, the project description and flow diagram of project boundary is not precise to the project activity.			CAR 12 OK
B.2.4	In case of grid connected electricity project: is the relevant grid correctly identified in accordance with the latest version of tool to calculate emission factor of electricity system and the underlying methodology?	11,17,	DR/C C/I	The project activity is a grid connected electricity project. As per the “Tool to calculate the emission factor for an electricity system” version 04.0, the relevant grid is NEWNE of India which has been correctly identified using the CEA			OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion	
			database version 9.0 which is the latest available at the time of web hosting for calculation of emission factor of electricity system.		
B.2.5	Does the project involve other emissions sources not foreseen by the methodologies that may question the applicability of the methodology? Do these sources contribute by more than 1% to the estimated emission reductions of the project?	11,171	DR/C C/I	The validation did not reveal any other emission sources, which may contribute to more than 1% to the estimated emission reductions of the project since this is windmill project which involves mainly the assembly of components at site and erection.	OK
B.3 Identification of the Baseline Scenario					
B.3.1	Which baseline scenarios have been identified? Is the list of the baseline scenarios complete? Does the PDD follow the steps to determine the baseline scenario required by the methodology/tool?	11,171	DR/C C/I	The baseline scenario identified in section B.4 of the web hosted PDD is in accordance with the applied methodology.	OK
B.3.2	How have the other baseline scenarios been eliminated in order to determine the baseline?	11,171	DR/C C/I	As the applied methodology AMS-I.D. version 17, prescribes a baseline scenario in case of the installation of a new grid connected renewable power plant. Therefore, the PP has not identified any baseline alternatives in order to determine the baseline.	OK
B.3.3	What is the baseline scenario? Is the determination of the baseline scenario in accordance with the guidance in the methodology?	11,171	DR/C C/I	The baseline scenario identified in section B.4 of the web hosted PDD is in accordance with the applied methodology which is as below: the baseline scenario is the electricity delivered to the grid by project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid	OK
B.3.4	Has the baseline scenario been determined using conservative assumptions? Does the baseline scenario sufficiently take into account relevant national and/or sectoral policies (E+ / E-), macro-economic trends and political aspirations?	11,171	DR/C C/I	The PDD is transparent regarding the determination of the emission factor. PP has used CEA CO ₂ Baseline Database for the Indian Power Sector version 9.0 which is the latest available database at the time of webhosting of the project activity in order to calculate combined margin, operating margin and build margin using “Tool to calculate emission factor for an electricity system” version 04.0. Apart from emission factor, other parameter includes quantity of net electricity supplied to the grid as a result of implementation of the CDM project activity which is calculated ex-ante based on the rated capacity and the	OK

Checklist Question		Reference	MoV ¹	Comments	Conclusion
				PLF.	
B.4 Additionality					
B.4.1	What tool does the project use to assess additionality? Is this in line with the methodology?	/11, /9/	DR/C C/I	PP has applied "Guidelines on the demonstration of additionality of small-scale project activities" version 09 in line with the applied methodology and simplified modalities and procedures for small scale CDM project activities.	OK
B.4.2	What is the project additionality mainly based on?	/11, /9/	DR/C C/I	As per the "Guidelines on the demonstration of additionality of small-scale project activities" version 09, PP can apply any of the barriers listed there in for demonstration of the additionality. Thus, in line with the guidelines, PP has used investment barrier to demonstrate the additionality.	OK
B.4.3 Prior consideration of CDM					
B.4.3.1	What is the starting date of the proposed project activity? Is it in accordance with the CDM Glossary of Terms?	/11, /14/, /23 / /27/	DR/C C/I	The starting date of the project activity identified in the section 30/08/3013 and is stated to be the date of purchase order by PP. PP has not submitted purchase order for 1 X 2 MW of WTG owned by Surbhi Textile. Thus, the starting date mentioned in PDD cannot be verified in line with the definition given in the CDM Glossary of Terms version 07.0.	CAR-13 OK
B.4.3.2	Is the project activity a new project activity or existing project?	/11, /23/ /27/	DR/C C/I	As discussed in B.4.3.1, the starting date of the project activity is chosen as 30/08/2013 and is before the publication of PDD for GSC. Thus, it's an existing project activity. However, starting date mentioned in PDD cannot be verified in line with the definition given in the CDM Glossary of Terms version 07.0 as PP has not furnished purchase order for 1 X 2 MW of WTG owned by Surbhi Textile.	CAR 13 OK
B.4.3.3	For an existing project activity with a start date is prior the date of the PDD publication for GSC, what is the evidence for serious consideration of CDM prior to the time of decision to proceed with the project activity?	/11, /4/, /5/	DR/C C/I	The start date of the project activity is prior to the date of the PDD publication for GSC. Thus, as per Para 27 of Project Standard version 06.0PP is requested to submit evidences to demonstrate prior consideration as required by Project standard. /	CAR-14 OK
B.4.3.4	Does the timeline of the project confirm that continuous actions in parallel with the implementation were taken to secure CDM status? Please specify the gap between the documented evidences.	/11, /5/	DR/C C/I	From the timeline given in the web hosted PDD, it is not clear how the it is confirmed that the continuous actions in parallel with the implementation were taken to secure CDM status in accordance with para 28 of Project Standard version 06.0.	CAR-15 OK
B.4.4 Investment analysis					

Checklist Question	Reference	MoV ¹	Comments	Conclusion
B.4.4.1 What is the analysis method used to determine whether the proposed project activity is not (a) the most economically or financially attractive; or (b) economically or financially feasible, without the revenue from the sale of certified emission reductions?	/11, /10/,/32/	DR/C C/I	The analysis method used to determine whether the proposed project activity is not financially viable without the revenue of CDM is benchmark analysis. This is in accordance with the Non-binding best practice examples to demonstrate additionality for SSC project activities, Annex 34 of EB 35. Further, the chosen approach is also in line with the paragraph 19 of Guidelines on the assessment of investment analysis, version 05, according to which the benchmark analysis is the most suitable approach in cases where the alternative to the project is supply of electricity from grid.	OK
B.4.4.2 What the financial indicator is used?	/11/,/3/,/5/	DR/C C/I	The financial indicator chosen is post tax equity IRR. The guidelines on assessment of investment analysis version 05 do not provide any specific guidance on choosing financial indicator to be used for demonstrating investment barrier. Thus, the indicator chosen by the PP is accepted.	OK
B.4.4.3 If a benchmark is used, is it ensured that it is selected in accordance with the requirements of the EB guidelines and it represents standard returns in the market? Is the benchmark suitable for the type of financial indicator presented? Is it ensured the any risk premiums applied in determining the benchmark reflect the risks associated with the project type or activity?	/11/,/3/,/5/	DR/C C/I	PP has chosen expected return on equity as the benchmark for the project activity. In the context of the financial indicator chosen, the required return of equity (ROE) is found to be a suitable benchmark. ROE has been computed using default values given in Annex 5 of EB 62 for each investor separately based upon their respective investment decisions. PP has used survey reports published by Reserve Bank of India (RBI) which is the central bank of India and the inflation rates used in case of both the investors are the rates predicted over 10 years. In view of Para 5 of Appendix of Annex 5 of EB 62, PP is requested to justify how the choice of inflation rate confirms to the guidance given in this para. Further, PP is requested to provide evidence for investment decision taken by Surbhi Textile and SJP Constructions and justify the suitability of input values used in benchmark calculation.	CL-3 OK
B.4.4.4 Is the investment analysis carried out in accordance with specific guidance from EB? Is the investment analysis complete and accurate?	/11/,/3/,/5/, /22/ , /23/	DR/C C/I	Please clarify following: A. IRR analysis for Surbhi Textile Mills (2 X 2 MW) 1. Offer letter dated 25/10/2013 from Inox Wind indicates	CL-4 CL-5 CL-6 OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
Is the investment analysis provided in a spreadsheet version? Are all the formulas used readable and all relevant cell be viewable and unprotected?	,/24/ ,/25/ ,/26/ ,/27/ ,/28/ ,/29/ ,/30/		<p>project size of 1 X 2MW. However, the actual capacity of the WTGs developed by Surbhi Textile is 2 X 2 MW. Please explain how this offer was used to carry out financial analysis for 2 WTGs based on which investment decision was taken. Further, the data source for number of machines mentioned in the spreadsheet refers to the offer which is not correct.</p> <p>2. Please clarify the basis for considering expected date of commissioning as 31/03/2014. Provide actual commissioning dates.</p> <p>3. Please provide manufactures specifications which states that the life of WTG is 20 years.</p> <p>4. Provide third party PLF report for the PLF of 21.42%. Also, furnish actual PLF values.</p> <p>5. Kindly provide TERI report referred for deration after 10th year and justify how deration factor of 5% is applicable to the project activity.</p> <p>6. Explain suitability of use of MERC order dated 22/03/2013 for tariff determination in view of the decision making date. Further clarify basis for using tariff determined for wind zone 2 and applying it for the whole life of the asset. Provide power purchase agreements for checking actual tariff rate.</p> <p>7. Submit O&M agreements for verifying actual O&M charges.</p> <p>8. Please explain whether the TAC order 2001 used for insurance calculation was the latest available order at the time of decision making. Provide actual insurance agreement.</p> <p>9. Capital cost and O&M charges for the project activity are sourced from offer dated 25/10/2013. However, this offer is only for 1 X 2 MW of WTG which does not match the actual installed capacity of 2 X 2 MW. Hence, justify how this offer was used to determine both these parameters for 2 numbers of WTGs. Also provide the invoices and a CA certificate certifying the cost of the asset and the pattern of funding for the same.</p>	

Checklist Question	Reference	MoV ¹	Comments	Conclusion
			<p>10. Calculation of net depreciable value is incorrect.</p> <p>11. Please explain suitability of tax rates applied for IRR calculation in view of the decision making date.</p> <p>12. Provide evidence for investment decision taken by Surbhi Textile and justify the suitability of input values used in IRR calculation.</p> <p>13. The PDD is not transparent on the input values and their sources used for IRR calculations.</p> <p>B. IRR analysis for Surbhi Textile Mills (1 X 0.8 MW)</p> <p>1. Provide third party PLF report for the PLF of 23.45%. Also, furnish actual PLF values.</p> <p>2. Kindly provide TERI report referred for deration after 10th year and justify how deration factor of 5% is applicable to the project activity.</p> <p>3. Explain suitability of use of GERC order dated 16/04/2013 in view of the decision making date. Also, please furnish actual electricity bills of the facility where the electricity is used for captive consumption for period one year before investment decision.</p> <p>4. Please provide manufactures specifications which states that the life of WTG is 20 years.</p> <p>5. Clarify the basis for considering expected date of commissioning as 31/03/2014. Provide actual commissioning dates.</p> <p>6. Submit O&M agreements for verifying actual O&M charges.</p> <p>7. Kindly provide the invoices and a CA certificate certifying the cost of the asset and the pattern of funding for the same.</p> <p>8. Please explain suitability of tax rates applied for IRR calculation in view of the decision making date.</p> <p>9. Please explain whether the TAC order 2001 used for insurance calculation was the latest available order at the time of decision making. Provide actual insurance agreement.</p>	

Checklist Question	Reference	MoV ¹	Comments	Conclusion
			<p>10. Submit O&M agreements for verifying actual O&M cost.</p> <p>11. Checked loan sanction letter by Dena bank which mentions that the loan is sanctioned for 2 WTGs whereas project involves only 1 WTG. Please clarify this. Further, explain how much is the actual loan amount, interest rate, tenure, moratorium for 1 number of WTG.</p> <p>12. Calculation of net depreciable value is incorrect.</p> <p>13. Provide evidence for investment decision taken by Surbhi Textile and justify the suitability of input values used in IRR calculation.</p> <p>14. The PDD is not transparent on the input values and their sources used for IRR calculations.</p> <p>C. IRR analysis for SJP Constructions (2 X 2 MW):</p> <p>1. Provide third party PLF report for the PLF of 21.42%. Also, furnish actual PLF values.</p> <p>2. Kindly provide TERI report referred for deration after 10th year and justify how deration factor of 5% is applicable to the project activity.</p> <p>2. Please clarify the basis for considering expected date of commissioning as 31/03/2014. Provide actual commissioning dates.</p> <p>3. Please provide manufactures specifications which states that the life of WTG is 20 years.</p> <p>4. Explain suitability of use of MERC order dated 22/03/2013 for tariff determination in view of the decision making date. Further clarify basis for using tariff determined for wind zone 2 and applying it for the whole life of the asset. Provide power purchase agreements for checking actual tariff rate.</p> <p>5. Submit O&M agreements for verifying actual O&M charges.</p> <p>6. Please explain whether the TAC order 2001 used for insurance calculation was the latest available order at the time of decision making. Provide actual insurance</p>	

Checklist Question		Reference	MoV ¹	Comments	Conclusion
				agreement. 7. Capital cost and O&M charges for the project activity are sourced from offer dated 25/10/2013. However, this offer is only for 1 X 2 MW of WTG which does not match the actual installed capacity of 2 X 2 MW. Hence, justify how this offer was used to determine both these parameters for 2 numbers of WTGs. Also provide the invoices and a CA certificate certifying the cost of the asset and the pattern of funding for the same. 8. Calculation of net depreciable value is incorrect. 9. Please explain suitability of tax rates applied for IRR calculation in view of the decision making date. 10. Provide evidence for investment decision taken by SJP Constructions and justify the suitability of input values used in IRR calculation. 11. The PDD is not transparent on the input values and their sources used for IRR calculations.	
B.4.4.5	Cross-check the parameters used in the financial analysis against third party or publicly available sources (all parameters used as input values shall be cross-checked and assessed).	/11,/31,/5/	DR/C C/I	Please refer B.4.4.4.	CL 4, CL 5 CL 6 OK
B.4.4.6	Are the input values used in the investment analysis valid and applicable at the time of the investment decision taken by the PP?	/11,/31,/5/	DR/C C/I	Please refer B.4.4.4	CL 4, CL 5 CL 6 OK
B.4.4.7	Where applicable, the PFL has been defined ex-ante according to the applicable EB guideline?	/11,/31,/5/	DR/C C/I	Please refer B.4.4.4	CL 4, CL 5 CL 6 OK
B.4.4.8	Does the time period of the investment analysis reflect the expected operation of the underlying project activity (technical lifetime)?	/11,/31,/5/	DR/C C/I	Yes. The time period of the investment analysis reflects the expected operation of 20 years. However, PP needs to support the lifetime of the project through documentary evidences.	CAR 10 OK
B.4.4.9	Does the fair value of the project activity assets is included at the end of the assessment period as a cashflow in the final year? Is the fair value calculated in accordance with local	/11,/31,/5/	DR/C C/I	Please refer B.4.4.4	CL 4, CL 5 CL 6 OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
accounting regulations where available or international best practice?				
B.4.4.10 Does the income tax calculation take depreciation into account? Is the depreciation year in accordance with normal accounting practice in the Host Country	/11,/31,/5/	DR/C C/I	Please refer B.4.4.4	CL 4, CL 5 CL 6 OK
B.4.4.11 Sensitivity analysis: have the key parameters contributing to more than 20% of the revenue/costs during operating or implementation been identified?	/11,/31,/5/	DR/C C/I	In case of all the three IRR analysis presented by PP, the parameters that are subjected to sensitivity analysis include Plant Load Factor (PLF), project cost, Operation and Maintenance (O&M) and tariff. These parameters were found to be contributing to more than 20% of the revenue/costs during operation of the project. However, PP is requested to include Debt to Equity ratio (D/E) and interest rate in the sensitivity analysis as the total interest cost is higher than 20% of the project cost for all the three IRR analysis.	CAR-16 OK
B.4.4.11 Sensitivity analysis: is the range of variations is reasonable in the project activity? The main parameters can be changed for the different project category.	/11,/31,/5/	DR/C C/I	The sensitivity range has been chosen as $\pm 10\%$ which is as per the annex 5 of EB 62. Hence, found acceptable.	OK
B.4.4.12 Have the key parameters been varied to reach the benchmark and the likelihood of this happening been justified to be small?	/11,/31,/5/	DR/C C/I	Yes. Key parameters have been varied to reach benchmark. PP is requested to explain likelihood of not reaching the benchmark for each of the key parameters subjected to sensitivity by providing proper justification based on actual values.	CAR-17 OK
B.4.5 Barrier analysis				
B.4.5.1 Are the barriers identified complimentary to a potential investment analysis?	/11,/9/	DR/C C/I	As per Annex 27 of EB 68, the PP can demonstrate any one of the barrier listed therein. Thus, PP has chosen to demonstrate investment barrier and hence demonstration of other barriers is not required.	OK
B.4.5.2 How were the investment barriers assessed to be real?	/11,/9/	DR/C C/I	Please refer B.4.5.2.	OK
How were the technological barriers assessed to be real?	/11,/9/	DR/C C/I	Please refer B.4.5.2.	OK
B.4.5.3 How were the other barriers assessed to be real?	/11,/9/	DR/C C/I	Please refer B.4.5.2.	OK
B.4.5.4 Barriers due to prevailing practice (First of its kind):	/11,/9/	DR/C	Please refer B.4.5.2.	OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
does the project apply measures currently covered in the framework (fuel and feedstock switch, switch of technology with or without change of energy source, methane destruction, methane formation avoidance)?		C/I		
B.4.5.5 Barriers due to prevailing practice (First of its kind): do the technologies deliver the same output and differ by at least of energy source/fuel, feed stock, size of installation?	/11,/9/	DR/C C/I	Please refer B.4.5.2.	OK
B.4.5.6 Barriers due to prevailing practice (First of its kind): does the applicable geographical area is in compliance with the definition as per the EB guideline?	/11,/9/	DR/C C/I	Please refer B.4.5.2.	OK
B.4.5.7 Is the project activity prevented by the identified barriers and at least one of the possible alternatives to the project activity is feasible under the same circumstances?	/11,/9/	DR/C C/I	Please refer B.4.5.2.	OK
B.4.5.8 How the CDM can alleviate the identified barriers?	/11,/9/	DR/C C/I	Please refer B.4.5.2.	OK
B.4.6 Common practice analysis				
B.4.6.1 Does the project apply measures currently covered in the framework (fuel and feedstock switch, switch of technology with or without change of energy source, methane destruction, methane formation avoidance)?	/1/	DR	The project activity is a small scale CDM project and hence as per the simplified modalities and procedures for small-scale CDM project activities, demonstration of common practice analysis is not required.	OK
B.4.6.2 Do the technologies deliver the same output and differ by at least of energy source/fuel, feed stock, size of installation, investment climate in the date of the investment decision, other features?	/1/	DR	Please refer B.4.6.1.	OK
B.4.6.3 Does the applicable geographical area is in compliance with the definition as per the EB guideline?	/1/	DR	Please refer B.4.6.1.	OK
B.4.6.4 How many similar non-CDM-projects exist in the region within the scope? (describe how the steps of the additionality tool have been applied)	/1/	DR	Please refer B.4.6.1.	OK
B.4.6.5 What is the data source(s) used for the common practice analysis?	/1/	DR	Please refer B.4.6.1.	OK

Checklist Question		Reference	MoV ¹	Comments	Conclusion
B.4.7 Conclusion					
B.4.7.1	What is the conclusion with regard to the additionality of the project activity?	/1/,/3/,/5/, /9/, /14/,/23/ /27/ /10/,/32/	DR/C C/I	Please refer to B.4.4 to B.4.6	CAR 13, CAR 14, CAR 15, CAR 16, CAR 17, CL 3, CL 4, CL 5 OK
B.5 Algorithms and/or formulae used to determine emission reductions					
B.5.1 Baseline emissions					
B.5.1.1	Are the steps and equations applied to calculate the baseline emissions in compliance with the requirements of selected baseline and monitoring methodology?	/1/, /2/, /7/, /8/	DR/C C/I	The baseline emissions are calculated according to the equation 1 of AMS-I.D. version 17. The “Tool to calculate the emission factor for an electricity system” version 04.0 has been applied to calculate the emission factor for NEWNE grid.	OK
B.5.1.2	Have conservative assumptions been used when calculating the baseline emissions and are the uncertainty estimates properly addressed? Are all the values used in the PDD considered reasonable in the context of the proposed project activity?	/1/, /2/, /7/, /8/	DR/C C/I	The baseline emissions is calculated using the two parameters i.e. $EG_{BL,y}$ and $EF_{CO2,grid,y}$. Calculation of $EG_{BL,y}$ as verified from the CER worksheet is based on the rated capacity of each WTG, respective PLF and transmission/wheeling losses. PP is requested to furnish evidence for PLF considered in the calculation. $EF_{CO2,grid,y}$ is calculated using the approach given in the “Tool to calculate emission factor for an electricity system” version 04.0 which is the latest available version of the tool. PP has used version of CEA database available at the web hosting time in order to calculation emission factor i.e. version 09.0. Checked the calculation of emission factor provided in the CER worksheet and is found to be correct. Simple operating margin and build margin have been calculated as 0.9776tCO ₂ /MWh and 0.9673tCO ₂ /MWh. Based on these two margins, combined margin has been calculated as 0.9750tCO ₂ /MWh after applying weighting of 75% and 25% to operating and build margin respectively. These calculations are in line with the “Tool to calculate the	CL-4 OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion	
			emission factor for an electricity system” version 04.0 and CEA database version 09.0		
B.5.1.3	Baseline Emissions estimated (in case of different components applied please make them transparent).	11/, 12/, 17/, 18/	DR/C C/I	Please refer to B.5.1.1 and B.5.1.2. As per the webhosted PDD and CER worksheet submitted by PP, the baseline emissions estimate is 16,078 tCO ₂ e per year.	OK
B.5.2 Project emissions					
B.5.2.1	Are the steps and equations applied to calculate the project emissions in compliance with the requirements of selected baseline and monitoring methodology? Are all the values used in the PDD considered reasonable in the context of the proposed project activity?	11/, 12/, 17/	DR/C C/I	According to AMS-I.D., most of the renewable power generation activities result in no project emissions. The PDD also states the same. Hence, found to be acceptable.	OK
B.5.2.2	Have conservative assumptions been used when calculating the project emissions and are the uncertainty estimates properly addressed?	11/, 12/, 17/	DR/C C/I	Please refer B.5.2.1	OK
B.5.2.3	Project emissions estimated	11/, 12/, 17/	DR/C C/I	As per the webhosted PDD and CER worksheet submitted by PP, the project emissions estimate is 0 tCO ₂ e per year.	OK
B.5.3 Leakage					
B.5.3.1	Are the steps and equations applied to calculate the leakage in compliance with the requirements of selected baseline and monitoring methodology? Are all the values used in the PDD considered reasonable in the context of the proposed project activity?	11/, 12/, 17/	DR/C C/I	According to AMS.I.D, leakage emissions are to be considered only in cases where there is transfer of the equipment from other project activity. Since the project activity is a Greenfield project as confirmed during the site visit, the leakage emissions are not applicable. Same is explained in the PDD and hence found to be acceptable.	OK
B.5.3.2	Have conservative assumptions been used when calculating the leakage and are the uncertainty estimates properly addressed?	11/, 12/, 17/	DR/C C/I	Please refer B.5.3.1	OK
B.5.3.3	Leakage estimated	11/, 12/, 17/	DR/C C/I	As per the webhosted PDD and CER worksheet submitted by PP, the leakage emissions estimate is 0 tCO ₂ e per year.	OK
B.5.4 Emission reductions					
B.5.4.1	Has the methodology been correctly applied to calculate the emission reductions and can this be replicated by the data provided in the PDD and supporting files to be submitted for registration?	11/, 12/, 17/, 18/	DR/C C/I	The emission reductions are calculated as per the equation 10 of AMS-I.D. version 17. The emission reductions can be replicated by the data	CL 4, CAR-2 OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion	
			provided in the PDD. However, PP needs to address the findings raised in the calculation of baseline emissions as indicated in B.5.1 above.		
B.5.4.2	Are all the assumptions and data used by the project participants listed in the PDD including their references and sources?	<i>/11/</i> , <i>/21/</i> , <i>/71/</i> , <i>/8/</i>	DR/C C/I	The emission reductions are based on the baseline, project and leakage emissions. PP has not listed the assumptions and the sources of the parameters required for calculation of baseline emissions specifically installed capacity, transmission/wheeling losses and PLF. The same has been raised as finding in A.2.1 above.	CAR-2 OK
B.5.4.3	Is all the documentation used by the project participants as the basis for assumptions and source of data quoted and interpreted in the PDD?	<i>/11/</i> , <i>/21/</i> , <i>/71/</i> , <i>/8/</i>	DR/C C/I	Please refer B.5.4.2	CAR-2 OK
B.5.4.4	Emission Reductions estimated	<i>/11/</i> , <i>/21/</i> , <i>/71/</i> , <i>/8/</i>	DR/C C/I	As per the webhosted PDD and CER worksheet submitted by PP, the emission reductions estimate is 16,078 tCO ₂ e per year.	OK
B.6 Monitoring plan					
B.6.1 Parameters ex-ante					
B.6.1.1	Does the monitoring plan contain the list of all parameters required by the approved methodology and by the applicable methodological tool?	<i>/11/</i> , <i>/71/</i> , <i>/8/</i>	DR/C C/I	Yes. As per AMS-I.D. version 17, the only parameter that is required to be monitored is EG _{BL,y} which has been included by as the monitoring parameter in the PDD. As per the “Tool to calculate the emission factor for an electricity system” version 04.0, there are no other monitoring parameters required as the PP has fixed emission factor of the grid ex-ante.	OK
B.6.1.2	How were the parameters available at validation verified?	<i>/11/</i> , <i>/71/</i> , <i>/8/</i>	DR/C C/I	As per the web hosted PDD, the parameters that are available at the time of validation are EF _{OM, y} (0.9776 tCO ₂ /MWh) , EF _{BM, y} (0.9673 tCO ₂ /MWh). These parameters have been correctly calculated using the step-wise procedures given in “Tool to calculate the emission factor for an electricity system” version 04.0 and CEA database version 09.0 which was the latest database available at the time of web hosting of PDD. However, EF _{grid,CM,y} i.e. grid emission factor has not been included as ex-ante parameter which is found to be incorrect. Also, notations of parameters used in calculation of emission factor are not consistent with the applied tool.	CAR-18, CAR-2 OK
B.6.1.3	Which default data have been selected and applied?	<i>/11/</i> , <i>/71/</i> , <i>/8/</i>	DR/C	PP has used default data as published by CEA in its CO ₂	OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
		C/I	Baseline Database for the Indian Power Sector version 09.0 which was the latest available at the time of web hosting to estimate emission factor of OM, BM and CDM. Since this database is published by CEA which a government body; use of the same has been found to be credible and reliable.	
B.6.1.4 Are all the values used in the PDD considered reasonable in the context of the proposed project activity?	/11, /71, /8/	DR/C C/I	Since PP has used CEA database version 09.0; a database which is published by CEA which is a government body, the values used for the parameters available ex-ante are deemed to be reasonable.	OK
B.6.2 Parameters ex-post				
B.6.2.1 Does the monitoring plan described in the PDD comply with the requirements of the methodology and the applicable methodological tool?	/11, /71, /8/	DR/C C/I	The monitoring plan prescribed in the PDD complies with the requirements of AMS-I.D. version 17 and "Tool to calculate the emission factor for an electricity system version 04.0.	OK
B.6.2.2 Does the monitoring plan contain all necessary parameters and are they clearly described?	/11, /71, /8/	DR/C C/I	<p>As per web hosted PDD, the monitoring parameters as required by AMS-I.D. version 17 are identified as $EG_{BL,y}$, Maharashtra (Quantity of net electricity supplied to the grid from the project activity in year y in the State of Gujarat) and $EG_{BL,y,MH}$ (Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh) in the state of Maharashtra. As per "Tool to calculate the emission factor for an electricity system" version 04.0, there are no parameters that need to be monitored as PP has chosen to fix the emission factor of grid ex-ante.</p> <p>The project activity is located in two states namely Maharashtra and Gujarat. Procedure for monitoring and measurement of $EG_{BL,y}$ in both these states is different as confirmed during the site visit. However, the monitoring parameters included in the PDD do not confirm to the actual monitoring procedure followed at these sites. Hence, kindly include the monitoring parameters that are involved in the monitoring of $EG_{BL,y}$ considering the actual procedure for monitoring and measurement of $EG_{BL,y}$ applicable for each site and each investor. Further, PP is requested to check the notations used for $EG_{BL,y}$ to calculate quantity of net electricity supplied to the grid from the project activity in the state of Gujarat and Maharashtra.</p>	CAR-19 OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion	
B.6.2.3	Is the measurement equipment described? Is the accuracy of the measurement equipment addressed and deemed appropriate? Are the requirements for maintenance and calibration of measurement equipment described and deemed appropriate?	11, 171, 181	DR/C C/I	As per web hosted PDD, monitoring and measuring equipment for EG _{BL,y} Maharashtra and EG _{BL,y,MH} is energy meters calibrated at frequency of once in a year and once in 3 years for Maharashtra and Gujarat site respectively. During the site visit, it was noted that there are main, check and control panel meters (in case of Maharashtra) and main, check and yard meters (in case of Gujarat site) for monitoring of quantity of net electricity supplied to the grid. Hence, PP is requested to specify the measurement equipments in line with the actual practice followed at the respective site. Please refer B.6.2.2 for further details.	CAR-19 OK
B.6.2.4	Does the Monitoring Plan stated in the PDD confirm that the calibration of meters will be done by an accredited person or institution?	11, 171, 181	DR/C C/I	Calibration of energy meters at Gujarat site will be done once in 3 years and Maharashtra site once in a year by respective SEB officials as per the web hosted PDD. However, PP needs to specify the measurement equipments in line with the actual practice followed at the respective site and then give the calibration related details for these meters separately. For further details, please refer B.6.2.3.	CAR-19 OK
B.6.2.5	Is the monitoring and recording frequency adequate for all monitoring parameters? Is it in line with the monitoring methodology?	11, 171, 181	DR/C C/I	EG _{BL,y} Maharashtra and EG _{BL,y,MH} are monitored continuously and recorded every once in a month. The frequency is in line with the applied monitoring methodology and actual practice followed at these sites.	OK
B.6.2.7	How has it been assessed that the monitoring arrangements described in the monitoring plan are feasible within the project design? Please confirm the ability of the project participants to implement the described monitoring plant.	11, 171, 181	DR/C C/I	It was noted that the monitoring arrangements described in the monitoring plan are not in line with the actual monitoring arrangements observed during the site visit for both Maharashtra and Gujarat sites. Hence, PP is requested to make the monitoring plan in line with actual practice followed at these sites. Please refer B.6.2.2 for further details.	CAR-19 OK
B.6.3 Management/Quality Assurance/Quality Control					
B.6.3.1	Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)?	11, 171, 181	DR/C C/I	Procedures for day-day to record handling are identified by PP. As per the PDD, EG _{BL,y} Maharashtra and EG _{BL,y,MH} will be monitored continuously and recorded once in every month in the form of credit report and certificate for share of electricity for Maharashtra and Gujarat sites respectively. However these two parameters are derived after applying	CAR-19 OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion	
			apportioning method based on certain parameters that are monitored and measured as observed during the site visit. Hence, PP is requested to include all the relevant parameters that are used in apportioning methodology to arrive at EG _{BL,y,Maharashtra} and EG _{BL,y,MH} and include the procedures for record handling for these parameters.		
B.6.3.2	Are the data management and quality assurance and quality control procedures sufficient to ensure that the emission reductions achieved by/resulting from the project can be reported ex post and verified?	/1/, /7/, /8/	DR/C C/I	yes, the procedures identified in the PDD for data management and quality assurance are sufficient for ensuring emissions reductions can be reported and verified ex post.	OK
B.6.3.3	Will all monitored data required for verification and issuance be kept for two years after the end of the crediting period or the last issuance of CERs, for this project activity, whichever occurs later?	/1/, /7/, /8/	DR/C C/I	Yes. The monitored data will be kept for 2 years after the end of the crediting activity. This is mentioned in the PDD.	OK
C.1 Crediting period					
C.1.1	What is the expected crediting starting date of the proposed project activity? Does the crediting period start eight week after the request for registration?	/1/	DR/C C/I	The expected crediting starting date of the project activity is 30/06/2014 or upon registration with UNFCCC whichever is later.	OK
C.1.2	What is the length of the crediting period? Is it clearly defined and reasonable?	/1/	DR/C C/I	Length of the crediting period is 7 years and is renewable type of crediting period. It is clearly defined in the PDD and deemed to be reasonable.	OK
D.1 Environmental impacts					
D.1.1	Has an analysis of the environment impacts of the project activity been undertaken? Is it clearly and sufficiently described in the PDD?	/1/	DR/C C/I	The PDD refers to GoI notification for EIA dated 2006. As per the schedule 1 of the EIA notification dated 2009, the wind power projects are not required to carry out EIA study. Hence, analysis of environment impacts of the project activity is not required. However, PP has presented analysis of possible environmental impacts due to the project activity. Please provide approval for installation of WTGs.	OK CL-7
D.1.2	Will the project create any adverse environmental effects? Are transboundary environmental impacts considered in the analysis?	/1/	DR/C C/I	There are no transboundary environmental impacts due to the project activity. The same is stated in the PDD. Hence, accepted.	OK
D.1.3	Is the analysis of the environmental impacts required by the legislation of the host Country? If yes, has the EIA has been approved by local Government? Does the approval contain any conditions that need monitoring?	/1/	DR/C C/I	Please refer D.1.1	OK CL-8

Checklist Question	Reference	MoV ¹	Comments	Conclusion
D.1.4	/1/	DR/C C/I	Please refer D.1.1	CL-9 OK
D.1.5	/1/	DR/C C/I	No. Monitoring of sustainable development indicators/ environmental impacts warranted by legislation in the host country.	OK
D.1.6	/1/	DR/C C/I	PP is requested to justify sustainable development indicator in line with the guidance given by NCDMA; the host country DNA. Further, please support the following claims made while explaining the sustainable development: 1. Social well-being: Frequency of visiting villages and nearby areas by skilled, technical and industrialist increase due to installation / site visit / operation and maintenance work related to WTGs. This directly and indirectly positively effects the economy of villages and nearby area. 2. Economic well being: availability of electricity to the local consumers (villagers & sub-urban habitants) which will provide new opportunities for industries and economic activities to be setup in the area thereby resulting in greater local employment, ultimately leading to overall development.	CL-8 OK
E.1 Local stakeholder consultation				
E.1.1	/1/	DR/C C/I	As per the web hosted PDD, all the local stakeholders were invited by PP for local stakeholder consultation meeting prior to the publication of the PDD for web hosting. However, evidence for same needs to be submitted for verification.	CL-9 OK
E.1.2	/1/	DR/C C/I	PP has not provided minutes of meeting and attendance sheets of stakeholders who participated in the meetings to check whether the stakeholders invited were considered appropriate for project activity.	CL-9 OK
E.1.3	/1/	DR/C C/I	As per web hosted PDD, there are no comments from stakeholders. However, please refer E.1.3	CL-9 OK
E.1.4	/1/	DR/C C/I	As per web hosted PDD, there are no comments from stakeholders that need actions. However, please refer E.1.3	CL-9 OK
E.1.5	/1/	DR/C C/I	No. stakeholder consultation process is not required by regulations of the host country.	OK

Checklist Question	Reference	MoV ¹	Comments	Conclusion
accordance with such regulations/laws?				

TABLE 3 RESOLUTION OF CORRECTIVE ACTION REQUESTS AND CLARIFICATION REQUESTS

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>CAR 1</p> <p>Please submit Letter of Approval (LoA) issued by host Party DNA.</p>	A.1.1, A.3.3, A.3.4	The LoA for the project has now been submitted.	<p>DOE's assessment round 1: Checked the HCA dated 03/09/2014 No.: 4/1/2014-CCC and found to be OK.</p> <p>CAR 1 is closed.</p>
<p>CAR 2</p> <p>The PDD is incomplete in line with the Guidelines for completing the Project Design Document form version 01.1 with regard to the following points:</p> <p>1. Section A.1 does not provide the estimate of annual average for the chosen crediting period.</p> <p>2. Section A.2.4 does not include a map showing physical location of the project activity.</p> <p>3. Section A.3 lacks description of technology involved in the pre-project and baseline scenario.</p> <p>4. Section B.6.1 does not explain how the methodological steps for calculating project emissions, leakage emissions and emission</p>	A.1.2, A.5.3, B.5.4.1, B.5.4.2, B.5.4.3, B.6.1.2	<p>1. The Section A.1 now provide the estimate of annual average for the chosen crediting period, i.e. 16078 tCO₂e per annum.</p> <p>2. The revised Version 2 includes a map showing the physical location of the project activity under Section A.2.4.</p> <p>3. The revised PDD version 2 provides a justification that both baseline scenario and scenario existing prior to the implementation of the project activity are the same.</p> <p>4. Section B.6.1 has been revised to explain how the methodological steps for calculating project emissions, leakage</p>	<p>DOE's assessment round 1:</p> <p>1. Checked PDD section A.1 and found that the annual average for the crediting period is mentioned. Closed.</p> <p>2. Checked that map indicating project location has been included in the PDD. However, physical location details given for Surbhi WTGs are not correct with commissioning details.</p> <p>3. Noted that the PDD mentions technology involved in the baseline scenario which is same as pre-project scenario. Closed.</p> <p>4. Noted that B.6.1 has been revised to include steps for</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>reductions are applied.</p> <p>5. Information provided in appendix 3, 4, 5 is not in line with the PDD completion guidelines.</p> <p>6. Notations of parameters used in calculation of emission factor are not consistent with the applied tool.</p> <p>7. Justification given on applicability condition 1 in B.2 is not clear on exact number and capacities of WTGs involved in selling and wheeling power.</p> <p>8. Diagram in the section B.3 does not indicate emission sources and GHGs included in the project boundary. Further section B.3 and A.3 do not provide description about the monitoring equipments and their location in the project activity.</p>		<p>emissions and emission reductions are applied.</p> <p>5. Information provided in appendix 3, 4, 5 is revised to be in line with the PDD completion guidelines.</p> <p>6. Notations of parameters used in calculation of emission factor have been revised to be consistent with the applied tool.</p> <p>7. The individual WTG at Gujarat of 0.8 MW is for captive propose and the same is not mentioned in applicability condition 1 in B.2 of the PDD.</p> <p>8. Diagram in the section B.3 does not indicate emission sources and GHGs included in the project boundary as there are no emissions from the project.</p> <p>Further section B.3 and A.3 has been revised to provide description about the</p>	<p>calculating emission reductions as per AMS I.D. version 17 and “Tool to calculate the emission factor for an electricity system” version 4.0. Closed.</p> <p>5. Checked information given in Appendix 3, 4 and 5 of the PDD and found that it is in line with the “Instructions for filling out the project design document form for small-scale CDM project activities” given in CDM-PDD-SSC-FORM version 4.0. Closed.</p> <p>6. Notations used for the parameters like operating margin, build margin, combined margin, weighting of operating and build margin emission factors are found to be in line with “Tool to calculate the emission factor for an electricity system” version 4.0. Closed.</p> <p>7. Checked that the explanation in B.2 has been modified to indicate capacity of plant feeding electricity for captive purpose. Hence, closed.</p> <p>8. Diagram and description of the project boundary is not specific to the project activity and does not provide monitoring arrangement for net electricity supplied to the grid.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>monitoring and their location in the project activity.</p> <p>Response#2:</p> <p>2. The physical location details given for Surbhi WTGs are now matching with commissioning details.</p> <p>8. The metering for the project activity has now been included in the Diagram.</p> <p>Response#3:</p> <p>8. The metering details and the physical locations of the project has been corrected accordingly.</p>	<p>CAR 2 is open.</p> <p>Assessment #2:</p> <p>2. Verified that the commissioning details of Surbhi WTGs have been corrected in accordance with the certificates. Closed.</p> <p>8. The project involves two different sites falling under purview of different discoms. However, the project diagram gives a generic representation of the boundary and is not specific to the site wrt number of machines, rated capacity, and metering system. Further the description of the boundary is also not explicit on these factors. CAR 2 is open.</p> <p>Assessment #3:</p> <p>PP has made necessary corrections and the revision made is found OK. Hence CAR 2 is closed.</p>
<p>CAR 3</p> <p>Please provide following documents for verification:</p> <p>1. Purchase order for 1 X 2 MW of WTG developed by Surbhi Textile Mills Ltd</p> <p>2. Power Purchase Agreements for WTGs developed by Surbhi Textile Mills (2 X 2 MW) and</p>	<p>A.2.1, A.2.2, A.2.3, A.2.4,</p>	<p>The mentioned documents are attached herewith. Further, the Bundling form shall be submitted at a later stage once the PDD is finalized.</p> <p>Pls. note the PPA for Surbhi Textiles Ltd. and SJP constructions WTGs in</p>	<p>DOE's assessment round 1:</p> <p>1. Verified purchase order placed for 2 MW of 1 number of WTG for location MV2 T 26 to Inox Wind dated 19/11/2013.</p> <p>2. PPA not submitted. PP to submit agreements for closure of finding.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>SJP Constructions (2 X 2 MW)</p> <p>3. Commissioning certificates for WTGs</p> <p>4. Bundling form for the project activity in accordance with Annex 22 of EB 66</p>		<p>Maharashtra is under process and not yet signed. The same shall be available once approved by the DISCOM.</p> <p>The commissioning certificates are attached herewith.</p> <p>Response#2: 2. PPA for all WTGs is being submitted. 4. Bundling form is being submitted.</p> <p>Response#3: 4. Bundling form is being submitted herewith.</p>	<p>3. Checked the commissioning certificates and found to be ok.</p> <p>4. Bundling form not submitted. PP to submit agreements for closure of finding. CAR 3 is open.</p> <p>Assessment #2: 2. Checked the PPA between Surbhi and Dakshin Gujarat Vij Ltd dated 10/02/2014 (0.8 MW) , Surbhi and MSEDCL dated 10/10/2014 (2 X MW MV2T-18 and 61) and SJP and MSEDCL dated 31/10/2014 (2 x 2 MW MVT 19 and MVT 20). Closed.</p> <p>4. Checked the bundling agreement dated 20/02/2014. "CDM small-scale project activities bundling form" is not provided. CAR 3 is open.</p> <p>Assessment #3 PP has submitted the bundling form; and is in line with the requirements. Hence CAR 03 is closed.</p>
<p>CAR 4</p> <p>PP needs to provide the MoC statement as per the latest version of the form F-CDM-MOC available on the UNFCCC web site. Also provide</p>	<p>A.4.1, A.4.2, A.4.3, A.4.4</p>	<p>The board note for the project proponent are submitted herewith as supporting document for authority of the person signing the MoC. Further the MoC shall</p>	<p>DOE' assessment round 1: Copy of board resolution submitted passed at the meeting held on 28/10/2013, 26/10/2013 (for Surbhi)</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
supporting documents to cross verify the personal identities, specimen signatures and the employment status of the official signing the MoC and to confirm that the official submitting and signing MoC has got the authority do so on behalf of the PP.		<p>be submitted at a later stage.</p> <p>Response#2: The Project proponent is ReXchange Global Solutions (P73) and a undertaking submitted to MoEF is attached herewith along with HCA received for the project activity. ReXchange being a propreitry firm thus the Pan Card copy of Mr. Manish Dabkara has been attached. MoC is also being submitted for the DOEs perusal.</p> <p>Response#3: ReXchange being a propreitry firm thus there is no registration required. However, Pan Card copy of Mr. Manish Dabkara has been attached herewith.</p> <p>Response#4: PP now has updated with the latest version of MOC form (CDM-MOC-FORM), version 02.2 dated 17/03/2015 is now submitted to the DOE.</p>	<p>and 28/10/2013 (for SJP) is not sufficient to cross verify the personal identities, specimen signatures and the employment status of the official signing the MoC and to confirm that the official submitting and signing MoC has got the authority do so on behalf of the PP. Further, MoC is not submitted by PP. CAR 4 is open.</p> <p>Assessment #2: Checked MoC dated 17/11/2014 and the declaration provided by the PP dated 11/03/2014. PP is required to submit - Registration documents or equivalent of ReXchange Global Solutions (P73) and - Written confirmation from ReXchange Global Solutions (P73) for authorization of signatory to submit the MoC and corporate and personal details, employment status and specimen signature of the authorized signatory as given in the MoC is valid and accurate. CAR 4 is open.</p> <p>Assessment #3 The justification provided by PP is acceptable as there is no formal sole proprietorship registration; and to start a proprietorship only PAN number for the Proprietor is required. PP has submitted PAN</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
			<p>card copy of authorized signatory with specimen signature. Hence this part of the CAR is closed however Modalities of communication statement used is version 02.1 dated 16/03/2012 ((F-CDM-MOC), which is not the latest available.</p> <p>CAR 4 is open.</p> <p>Assessment #4: The PP has submitted the MOC form and found that, the form now used is the latest version available.</p> <p>Hence CAR 4 is closed.</p>
<p>CAR 5</p> <p>The type of the project activity identified in section B.1 of PDD is not consistent with the UNFCCC web site.</p>		<p>The Type of project activity mentioned has been revised to be in line with the UNFCCC website.</p>	<p>DOE's assessment round 1: Checked that the type and category has been revised in in line with UNFCCC web site. CAR 5 is closed.</p>
<p>CAR 6</p> <p>The operational lifetime of the project activity is inconsistent in the webhosted PDD. Further, PP is requested to corroborate it through documentary evidences.</p>	A.5.4, B.4.4.8	<p>The operational lifetime of the project activity is revised to be consistent in the PDD for 20 years. The technical parameters for the Windmills are attached herewith.</p>	<p>DOE's assessment round 1: Checked that the technical lifetime of project activity has been made 20 years 0 months in the PDD. Checked certificate from Inox Wind dated 24/03/2014 stating that the lifetime of 2MW capacity WTG as 20 years. However, the project involves WTG of 0.8 MW capacity supplied by Enercon. Please submit evidence for lifetime of this WTG.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>Response#2:</p> <p>Lifetime supporting document for Enercon WTG is being submitted herewith in form of publicly available link² from the supplier.</p>	<p>CAR 6 is open.</p> <p>Assessment #2:</p> <p>Checked the web link provided and noted that the minimum average life time committed by the supplier is of 20 years.</p> <p>CAR 6 is closed.</p>
<p>CAR 7</p> <p>PP is requested to provide audited balance sheets of Surbhi Textile and SJP Constructions for year 2011-12, 2012-13 and 2013-14 to verify the same.</p>	A.6.1, A.6.2	<p>The audited balance sheets are attached herewith.</p> <p>Response#2:</p> <p>Audited balance sheet for Surbhi Textile for FY 2012-13 is being submitted.</p>	<p>DOE's assessment round 1:</p> <p>Audited balance sheet for year 2011-12, 2012-13, 2013-14 for SJP constructions received. Please submit audited balance sheet for Surbhi Textile for the same years.</p> <p>CAR 7 is open.</p> <p>Assessment #2:</p> <p>Checked audited balance sheets of Surbhi FY 011-12, 2012-13, 2013-14 and found that there is no ODA received.</p> <p>CAR 7 is closed.</p>
<p>CAR 8</p> <p>The PDD does not provide precise description and flow diagram of project boundary.</p>	B.2.1	<p>The PDD section B.3 already provides a flow diagram for the flow of electricity in the project activity. The monitoring for the same has now been included.</p>	<p>DOE's assessment round 1:</p> <p>Refer CAR 2 (8).</p> <p>CAR 8 is open.</p>

² <http://www.windworldindia.com/key-differentiators.jsp>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>Response#2: Refer response at CAR 2 (8).</p> <p>Response#3: Refer response at CAR 2 (8).</p>	<p>Assessment #2: CAR 2, point 8 is open. CAR 8 is open.</p> <p>Assessment #3 PP has made necessary corrections and the revision made is found OK. Hence CAR 8 is closed.</p>
<p>CAR 9</p> <p>Justify the choice of starting date is in line with the CDM Glossary of Terms version 07.0 i.e the earliest date on which implementation began.</p>	B.4.3.1, B.4.7.1, B.4.3.2,	The start date of the project activity is the date of the purchase order for the first WTG under the project activity.	<p>DOE's assessment round 1: Checked the POs placed by Surbhi Textile and SJP Constructions to suppliers for their respective WTGs and noted that the earliest PO was placed by Surbhi Textile to Enercon for 1 X 800kW of WTG located in Gujarat on 30/08/2013. The same date has been considered by PP as the starting date of project activity as per CDM Glossary of Terms version 7.0.</p> <p>CAR 9 is closed.</p>
<p>CAR 10</p> <p>PP is requested to submit evidences to demonstrate prior consideration as required by Project standard</p>	B.4.3.3, B.4.7.1	The F-CDM consideration forms sent to CDM EB and MoEF are attached herewith.	<p>DOE's assessment round 1: Please submit prior consideration forms, intimation emails sent to UNFCCC and MoEF and acknowledgement emails from these parties for Surbhi Textile and SJP Construction in PDF format.</p> <p>CAR 10 is open.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>Response#2: Prior consideration emails sent to UNFCCC and MoEF and acknowledgement emails from these parties for Surbhi Textile and SJP Construction are being submitted.</p> <p>Response#3: The copies for the have been submitted to the DOE in outlook email format. Further PDF copies are also submitted herewith.</p>	<p>Assessment #2: Please submit the PDF copies of emails and Forms sent to the parties. CAR 10 is open.</p> <p>Assessment #3 PP has submitted the PDF copies of emails and Forms sent to the parties. Found OK. CAR 10 is closed.</p>
<p>CAR 11</p> <p>From the timeline given in the web hosted PDD, it is not clear how the it is confirmed that the continuous actions in parallel with the implementation were taken to secure CDM status in accordance with para 28 of Project Standard version 06.0.</p>	B.4.3.4, B.4.7.1	<p>The F-CDM consideration forms sent to CDM EB and MoEF are submitted within 6 months of the start date, thus demonstrating the serious CDM consideration.</p> <p>Response#2: Refer response at CAR 10.</p> <p>Response#3: Refer response at CAR 10.</p>	<p>DOE's assessment round 1: Please refer CAR 10. CAR 11 is open.</p> <p>Assessment #2: Refer to CAR 10</p> <p>Assessment #3 PP has submitted the PDF copies of emails and Forms sent to the parties. Found OK. CAR 11 is closed.</p>
<p>CAR 12</p> <p>PP is requested to include D/E and interest rate in the sensitivity analysis as the total interest cost is higher than 20% of the project cost for all the three IRR analysis.</p>	B.4.4.11, B.4.7.1	<p>Debt equity ratio and interest rate have now been included as a separate parameter for sensitivity analysis in the financials as well as included in the revised PDD.</p>	<p>DOE's assessment round 1: Checked IRR calculation and noted that D/E and interest rate has been included for sensitivity analysis. But the results of sensitivity analysis and probability to breach benchmark have not been updated for these parameters in the PDD and IRR excel sheets of both the</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>Response#2: Please refer the revised IRR sheets and PDD. Sensitivity analysis and probability to breach benchmark have been updated.</p> <p>Response#3: The PDD is now consistent with IRR work sheets for the values of PLF sensitivity analysis.</p>	<p>developers.</p> <p>CAR 12 is open.</p> <p>Assessment #2: Checked that the PP has now discussed results of sensitivity analysis and likelihood of crossing benchmark for D/E and interest rate in the PDD. However, the PDD is not consistent with IRR work sheets for the values of PLF sensitivity analysis of SJP Construction. CAR 12 is open.</p> <p>Assessment #3 PP has revised the PDD and the revisions made are found appropriate. Hence CAR 12 is closed.</p>
<p>CAR 13</p> <p>Kindly explain likelihood of not reaching the benchmark for each of the key parameters subjected to sensitivity by providing proper justification based on actual values.</p>	B.4.4.12, B.4.7.1	The PDD now clearly describes the required variations of key parameters to reach the benchmark and their possibility of happening of the same.	<p>DOE's assessment round 1:</p> <p>PLF: It is not understood how the PLF will not cross 10% compared to MNER state wise generation data for Maharashtra and Gujarat. Please justify likelihood of not crossing the benchmark with the actual data.</p> <p>O&M: O&M agreement for WTGs of Surbhi Textile i.e. 2 X 2MW and 1 X 0.8 MW is not available. Please submit the same.</p> <p>Tariff: Agreements for sale/wheel of</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>Response#2:</p> <p>Please refer section B.5 of the revised PDD. Justification for the PLF not crossing the benchmark is discussed. Moreover, an excel detailing the actual PLF achieved in the states of Gujarat and Maharashtra from 2005-06 to 2011-12 is also being provided which is based on the MNRE links that are already provided in the PDD.</p> <p>O&M agreement has not yet been signed as the WTGs are under free O&M as of now for a period of 2 years (0.8 MW WTG of Surbhi Textile) and 3 years (2 MW WTGs of Surbhi Textile as well as SJP Constructions). A declaration certified by a CA to this effect is being submitted.</p> <p>PPA for all WTGs is being provided now. It is to be noted here that the WTGs in Maharashtra (for both Surbhi Textile and</p>	<p>power for all the WTGs are not available. For WTGs of Surbhi Textile and SJP Construction which are located in Maharashtra, the premise for selecting tariff rate for wind zone 2 is not clear. Further, please provide actual HT bills for the facility to which 1 X 0.8 MW is supplying electricity to confirm the actual tariff rate.</p> <p>CAR 13 is open.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>SJP Constructions) are located in wind zone 1 and not wind zone 2, as erroneously mentioned earlier. The supporting wind zone classification letter will be provided soon. The IRR sheets have been amended accordingly. Further, actual HT bills for both the facilities to which 0.8 MW WTG is supplying electricity are being provided. It is to be noted here that the tariff rate has been calculated as the energy charge + (energy charge * electricity duty) which gives the saving in energy per unit of electricity that is set off from the WTG. As per the PPA, the electricity being generated is being wheeled to 2 units. One unit is connected to an HT feeder while the other is connected to LT feeder. For the facility connected to an HT feeder, the energy charge (at the time of decision making) is INR 4.25 per kWh while the electricity duty is 15%. For the facility connected to a LT connection, the energy charge is INR 4.60 per kWh while the electricity duty is 10%. The wheeling ratio of the electricity generated by the 0.8 MW WTG is 75:25 for HT:LT connections. Accordingly the tariff has been revised in the IRR sheets to consider both the connections.</p> <p>Response#3:</p> <p>PLF: Justification for likelihood of occurrence of the breakeven point of PLF is now clearly discussed in the PDD. Further, since the PPA for the</p>	<p>Assessment #2:</p> <p>PLF: Checked the web links provided in the PDD for MNRE of generation data and installed capacity and calculation of average PLF for Maharashtra and Gujarat</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>Maharashtra WTGs has been signed as late as October 2014, hence generation data is not being submitted. The generation data of 0.8 MW machine of Surbhi textiles is submitted herewith. Further the monthly JMR sheets are available at https://www.sldcguj.com/EnergyAccount/Energy_Block_New.asp</p> <p>Pls. select the location as "Vadali".</p> <p>O&M: The actual O&M Cost for all the 3 projects has now been revised in accordance with the CA certificate. Accordingly, all the financial sheets have been revised. However, please note these values were not available at the time of decision making there is no change in IRR for any project.</p> <p>1. Wind zone class certificate is under process and can be confirmed during verification. However, for validation purpose, the wind zone can be verified from MERC Order³ dated 22/03/2013, page 41.</p> <p>2. The justification for PLF not increasing by 7.17% has already been given in the</p>	<p>based on this data. This was found to be appropriate. Justification for likelihood of occurrence of the breakeven point of PLF for Surbhi and SJP is not clearly discussed in the PDD. PP is requested to provide evidence for PLF based on the actual generation data.</p> <p>O&M: Checked the CA certificate dated 26/06/2014 and 12/07/2014 corresponding to Surbhi textile and SJP constructions WTGs. The certificates state details regarding O&M charges however don't provide source of the information. As per the PDD, the O&M cost has been fixed in POs. However, POs do not indicate O&M cost. The justification is in contradiction with the CA certification and POs and hence not accepted.</p> <p>Tariff:</p> <p>Surbhi Textile:</p> <p>1. Submit wind zone class certificate issued by MEDA for all the WTGs</p> <p>2. The justification given for crossing the benchmark at increase of 7.17% is not acceptable in view of the fact that the PPA is valid only for 13 years. Hence, kindly justify</p>

³ http://mercindia.org.in/pdf/Order%2058%2042/Order_6_of_2013_22_March_2013.pdf

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>PDD. Moreover, Maharashtra Electricity Regulatory Commission follows “cost plus” approach to fix up the tariff for wind power project as clearly evident in MERC Order dated 24th Nov 2003⁴ (Page no. 10 & 11 of 176). As per this approach, the tariff by the utility should be set such that the revenue from tariff should be able to cover the cost of the investment and in addition be able to give a return at the rate set by the respective utility. The tariff is arrived based on this methodology.</p> <p>Tariff = Cost + Return</p> <p>After 13th year there are significant amount of uncertainty over the tariff rate. It is also to be noted that the PPA tenure is of 13 years⁵, beyond which there is no commitment from the Discom to buy electricity from the project .There are poor chances that PPs all over the state will enjoy a higher revised tariff. There are more chances of lower tariff rate implied on them after 13th year. As stated in MERC Order also (Page no.14 of 176): the commission notes that:</p> <p><i>“in Cost Plus Approach, which the Commission has adopted for tariff proposal, rate per unit charged by such projects during initial period of 10 years is bound to be higher as during this period the project has various debt related obligations. However, it is essential that the consumer is able to enjoy the benefit of cheaper power once all debt related obligations are paid off and project has virtually no variable costs. (Page no.14).</i></p>	<p>the additionality of the project as it has been found that the IRR crosses benchmark at increase of 7.17% in the tariff rate for 2 X 2MW WTGs of Surbhi.</p>

⁴ http://www.mercindia.org.in/pdf/Detail_Wind_Energy_Order.pdf

⁵ PPA between Project proponent and the MSEDCL

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p><i>"The rate payable gets reduced after 10 years (i.e. after repayment of loan) so that the net average cost of energy gets reduced"(Page no.135)". To ensure that developer does not remove the machine after availing higher purchase rate for 10 years, an agreement may be signed allowing MSEB to have second charge for first 10 years (when the lender institution shall have first charge on the machine) and subsequently MSEB shall have first charge for the balance 10 years" (Page no.141).</i></p> <p>The above extracts from the tariff order of MERC indicate that the tariff will reduce after 13th year. Nevertheless, being conservative PP has considered the same tariff for the entire 20 years.</p> <p>3. In case of 1 X 0.8 MW, the tariff rate is calculated from the tariff order, considering the tariff for HT /LT based on billing demand, energy charges, electricity duty and time charges varying as per the electricity consumption units and time.</p> <p>The formula used by PP considers the apportioning (75% & 25%) for the LT/HT zone and the electricity duty applicable. The apportioning for 75% and 25% is as per the PPA and a copy is attached herewith. Sample Energy Bills are attached for reference.</p> <p>4. Pls. refer reply to point 2 above, the same is also provided in the PDD.</p> <p>SJP constructions:</p> <p>1. Pls. refer the reply to point 1</p>	<p>3. In case of 1 X 0.8 MW, kindly explain in detail how the tariff rate is calculated. From the tariff order, it is understood that the tariff for HT /LT is calculated based on billing demand, energy charges, electricity duty and time charges varying as per the electricity consumption units and time. However, the formula used by PP is not clear on how these factors have been considered. Kindly provide evidence for the use of 75:25 available at the decision time. It is not clear why PP</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>above</p> <p>2. Pls. refer to the reply to point 2 above.</p>	<p>has not used actual tariff rate based on the energy bills for consumer no. 11133 and 12306/05934/9 available at the decision time. Kindly provide the energy bills for the year 2012 and 2013 to cross verify the actual tariff rate.</p> <p>4. Justification for likelihood of occurrence of the breakeven point of tariff is not discussed transparently in the PDD.</p> <p>SJP constructions:</p> <p>1. Submit wind zone class certificate issued by MEDA for all the WTGs.</p> <p>2. Justification for likelihood of occurrence of the breakeven point of tariff is not discussed transparently in the PDD.</p> <p>CAR 13 is open.</p> <p>Assessment #3</p> <p>PP has revised the PDD and the revisions made are found appropriate. Further, the justifications provided by the PP found reasonable. Hence CAR 13 is closed.</p>
<p>CAR 14</p> <p>$EF_{grid,CM,y}$ i.e. grid emission factor has not been included as ex-ante parameter which is found to be incorrect.</p>	B.6.1.2	The PDD is revised to include the ex ante parameter for Grid emission factor.	<p>DOE's assessment round 1:</p> <p>$EF_{grid,CM,y}$ is not included as monitoring parameter.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>Response#2:</p> <p>EF_{grid,CM,y} is now included as monitoring parameter</p>	<p>CAR 14 is open.</p> <p>Assessment #2:</p> <p>EF_{grid,CM,y} has been included as ex-ante parameter and description provided is found to be accurate.</p> <p>CAR 14 is closed.</p>
<p>CAR 15</p> <p>The project activity is located in two states namely Maharashtra and Gujarat. Procedure for monitoring and measurement of EG_{BL,y} in both these states is different as confirmed during the site visit. However, the monitoring parameters included in the PDD do not confirm to the actual monitoring procedure followed at these sites. Hence, kindly include the monitoring parameters that are involved in the monitoring of EG_{BL,y} considering the actual procedure for monitoring and measurement of EG_{BL,y} applicable for each site and each investor. Further, PP is requested to check the notations used for EG_{BL,y} to calculate quantity of net electricity supplied to the grid from the project activity in the state of Gujarat and Maharashtra.</p>	<p>B.6.2.2, B.6.2.3, B.6.2.4, B.6.2.7, B.6.3.1</p>	<p>Monitoring procedure for two states are mentioned separately.</p> <p>Further for only monitoring parameter for the project activity is the net electricity supplied to the grid.</p> <p>The other parameters used to arrive the net electricity values are in the purview of Discom and PP does not have access to values of other PPs connected to the sub-station. Thus those parameters are not included as monitoring parameters.</p> <p>Further, the notations used for EG_{BL,y} to calculate quantity of net electricity supplied to the grid from the project activity in the state of Gujarat and Maharashtra are revised accordingly.</p> <p>Response#2:</p> <p>The metering and procedures for calculations are described in detail under B.7.3, further the clarification from GETCO for 3 year calibration is attached herewith which was received to the O&M supplier.</p> <p>Response#3:</p>	<p>DOE's assessment round 1:</p> <p>Measurement methods and procedures explained for quantity of net electricity supplied to the grid does not explain metering arrangement at the site adequately. Further, please support choice of calibration frequency of once in three years for Gujarat site.</p> <p>CAR 15 is open.</p> <p>Assessment #2:</p> <p>During the site visit, it was observed that the reading at each WTG is measured using site meters in Gujarat while LCS installed at WTG in Maharashtra. This is not clear in the procedure of measurement and apportioning explained in B.7.3.</p> <p>In B.7.1, PP is required to clearly</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>The type of energy meter used in the State of Maharashtra has been revised to mention Trivector meters, while for the state of Gujarat the meters have been revised to mention ABT meters.</p>	<p>specify the energy meters used to measure net electricity exported for Maharashtra site. The meter type of main and check meter used in Gujarat is not found to be in line with the site observations.</p> <p>CAR 15 is open.</p> <p>Assessment #3</p> <p>PP has revised the PDD and the revisions made are found appropriate. Hence CAR 15 is closed.</p>
<p>CL 1</p> <p>1. Clarify how the purpose of project activity described in the PDD (section A.1) is appropriate given that the power generated by 0.8 MW of WTG owned by Surbhi Textile is used for captive purpose.</p> <p>2. Technical specifications of WTG model WT2000DF and WW 53 are not found to be matching with the respective purchase orders. Also, as per the PO dated 30/08/2013, it was noted that the manufacturer of 0.8 MW WTG is Wind World India Ltd and model no. is WW-53. However, the PDD is not consistent with this.</p>	A.2.1, A.2.3	<p>1. The section A.1 of the PDD is revised to mention that the project involves both captive use as well as sale to grid.</p> <p>2. The name of Enercon India Limited has been changed to Wind World India Limited, thus accordingly the revisions have been carried out.</p> <p>Response#2:</p> <p>1. The section A.1 of the PDD has been revised accordingly.</p> <p>2. The name of Enercon has been replaced by Wind World India Limited at all the places in the revised PDD.</p>	<p>DOE's assessment round 1:</p> <p>1. Purpose of project activity is still not in line with the actual scenario.</p> <p>2. PDD is still not corrected according to the change mentioned in the response.</p> <p>CL 1 is open.</p> <p>Assessment #2:</p> <p>1. Revised purpose of the project activity was found to be acceptable.</p> <p>2. Checked that the change has been made throughout the PDD.</p> <p>CL 1 is closed.</p>
<p>CL 2</p> <p>From the database of projects available on the</p>	A.2.5	<p>The project proponent for the project under consideration is ReXchange Global</p>	<p>DOE's assessment round 1:</p> <p>Checked from UNFCCC web site</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
UNFCCC website, the validation team noted that there are projects requesting registration submitted by EKI Energy Services Limited. Thus, PP is requested to clarify how the project activity is not debundled component of a larger project activity in accordance with the Guidelines on assessment of debundling for SSC project activities version 03.		Solutions (P73). EKI Energy Services Limited is the carbon consultant for the project activity. Thus debundling criteria has been carried out considering the projects of ReXchange Global Solutions (P73) and there is no other project activity by them. Thus the project is not a de-bundled component of a larger project.	that the projects submitted by Enking International do not include WTGs from the investors involved in the project activity under consideration. Further, during the site visit, it was confirmed that there were no WTGs within 1km boundary of the WTGs involved in the project for Surbhi Textile and SJP Constructions. Hence, it was concluded that project is not a part of de-bundled project. CL 2 is closed.
CL 3 Please provide documentary evidence for investment decision taken by Surbhi Textile and SJP Constructions and justify the suitability of input values used in benchmark calculation.	B.4.4.3	The board note for the project activity is provided herewith. Further the justification of each assumption is already provided in the financial assessment sheet.	DOE's assessment round 1: Checked certified true copy of board resolution passed by Surbhi Textile at the meeting of board of directors held on 26/08/2013 for 1 X 0.8 MW and 28/10/2013 for 2 X 2 MW. Also verified board resolution copy of board of directors of SJP Constructions held on 28/10/2013 for 2 X 2 MW. CL 3 is closed.
CL 4 Please clarify following: A. IRR analysis for Surbhi Textile Mills (2 X 2 MW) 1. Offer letter dated 25/10/2013 from Inox Wind indicates project size of 1 X 2MW. However, the actual capacity of the WTGs developed by Surbhi Textile is 2 X 2 MW. Please explain how this offer was used to carry out financial analysis for 2 WTGs based on which investment decision was taken. Further, the data source for number of	B.4.4.4, B.4.4.6, B.4.4.9, B.4.7.1, B.5.4.1	B.4.4.5, B.4.4.7, B.4.4.10, B.5.1.2,	DOE's assessment round 1: 1. Confirmed the actual capital cost of 2 X 2 MW WTGs owned by Surbhi Textile from the POs placed dated 19/11/2013 and CA certificate stating the actual cost of the project dated 26/06/2014. Hence, accepted.

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>machines mentioned in the spreadsheet refers to the offer which is not correct.</p> <p>2. Please clarify the basis for considering expected date of commissioning as 31/03/2014. Provide actual commissioning dates.</p> <p>3. Please provide manufactures specifications which states that the life of WTG is 20 years.</p> <p>4. Provide third party PLF report for the PLF of 21.42%. Also, furnish actual PLF values.</p>		<p>assumed cost is exactly the same as the final purchase order cost. In fact, as a conservative approach, we have not considered the taxes paid in the financial sheet. As a result, the project cost considered as per offer letter is 2.45% more than the final purchase order cost.</p> <p>The data source for number of machines mentioned in the spreadsheet has been corrected</p> <p>As per para 6 of the Guidelines on the Assessment of Investment Analysis, version 05 "Input values used in all investment analysis should be valid and applicable at the time of the investment decision taken by the project participant". Accordingly, an expected date of commissioning as per the offer letter has been taken for financial analysis. Actual dates of commissioning have now been provided in the revised PDD.</p> <p>Manufactures specifications which states that the life of WTG is 20 years is submitted herewith.</p> <p>PLF estimation reports are attached herewith, further as the Wind machines are commissioned in 2014 itself, thus actual PLF values are not available for 1 year period.</p> <p>The same is being submitted to the DOE.</p> <p>The tariff has been considered as per the MERC tariff order applicable on the date of decision making.</p> <p>As per applicable MERC tariff order, electricity tariff is fixed at INR 4.74/kWh and is valid only for 13 years.</p>	<p>2. Commissioning date found to be in order with the offer letters. Hence, closed.</p> <p>3. Checked letter from Inox Wind dated 24/03/2014 stating lifetime of WTG model WT2000DF. Hence, closed.</p> <p>4. Verified third party PLF study report prepared by Progressive Certifications dated 28/10/2013 (2 MW of Inox Wind) and found to be OK. PP is requested to provide PLF data available since commissioning till date.</p> <p>5. Publishing date of TERI report is not evident from the report.</p> <p>6. The premise for selection of tariff rate relevant to wind zone 2 for</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>5. Kindly provide TERI report referred for deration after 10th year and justify how deration factor of 5% is applicable to the project activity.</p> <p>6. Explain suitability of use of MERC order dated 22/03/2013 for tariff determination in view of the decision making date. Further clarify basis for using tariff determined for wind zone 2 and applying it for the whole life of the asset. Provide power purchase agreements for checking actual tariff rate.</p>		<p>However, as per para 1.180 page 52, of Case No. 92 of 2012 of MERC⁶, "Considering the fact that for Group-IV Projects, i.e., the Projects for which tariff has been determined under MERC (RE Tariff) Regulations, 2010, the tariff is determined considering the levellisation over the useful life of the Wind Projects, the Commission rules that if such Projects opt to extend the EPA period from 13 years to 25 years, the tariff determined for Wind Energy Projects for 13 years, considered from the date of commercial operation of the Wind Project shall also be applicable from 14th year to 25 years". This clearly implies that the tariff will remain fixed at INR 4.74/kWh for the entire life of the project activity.</p> <p>The PPA for the project activity will be provided soon.</p> <p>The O&M agreements have not been signed yet, as the WTGs are still under free O&M period.</p> <p>TAC order 2001 is the latest available order and there has been no update from TAC on it till date. The actual insurance agreements are being provided to the DOE for its perusal.</p> <p>Please refer justification provided in Point 1 of CL4.</p>	<p>Surbhi Textile and SJP Constructions is not clear. Please clarify the same.</p> <p>7. Please submit declaration from the PP for same.</p> <p>8. Please provide evidence to verify that the TAC order was not revised after 2001. Further, actual insurance policies have not been submitted.</p> <p>9. Confirmed the actual capital cost of 2 X 2 MW WTGs owned by</p>

⁶ <http://www.mercindia.org.in/pdf/Order%2058%2042/Order%20Case%20No%20%2092%20of%202012.pdf>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>7. Submit O&M agreements for verifying actual O&M charges.</p> <p>8. Please explain whether the TAC order 2001 used for insurance calculation was the latest available order at the time of decision making. Provide actual insurance agreement.</p> <p>9. Capital cost and O&M charges for the project activity are sourced from offer dated 25/10/2013. However, this offer is only for 1 X 2 MW of WTG which does not match the actual installed capacity of 2 X 2 MW. Hence, justify how this offer was used to determine both these parameters for 2 numbers of WTGs. Also provide the invoices and a CA certificate certifying the cost of the asset and the pattern of funding for the same.</p> <p>10. Calculation of net depreciable value is incorrect.</p> <p>11. Please explain suitability of tax rates applied for IRR calculation in view of the decision making date.</p>		<p>The same has been corrected in the financial sheet.</p> <p>Tax rates in India are set at the beginning of the financial year and are not usually changed in between the financial year. For the said project activity, the decision to invest was taken on 2nd quarter of 2013 while the tax rates for that financial year were set during the annual budget on 28/02/2013⁷. This clearly implies that applicable tax rates at the time of decision making have been used.</p> <p>The same is being provided. All input values used in IRR calculation are available and applicable at the time of decision making. This can be cross-checked from the submitted documents and IRR sheet.</p> <p>Please refer the revised PDD. Section B.5 now provides the input values and their sources used for IRR calculations.</p> <p>Response#2: The actual generation data for Gujarat WTG is being provided. However, for all the Maharashtra WTGs, the PPA has been signed in October 2014 itself. Moreover, the WTGs are not yet operation due to non-issuance of wind</p>	<p>Surbhi Textile from the POs placed dated 19/11/2013 and CA certificate stating the actual cost of the project dated 26/06/2014. Hence, accepted.</p> <p>10. Ensured that the depreciation calculation has been rectified.</p> <p>11. Verified that the tax rates have been considered appropriately.</p> <p>12. Please refer comments for point no. 2, 3, 5 6 8 for suitability of input values.</p> <p>13. Noted that the PDD provides input values used for IRR calculations with their sources. However, please refer point no. 12 for appropriateness of the values.</p> <p>CL 4 is open.</p>

⁷ <http://indiabudget.nic.in/budget2013-2014/ub2013-14/bs/bs.pdf>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>12. Provide evidence for investment decision taken by Surbhi Textile and justify the suitability of input values used in IRR calculation.</p> <p>13. The PDD is not transparent on the input values and their sources used for IRR calculations.</p>		<p>zone certificates.</p> <p>The issuance date of the report is January 2005⁸. To view the PDF, please create a login ID.</p> <p>The wind zone was earlier erroneously considered as zone 2. However, it is zone 1. The wind zone classification certificate will be provided soon.</p> <p>CA certificate for all WTGs is being provided which specifically mentions the free O&M period.</p> <p>The latest available TAC order has been submitted to the DOE and we are not aware of any revision in it since then. Moreover, as per MERC tariff order, the O&M cost is 0.5% of project cost, much higher than what has been considered as per the TAC order (0.15% of project cost). Actual insurance policies are now being submitted.</p> <p>Please refer comments for point no. 2, 3, 5 6 8.</p> <p>Please refer point no. 12.</p> <p>Response#3:</p> <p>4. The PPA has been signed in October and the same is already submitted to the DOE. This supports as evidence that prior to this there was no generation available.</p>	<p>Assessment #2:</p> <p>4. Evidence for actual generation data of 2 X 2 MW has not been received. Please provide evidence for non-operation of these WTGs.</p> <p>5. Verified and accepted.</p> <p>6. The point is open as PP has not justified the basis of wind zone selection.</p> <p>7. Checked the CA certificate 26/06/2014 corresponding to Surbhi textile WTGs. The certificates state details regarding O&M period however don't provide source of the information.</p> <p>8. Checked TAC order dated 2001 and actual insurance policies. Noted that insurance has very marginal impact on IRR. Hence, accepted.</p> <p>12. Point no. 4, 6 and 7 are still open.</p> <p>13. Point no. 12 is still open.</p> <p>CL 4 is open.</p> <p>Assessment #3:</p> <p>From PP's response on CL 4, the validation team understands that</p>

⁸ <http://terienvic.nic.in/indexx.aspx?langid=1&slid=115&mid=2&sublinkid=48>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
			<p>the O&M agreements have not been signed yet, as the WTGs are still under free O&M period. The same has been cross checked with the offer letter and found ok.</p> <p>The validation team has verified the PPA and found the justification is reasonable. Hence CL 4 is closed.</p>
<p>CL 5</p> <p>Please clarify following:</p> <p>B. IRR analysis for Surbhi Textile Mills (1 X 0.8 MW)</p> <p>1. Provide third party PLF report for the PLF of 23.45%. Also, furnish actual PLF values.</p> <p>2. Kindly provide TERI report referred for deration after 10th year and justify how deration factor of 5% is applicable to the project activity.</p> <p>3. Explain suitability of use of GERC order dated 16/04/2013 in view of the decision making date. Also, please furnish actual electricity bills of the facility where the electricity is used for captive consumption for period one year before investment decision.</p> <p>4. Please provide manufactures specifications which states that the life of WTG is 20 years.</p>	<p>B.4.4.4, B.4.4.6, B.4.4.9, B.4.7.1</p> <p>B.4.4.5, B.4.4.7, B.4.4.10,</p>	<p>The same is being submitted to the DOE. Actual PLF values are not available for a year as commissioning occurred in 2013 - 14.</p> <p>The same is being submitted to the DOE. The latest applicable GERC order at the time of decision making has been considered in the financial sheet.</p> <p>The same is being submitted to the DOE.</p> <p>As per para 6 of the Guidelines on the Assessment of Investment Analysis, version 05 "Input values used in all investment analysis should be valid and applicable at the time of the investment</p>	<p>DOE's assessment round 1:</p> <p>1. Checked PLF study report prepared by Progressive Certifications for 1 X 0.8 MW dated 25/08/2013 and found to be OK. PP is requested to provide PLF data available since commissioning till date.</p> <p>2. Publishing date of TERI report is not evident from the report.</p> <p>3. Checked copy of the board resolution passed by Surbhi Textile dated 26/08/2013. In view of this decision date, GERC order dated 08/08/2012 was found to be latest and relevant order. Hence, closed.</p> <p>4. Evidence for lifetime of WTG model WW 53 having rated capacity of 0.8 MW is not submitted.</p> <p>5. Commissioning date for 1 X 0.8 MW of Surbhi Textile is not found to be in accordance with the offer letter.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>5. Clarify the basis for considering expected date of commissioning as 31/03/2014. Provide actual commissioning dates.</p> <p>6. Submit O&M agreements for verifying actual O&M charges.</p> <p>7. Kindly provide the invoices and a CA certificate certifying the cost of the asset and the pattern of funding for the same.</p> <p>8. Please explain suitability of tax rates applied for IRR calculation in view of the decision making date.</p> <p>9. Please explain whether the TAC order 2001 used for insurance calculation was the latest available order at the time of decision making. Provide actual insurance agreement.</p> <p>10. Submit O&M agreements for verifying actual</p>		<p>decision taken by the project participant". Accordingly, an expected date of commissioning as per the offer letter has been taken for financial analysis. Actual dates of commissioning have now been provided in the revised PDD.</p> <p>The O&M agreements have not been signed yet, as the WTGs are still under free O&M period.</p> <p>CA certificate that certifies the cost of the asset and the pattern of funding for the same shall be provided shortly.</p> <p>Tax rates in India are set at the beginning of the financial year and are not usually changed in between the financial year. For the said project activity, the decision to invest was taken on 3rd Quarter while the tax rates for that financial year were set during the annual budget on 28/02/2013'. This clearly implies that applicable tax rates at the time of decision making have been used.</p> <p>TAC order 2001 is the latest available order and there has been no update from TAC on it till date. The actual insurance agreements are being provided to the DOE for its perusal.</p> <p>Please refer justification provided in Point 6 of CL5.</p> <p>The total loan for Gujarat project is demarcated as from Dena bank as Fresh Term loan A for 337.50 Lacs, Term Loan B and Loan from BOB are for the 2 wind</p>	<p>6. Please submit declaration from the PP for same.</p> <p>7. Checked the CA certificate dated 26/06/2014 stating the actual project cost for 1 X 0.8 MW and D/E for the same and found to be OK.</p> <p>8. Noted that the tax rates have been considered appropriately.</p> <p>9. Please provide evidence to verify that the TAC order was not revised after 2001. Further, actual insurance policies have not been submitted.</p> <p>10. Please submit declaration from the PP for same.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>O&M cost.</p> <p>11. Checked loan sanction letter by Dena bank which mentions that the loan is sanctioned for 2 WTGs whereas project involves only 1 WTG. Please clarify this. Further, explain how much is the actual loan amount, interest rate, tenure, moratorium for 1 number of WTG.</p> <p>12. Calculation of net depreciable value is incorrect.</p> <p>13. Provide evidence for investment decision taken by Surbhi Textile and justify the suitability of input values used in IRR calculation.</p> <p>14. The PDD is not transparent on the input values and their sources used for IRR calculations.</p> <p>15. Please justify tariff rate of INR 4.89/kWh for used for the HTP I consumer.</p>		<p>machines in Maharashtra.</p> <p>The same has been corrected in the financial sheet.</p> <p>The same is being provided. All input values used in IRR calculation are available and applicable at the time of decision making. This can be cross-checked from the submitted documents and IRR sheet.</p> <p>Please refer the revised PDD. Section B.5 now provides the input values and their sources used for IRR calculations.</p> <p>Response#2: The actual generation data for Gujarat WTG is being provided. However, for all the Maharashtra WTGs, the PPA has been signed in October 2014 itself. Moreover, the WTGs are not yet operation due to non-issuance of wind zone certificates. The issuance date of the report is January 2005. To view the PDF, please create a login ID. Lifetime supporting document for Enercon WTG is being submitted herewith in form of publicly available link⁹ from the supplier.</p>	<p>11. Checked CA certificate dated 26/06/2014 stating actual debt and equity ratio for the project activity. Interest rate, tenure has been confirmed from the loan sanction letter from Dena bank.</p> <p>12. The depreciation calculation has been rectified in the revised excel sheets.</p> <p>13. Checked copy of board resolution passed by Surbhi textile for 1 X 0.8 MW dated 26/08/2013. However, please refer above points 2, 4, 5, 9 for suitability of input values.</p> <p>14. Noted that the PDD provides input values used for IRR calculations with their sources. However, please refer point no. 13 for appropriateness of the values.</p> <p>15. PP has not provided response. CL 5 is open. Assessment #2: 1. Evidence for actual generation data of 1 X 0.8 MW has not been received. Please provide evidence for non-operation the WTG.</p>

⁹ <http://www.windworldindia.com/key-differentiators.jsp>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>The commissioning date as per the offer letter is an indicative date and generally gives the maximum timeline by when the commissioning is expected. Since the offer letter and purchase order were placed in August 2013, it was envisioned by the management that the WTG will get commissioned by March 2014 as normally it does not take even 7 months for commissioning one WTG.</p> <p>CA certificate for all WTGs is being provided which specifically mentions the free O&M period.</p> <p>The latest available TAC order has been submitted to the DOE and we are not aware of any revision in it since then. Moreover, as per MERC tariff order, the O&M cost is 0.5% of project cost, much higher than what has been considered as per the TAC order (0.15% of project cost). Actual insurance policies are now being submitted.</p> <p>CA certificate for all WTGs is being provided which specifically mentions the free O&M period.</p> <p>Please refer comments for point no. 2, 4, 5, 9.</p> <p>Please refer comments for point no. 13.</p> <p>The tariff rate has been calculated as the energy charge + (energy charge * electricity duty) which gives the saving in energy per unit of electricity that is set off from the WTG. As per the PPA, the electricity being generated is being wheeled to 2 units. One unit is connected to an HT feeder while the other is connected to LT feeder. For the facility</p>	<p>2. Verified and accepted.</p> <p>4. Checked the web link and noted that the minimum average life time committed by the supplier is of 20 years. Hence, accepted.</p> <p>5. Accepted.</p> <p>6. Checked the CA certificate 26/06/2014 corresponding to Surbhi textile WTGs found OK.</p> <p>9. Checked TAC order dated 2001 and actual insurance policies. Noted that insurance has very marginal impact on IRR. Hence, accepted.</p> <p>10. Refer point no. 6.</p> <p>13. Point no. 2, 4, 5, 9 closed.</p> <p>14. Point no. 13 is closed.</p> <p>15. From the tariff order, it is understood that the tariff for HT /LT is calculated based on billing demand, energy charges, electricity duty and time charges varying as per the electricity consumption units and time. However, the formula used by PP is not clear on how these factors have been considered. Kindly provide evidence for the use of 75:25 available at the decision time. It is not clear why PP has not used actual tariff rate based on the energy bills for consumer no. 11133 and 12306/05934/9 available</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>connected to an HT feeder, the energy charge (at the time of decision making) is INR 4.25 per kWh while the electricity duty is 15%. For the facility connected to a LT connection, the energy charge is INR 4.60 per kWh while the electricity duty is 10%. The wheeling ratio of the electricity generated by the 0.8 MW WTG is 75:25 for HT:LT connections. Accordingly the tariff has been revised in the IRR sheets to consider both the connections.</p> <p>Response#3:</p> <p>1. The generation data of 0.8 MW machine of Surbhi textiles is submitted herewith. Further the monthly JMR sheets are available at https://www.sldcguj.com/EnergyAccount/Energy_Block_New.asp</p> <p>Pls. select the location as "Vadali".</p> <p>2. The terms of wheeling agreement is submitted to DOE</p>	<p>at the decision time. Kindly provide the energy bills for the year 2012 and 2013 to cross verify the actual tariff rate.</p> <p>CL 5 is open.</p> <p>Assessment #3</p> <p>PP has submitted the generation data of 0.8 MW machine of Surbhi textiles and also the wheeling agreement and power purchase agreement. The values and justifications found acceptable. Hence CL 5 is closed.</p>
<p>CL 6</p> <p>Please clarify following:</p> <p>C. IRR analysis for SJP Constructions (2 X 2 MW):</p> <p>1. Provide third party PLF report for the PLF of 21.42%. Also, furnish actual PLF values.</p> <p>2. Kindly provide TERI report referred for deration</p>	<p>B.4.4.4, B.4.4.5, B.4.4.6, B.4.4.7, B.4.4.9, B.4.4.10, B.4.7.1</p>	<p>The same is being submitted to the DOE.</p> <p>The same is being submitted to the DOE.</p>	<p>DOE's assessment round 1:</p> <p>1. Verified third party PLF study report prepared by Progressive Certifications dated 28/10/2013 (2 MW of Inox Wind) and found to be OK. PP is requested to provide PLF data available since commissioning till date.</p> <p>2. Publishing date of TERI report is</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>after 10th year and justify how deration factor of 5% is applicable to the project activity.</p> <p>2. Please clarify the basis for considering expected date of commissioning as 31/03/2014. Provide actual commissioning dates.</p> <p>3. Please provide manufactures specifications which states that the life of WTG is 20 years.</p> <p>4. Explain suitability of use of MERC order dated 22/03/2013 for tariff determination in view of the decision making date. Further clarify basis for using tariff determined for wind zone 2 and applying it for the whole life of the asset. Provide power purchase agreements for checking actual tariff rate.</p>		<p>As per para 6 of the Guidelines on the Assessment of Investment Analysis, version 05 "Input values used in all investment analysis should be valid and applicable at the time of the investment decision taken by the project participant". Accordingly, an expected date of commissioning as per the offer letter has been taken for financial analysis. Actual dates of commissioning have now been provided in the revised PDD.</p> <p>The same is being submitted to the DOE.</p> <p>The tariff has been considered as per the MERC tariff order applicable on the date of decision making.</p> <p>As per applicable MERC tariff order, electricity tariff is fixed at INR 4.74/kWh and is valid only for 13 years.</p> <p>However, as per para 1.180 page 52, of Case No. 92 of 2012 of MERC¹⁰, "Considering the fact that for Group-IV Projects, i.e., the Projects for which tariff has been determined under MERC (RE Tariff) Regulations, 2010, the tariff is determined considering the levellisation over the useful life of the Wind Projects, the Commission rules that if such Projects opt to extend the EPA period from 13 years to 25 years, the tariff determined for Wind Energy Projects for 13 years, considered from the date of commercial operation of the Wind Project shall also be applicable from 14th year to 25 years".</p>	<p>not evident from the report.</p> <p>2. Commissioning date found to be in order with the offer letters. Hence, closed.</p> <p>3. Checked letter from Inox Wind dated 24/03/2014 stating lifetime of WTG model WT2000DF. Hence, closed.</p> <p>4. The premise for selection of tariff rate relevant to wind zone 2 for SJP Constructions is not clear. Please clarify the same.</p>

¹⁰ <http://www.mercindia.org.in/pdf/Order%2058%2042/Order%20Case%20No%20%2092%20of%202012.pdf>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>5. Submit O&M agreements for verifying actual O&M charges.</p> <p>6. Please explain whether the TAC order 2001 used for insurance calculation was the latest available order at the time of decision making. Provide actual insurance agreement.</p> <p>7. Capital cost and O&M charges for the project activity are sourced from offer dated 25/10/2013. However, this offer is only for 1 X 2 MW of WTG which does not match the actual installed capacity of 2 X 2 MW. Hence, justify how this offer was used to determine both these parameters for 2 numbers of WTGs. Also provide the invoices and a CA certificate certifying the cost of the asset and the pattern of funding for the same.</p> <p>8. Calculation of net depreciable value is incorrect.</p> <p>9. Please explain suitability of tax rates applied for IRR calculation in view of the decision making date.</p>		<p>This clearly implies that the tariff will remain fixed at INR 4.74/kWh for the entire life of the project activity.</p> <p>The PPA for the project activity will be provided soon.</p> <p>The O&M agreements have not been signed yet, as the WTGs are still under free O&M period.</p> <p>TAC order 2001 is the latest available order and there has been no update from TAC on it till date. The actual insurance agreements are being provided to the DOE for its perusal.</p> <p>The offer letter submitted to the project investor specifically says that the offer is for 2 X 2 MW capacities. CA certificate that certifies the cost of the asset and the pattern of funding for the same shall be provided shortly.</p> <p>The same has been corrected in the financial sheet.</p> <p>Tax rates in India are set at the beginning of the financial year and are not usually changed in between the financial year. For the said project activity, the decision to invest was taken on 3rd Quarter while the tax rates for that financial year were set during the annual budget on 28/02/2013⁷. This clearly implies that applicable tax rates at the time of decision making have been used.</p>	<p>5. Please submit declaration from the PP for same.</p> <p>6. Please provide evidence to verify that the TAC order was not revised after 2001. Further, actual insurance policies have not been submitted.</p> <p>7. Checked the offer letter given to SJP Constructions 20/10/2013 and noted that it was for 2 X 2 MW. Confirmed the actual capital cost the POs placed dated 19/11/2013 and CA certificate stating the actual cost and D/E of the project dated 12/07/2014. Hence, accepted.</p> <p>8. Ensured that the depreciation calculation has been rectified.</p> <p>9. Verified that the tax rates have been considered appropriately.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>10. Provide evidence for investment decision taken by SJP Constructions and justify the suitability of input values used in IRR calculation.</p> <p>11. The PDD is not transparent on the input values and their sources used for IRR calculations.</p>		<p>The same is being provided. All input values used in IRR calculation are available and applicable at the time of decision making. This can be cross-checked from the submitted documents and IRR sheet.</p> <p>Please refer the revised PDD. Section B.5 now provides the input values and their sources used for IRR calculations.</p> <p>Response#2: The actual generation data for Gujarat WTG is being provided. However, for all the Maharashtra WTGs, the PPA has been signed in October 2014 itself. Moreover, the WTGs are not yet operation due to non-issuance of wind zone certificates.</p> <p>The issuance date of the report is January 2005. To view the PDF, please create a login ID.</p> <p>The actual generation data for Gujarat WTG is being provided. However, for all the Maharashtra WTGs, the PPA has been signed in October 2014 itself. Moreover, the WTGs are not yet operation due to non-issuance of wind zone certificates.</p> <p>CA certificate for all WTGs is being provided which specifically mentions the free O&M period.</p> <p>The latest available TAC order has been submitted to the DOE and we are not</p>	<p>10. Please refer above comments in this CL for suitability of input values.</p> <p>11. Noted that the PDD provides input values used for IRR calculations with their sources. However, please refer point no. 10.</p> <p>CL 6 is open.</p> <p>Assessment #2:</p> <p>1. The PP has submitted the document and found accepted.</p> <p>2. Verified and accepted.</p> <p>4. Justification found accepted. Hence this part of the CL is closed.</p> <p>5. Checked the CA certificate</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
		<p>aware of any revision in it since then. Moreover, as per MERC tariff order, the O&M cost is 0.5% of project cost, much higher than what has been considered as per the TAC order (0.15% of project cost). Actual insurance policies are now being submitted.</p> <p>Please refer above comments in this CL.</p> <p>Please refer above comments in this CL.</p>	<p>01/07/2014 corresponding to SJP Constructions WTGs. Found acceptable. Hence closed.</p> <p>6. Verified and accepted.</p> <p>9. Checked TAC order dated 2001 and actual insurance policies. Noted that insurance has very marginal impact on IRR. Hence, accepted.</p> <p>Since all the above comments are addressed and accepted point no. 10 and 11 are closed.</p> <p>CL 6 is closed.</p>
<p>CL 7</p> <p>Please provide approval for installation of WTGs.</p>	D.1.1, D.1.3, D.1.4	<p>The consent for approvals are attached herewith.</p> <p>Response#2:</p> <p>The consent for approvals are attached herewith.</p>	<p>DOE's assessment round 1:</p> <p>Checked MEDA clearance for commissioning of 2 X 2MW of Surbhi Textile. Please submit clearances for WTGs of SJP Construction received from MEDA/GEDA.</p> <p>CL 7 is open.</p> <p>Assessment #2:</p> <p>Checked the clearances given by the MEDA and found to be OK.</p> <p>CL 7 is closed.</p>
<p>CL 8</p> <p>PP is requested to justify sustainable development indicator in line with the guidance given by NCDMA; the host country DNA. Further, please support the following claims made while explaining the sustainable development:</p>	D.1.6	<p>1. The frequency for visiting the villages and nearby areas cannot be quantified as the same is not as per any fixed schedule. The visit depends on the type of O&M issue. Further a certain amount of non-technical jobs are created due to the</p>	<p>DOE's assessment round 1:</p> <p>It was noted by the validation team that the project activity has received host country approval dated 03/09/2014 confirming sustainable development created by the project.</p>

Corrective action and/ or clarification requests	Reference to Table 2	Response by project participants	Validation Conclusion
<p>1. Social well-being: Frequency of visiting villages and nearby areas by skilled, technical and industrialist increase due to installation / site visit / operation and maintenance work related to WTGs. This directly and indirectly positively effects the economy of villages and nearby area.</p> <p>2. Economic well being: availability of electricity to the local consumers (villagers & sub-urban habitants) which will provide new opportunities for industries and economic activities to be setup in the area thereby resulting in greater local employment, ultimately leading to overall development.</p>		project both during the construction as well as operational phase.	CL 8 is closed.
<p>CL 9</p> <p>Submit evidence for invitation letters sent to stakeholders, minutes of meeting and attendance sheet for local stakeholder meeting.</p>	E.1.1, E.1.2, E.1.3, E.1.4	The documents pertaining to Local Stakeholder consultation process are attached herewith.	<p>DOE's assessment round 1:</p> <p>Checked minutes of the meeting held on 18/02/2014 and 21/02/2014, respective invitation letters send to stakeholders and attendance sheet and found to be OK.</p> <p>CL 9 is closed.</p>



RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

Si attesta che il sig./sig.ra:

Amalorpavanathan Cyril Augustus Arokiasamy

We declare that Mr/Mrs/Ms:

è qualificato come¹:
is qualified as:

CDM-TEC, CDM-VAL, CDM-VER, CDM-TL,

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

1.1, 1.2, 3.1, 5.1, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.1	Thermal energy generation	1
1.2	Renewables	1
3.1	Energy Demand	3
5.1	Chemical industry	5
13.1	Solid Waste and wastewater	13

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

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	30/06/2010	-
12	22/12/2014	Updated qualification according to AS ver.6.0

Il Resp. QPT
Head of QPT

¹ Legend:

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

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

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

RINA Services S.p.A. is accredited by the UNFCCC, as Designated Operational Entity (DOE), to carry out Validation and Verification of CDM Projects, by the VCSA, to carry out Validation and Verification of VCS Projects, by the GS Foundation, to carry out Validation and Verification of GS Projects and by the Ecologica Institute, to carry out Validation and Verification of SCS Reports



RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

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

Shruti Kudtarkar

è qualificato come¹:
is qualified as:

CDM -TEC, -VAL, -VER,

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

1.2, 13.1, 13.2, 14.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Renewables	1
13.1	Solid Waste and wastewater	13
13.2	Manure	13
14.1	Afforestation and reforestation	14

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

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	03/12/2012	-
4	22-12-2014	Updating qualification according to AS ver.6.0

Il Resp. QPT
Head of QPT

¹ Legend:

VAL: Validator
VER: Verifier
TEC: Technical Expert
TL: Team Leader
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RINA

CERTIFICATO DI QUALIFICA QUALIFICATION CERTIFICATE

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

Karthika Varma

è qualificato come¹:
is qualified as:

CDM –FIN EXP

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

-

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
-	-	-

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

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	20-10-2010	-
5	22-12-2014	Update qualification according to AS ver 6.0

Il Resp. QPT
Head of QPT

¹ Legend:

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VER: Verifier
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TL: Team Leader
FIN-EXP: Financial Expert
DET: Determiner

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RINA

**CERTIFICATO DI QUALIFICA
QUALIFICATION CERTIFICATE**

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

Rita Valoroso

è qualificato come1:
is qualified as:

**CDM -TEC, -VAL, -VER, -TL
TECHNICAL REVIEWER**

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

1.2, 13.1

AREE TECNICHE TECHNICAL AREAS	DESCRIZIONE DELL'AREA TECNICA TECHNICAL AREA DESCRIPTION	SCOPO SETTORIALE SECTORAL SCOPE
1.2	Renewables	1
13.1	Solid Waste and waste water	13

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

REVISIONE REVISION	DATA DATE	MOTIVAZIONI PER LA REVISIONE REASON FOR THE REVISION
0	18-01-10	-
9	22-12-2014	Update qualification according to AS ver.6.0

Il Resp. QPT
Head of QPT

¹ Legend:

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