



ASSESSMENT

REGARDING POST REGISTRATION CHANGES
VESTAS WIND TECHNOLOGY INDIA PRIVATE
LIMITED

25.70 MW BUNDLED WIND POWER PROJECT
IN UDUMALPET, TAMILNADU

Report No: 8110020087- 13/159

Date: 2014-04-08

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Assessment Report on post registration changes	Report No.	Rev. No.	Date of 1st issue:	Date of this rev.
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Project:	Title:	Registr. date:	UNFCCC-No.:	
	25.70 MW Bundled wind Power Project in Udumalpet, TamilNadu	2007-07-07	1015	
Project Participant(s):	Name:	Party:		
	Vestas Wind Technology India Private Limited	India		
Applied methodology/ies:	Title:	No.:	Scope:	
	Consolidated baseline methodology for grid connected electricity generation from renewable sources	ACM 0002 ver. 6	01/ 1.2	
Post Registration Changes:	Type of requested changes	Number of changes	Prior Approval required	
	☐ Temporary deviations from the MP	-	☐	
	☐ Temporary deviations from the MM	-	☐	
	☒ Corrections that do not affect the project	1	☐	
	☐ Change to the start date of the crediting p.	-	☐	
	☐ Permanent changes from the MP	-	☐	
	☐ Permanent changes from the MM	-	☐	
	☒ Design changes to the project activity/PoA	1	☒	
☐ Changes specific to A/R	-	☐		
Revised PDD:	Title:	Attached in TC:	Attached clean:	
	25.70 MW Bundled Wind Power Project in Udumalpet, Tamilnadu	☒	☒	
Assessment team / Technical Review and Final Approval	Assessment Team:	Technical review:	Final approval:	
	B.J.M.Amarnath (TL) S.Stalin (TM)	Alexandra Nebel Saalmann Martin	Alexandra Nebel	
Assessment Opinion:	☒	The post registration changes require prior Approval by the Board		
	☐	The post registration changes do not require prior Approval by the Board		
Document information:	Filename:	No. of pages:		
	Udmalpet Revalidation Report	30		

Abbreviations

CA	Corrective Action / Clarification Action
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification Request
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CP	Certification Program
DNA	Designated National Authority
EB	CDM Executive Board
GHG	Greenhouse gas(es)
PA	Project activity
PDD	Project Design Document
PoA	Programme of Activities
PRC	Post Registration Changes
QC/QA	Quality control/Quality assurance
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

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1 OBJECTIVE / SCOPE

Fehler! Verwenden Sie die Registerkarte 'Start', um x PPContractualClient dem Text zuzuweisen, der hier angezeigt werden soll. has commissioned the TÜV NORD JI/CDM Certification Program (CP) to assess post registration changes of the project

“Fehler! Verwenden Sie die Registerkarte 'Start', um x ProjectTitle dem Text zuzuweisen, der hier angezeigt werden soll.”

This report serves for all kind of post registration changes as defined in the PS.

This report serves as an annex to the Post-registration changes request form (F-CDM-PRC).

2 GENERAL CHARACTERISTICS

2.1 Project Characteristics

Essential data of the project is presented in the following Table 2-1.

Table 2-1: Project Characteristics

Item	Data
Project title	Fehler! Verwenden Sie die Registerkarte 'Start', um x ProjectTitle dem Text zuzuweisen, der hier angezeigt werden soll.
Project type	☐ Standard ☐ PoA
Project size	☒ Large Scale ☐ Small Scale
Project Scope (according to UNFCCC sectoral scope numbers for CDM)	☒ 1 Energy Industries (renewable- /non-renewable sources)
	☐ 2 Energy distribution
	☐ 3 Energy demand
	☐ 4 Manufacturing industries
	☐ 5 Chemical industry
	☐ 6 Construction
	☐ 7 Transport
	☐ 8 Mining/Mineral production
	☐ 9 Metal production
	☐ 10 Fugitive emissions from fuels (solid, oil and gas)
	☐ 11 Fugitive emissions from production and consumption of halocarbons and hexafluoride
	☐ 12 Solvents use
	☐ 13 Waste handling and disposal
	☐ 14 Afforestation and Reforestation
	☐ 15 Agriculture
	☐ 16 Carbon capture and storage
Applied Methodology	<i>ACM 0002 Version 6 Consolidated baseline methodology for grid connected electricity generation from renewable sources</i>
Technical Area(s)	1.2: Renewables
CDM registration No.	1015
Crediting period	☐ Renewable Crediting Period (7 y) ☒ Fixed Crediting Period (10 y)

For a detailed project description please refer to the registered PDD.

2.2 Overview of Post Registration Changes

Within this report post registration changes as listed in Table 2-2 are assessed.

Table 2-2: Overview Post Registration Changes

#	Applicable as of / from - to	Type of post registration change ¹⁾	Description
1	-	TDfrMP	-
2	-	TDfMM	-

#	Applicable as of / from - to	Type of post registration change ¹⁾	Description
3	2006-09-22	CrPDD	The registered PDD is corrected to reflect with the change in ownership (4), name changes (6) correction of full names (9) of WEGs and the name change of project participant
4	-	ChSD	-
5	-	PCfrMP	-
6	-	PCfMM	-
7	2012-10-22	CoPD	The WEG owned by M/s. Shri Gowrishankar Agencies Private Ltd with HTSC number 801 and 581 owned by M/s. Asian Wind Energy Private Limited were supplying power to Grid based on power purchase agreement with the state utility as per registered PDD. However it has been identified that from 01/11/2012 M/s. Shri Gowrishankar Agencies Private Ltd and M/s. Asian Wind Energy Private Limited from 22/10/2012 has entered into energy wheeling agreement with the state utility by which they can consume the equivalent energy at their industrial division. Due to this change the respective PPs gets higher tariff which is likely to affect the IRR hence the same is considered as changes to project design of the registered PDD.
8	-	CstAR	-

- ¹⁾
- TDfrMP : Temporary deviation from registered monitoring plan
 - TDfMM : Temporary deviation from the monitoring methodology
 - CrPDD : Corrections to the registered PDD
 - ChSD : Change to the start date of the crediting period
 - PCfrMP : Permanent changes from registered Monitoring Plan
 - PCfMM : Permanent changes from Monitoring Methodology
 - CoPD : Changes to the project design of a registered project activity / PoA
 - CstAR : Changes specific to afforestation or reforestation

2.3 Assessment team members and technical reviewers

On the basis of a competence analysis and individual availabilities a assessment team, consistent of one team leader and 1 additional team member, were appointed. Furthermore also the personnel for the technical review and the final approval were determined.

The list of involved personnel, the tasks assigned and the qualification status are summarized in the table 2-3 below.

Table 2-3: Involved Personnel

	Name	Company	Function ¹⁾	Qualification Status ²⁾	Scheme competence ³⁾	Technical competence ⁴⁾	Verification competence ⁵⁾	Host country Competence	On-site visit
☒ Mr. ☐ Ms.	B.J.M.Amarnath	TUV India Private Limited	TL	LA	☒	1.2	☒	☒	☐
☒ Mr. ☐ Ms	S.Stalin	TUV India Private Limited	TM ^{A)}	LA	☒	1.2	☒	☒	☒
☐ Mr. ☒ Ms.	Alexandra Nebel	TN CERT	FA/ TR ^{B)}	SA	☒	-	☒	☐	-
☒ Mr. ☐ Ms.	Saalman Martin	TN CERT	TR ^{B)}	SA	☒	1.2	☒	☒	-

¹⁾ TL: Team Leader; TM: Team Member, TR: Technical review; OT: Observer-Team, OR: Observer-TR; FA: Final approval

²⁾ GHG Auditor Status: A: Assessor; LA: Lead Assessor; SA: Senior Assessor; T: Trainee; TE: Technical Expert

³⁾ GHG auditor status (at least Assessor)

⁴⁾ As per S01-MU03 or S01-VA070-A2 (such as 1.1, 1.2, ...)

⁵⁾ In case of verification projects

^{A)} Team Member: GHG auditor (at least Assessor status), Technical Expert (incl. Host Country Expert or Verification Expert), not ETE

^{B)} No team member

2.4 Assessment Steps

The *assessment of post registration changes* consisted of the following steps:

- Appointment of team members and technical reviewers
- A desk review of the registered and revised PDD^{/PDD/} submitted by the client and additional supporting documents
- On-Site assessment (if required)
- Background investigation and follow-up interviews with personnel of the project developer and its contractors,
- Resolution of corrective actions (CARs / CLs) (if any)
- Final reporting
- Technical review

- Final approval.

In this case all activities were carried out as part of the 3rd periodic verification of this project activity.

2.5 Review of Documents

The registered as well as the revised PDD and supporting background documents related to the project design and the post registration changes were reviewed.

As far as required the assessment team used additional documentation by third parties like host party legislation, technical reports referring to the project design or to the basic conditions and technical data.

2.6 Follow-up Interviews

The validation team has carried out interviews in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for CDM.

During validation the validation team has performed interviews to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in table 2-4.

Table 2-4: Interviewed persons and interview topics

Interviewed Persons / Entities	Interview topics
Project proponent representatives ^{/IM01/} Project consultant ^{/IM02/}	- Details of the project validation and earlier verifications - Project history - Technical details of plant - Intended / implemented changes from the previous project design - Impact of changes on the additionality justification - Impact on the monitoring of the project - Editorial issues of the revised PDD

A comprehensive list of all interviewed persons is part of section 7 'References'.

2.7 Resolution of Clarification and Corrective Action Requests

2.7.1 Definition

A **Corrective Action Request (CAR)** will be established where:

- mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,
- the requirements deemed relevant for validation of the intended / implemented changes,
- there is a risk that the changes cannot be approved by the UNFCCC or that emission reductions would not be able to be verified and certified after the implementation of the changes.

A **Clarification Request (CL)** will be issued where information is insufficient, unclear or not transparent enough to establish whether a requirement is met.

2.7.2 Assessment

After reviewing all relevant documents and taken all other relevant information into account, the assessment team issues all findings (in the course of a draft report, if applicable) and hands over the findings to the project proponent in order to respond on the issues raised and to revise the documentation accordingly.

The final reporting step starts after resolution of the raised CARs and CLs. In case the findings from CARs and CLs cannot be resolved by the project proponent or the proposed action related to the FARs raised cannot be assessed as adequate, no positive assessment opinion can be issued by the validation team.

The CAR(s) / CL(s) / FAR(s) are documented in the context of the respective chapters.

2.8 Technical review

Before submission of the final assessment report a technical review is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project falls under. The technical reviewer is not considered to be part of the verification team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the assessment opinion as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

2.9 Final approval

After successful technical review of the final report an overall (esp. procedural) assessment of the requested post registration changes will be carried out by a senior assessor located in the accredited premises of TÜV NORD.

Only after this step the notification or the report can be forwarded to the UNFCCC (in case of a positive validation opinion).

3 CHANGES THAT DO NOT AFFECT THE PROJECT DESIGN

3.1 Assessment of Changes

Requested Deviations / Changes #1

- Type of change(s):
- ☐ Temporary Deviation from Monitoring Plan
 - ☐ Temporary Deviation from Monitoring Methodology
 - ☒ Corrections that do not affect the project design
 - ☐ Permanent Change from Monitoring Plan
 - ☐ Permanent Change from Monitoring Methodology
 - ☐ Changes specific to afforestation or reforestation

A. Description of post registration change

Start Date:

Please provide the start date of the change

2006-09-22

End Date:

Please provide the end date of the change, if applicable

-

Description:

Please give a detailed description of the changes

The registered PDD is corrected to reflect with the change in ownership (4), name changes (6), correction of full names (9) of WEGs & the name change of project participant

Ownership Changes: The details of the ownership changes of the WEGs is presented below

Sl. No.	WEG Owner as per registered PDD	WEG Capacity in MW	HTSC No.	Ownership Changed To
1	Golden Sun Industries	0.750	643	V V Minerals on 25.10.2012
2		0.750	673	
3	Zigma Technologies	0.750	599	RB Wovens Private Limited on 22.09.2006
4		0.750	645	

Name Change: The details of name changes of the WEGs owners is presented below

Sl. No.	WEG Owner name as per registered PDD	WEG Capacity in MW	HTSC No.	Name Changed To
1	Sri Gowarishankarar	1.650	801	Shri Gowarishankarar Agencies Private Ltd. On 08.07.2011 (Firm to Pvt. Ltd.)
2	Classic Knit (Name Change)	0.750	368	Royal Classic Mills (P) Ltd. on 01.04.2010 (Name Change)
3	Royal Classic Mills (Name Change)	0.750 x 3	574 600 601	Classic Knit India (P) Ltd. on 24.12.2012 (Name Change)

Requested Deviations / Changes #1

	4	Asian Handlooms	1.650	581	Asian Fabrix Private Limited on 11.11.2009 and subsequently to Asian Wind Energy Private Limited on 22.10.2012 (Name Change)
	Full Name: Full name of the following WEG owners has been updated				
	Sl. No.	WEG Owner name as per registered PDD	WEG Capacity in MW	HTSC No.	Full Name
	1	Kongoor Textiles	0.750	446	Kongoor Textiles Process
	2	GVG Industries	0.750	359	GVG Industries Private Ltd
	3	GVG Paper Mills	0.750 x2	402 841	GVG Paper Mills Private Ltd.
	4	SVPB Spinners	0.750	357	SVPB Spinners Private Ltd
	5	SVA Syntex	0.750	358	SVA Syntex Private Ltd
	6	City Mills	0.750 x3 1.650 x1	425 395 397 824	City Mills Private Limited
	7	Interocean	0.950	689	Interocean Navigation Ltd
	8	Interocean	1.650	602	Interocean Shipping India Pvt. Ltd
	9	Kannapiran	1.650	613	Sri Kannapiran Mills Ltd
	Project Participant Name Change:				
	Sl. No.	Project Participant Name as per registered PDD	Name Changed To		
	1	NEG Micon (I) Private Limited.	Vestas Wind Technology India Private Limited on 09/11/2006		
	2	-	Swedish Energy Agency obtained approval on 13/12/2012		

B. Assessment of post registration change – Corrections

Correctness:

Please assess whether the corrected information (incl. ex-ante values) is an accurate reflection of actual project information.

Ownership Changes: The assessment of the ownership changes of the WEGs is presented below

Sl. No.	Ownership Changed To	HTSC No.	Assessment
1	V V Minerals on 25.10.2012	643	The agreement between Gold Sun Industries and V V Minerals dated 25.10.2012 has been verified and found that along with the ownership the rights for the CERs has been transferred to V V Minerals hence the change is deemed acceptable.
2		673	
3	RB Wovens on 22.09.2006	599	The agreement between Zigma Technologies and RB Wovens dated 22.09.2006 has been verified and found that along with the ownership the rights for the CERs has been transferred to V V Minerals. The same is also verified during the
4		645	

Requested Deviations / Changes #1

			first monitoring period and the same is assessed in the respective verification report for which the issuance has been issued hence the change is deemed acceptable.	
<u>WEGs owner name changes:</u> The assessment of the ownership name changes of the WEGs is presented below				
Sl. No.	Name Changed To	HTSC No.	Assessment	
1	Sri Gowarishankar Agencies Pvt. Ltd. On 08.07.2011 (Firm to Pvt. Ltd.)	801	Certificate of incorporation and approval from state electricity utilities of Sri Gowarishankar Agencies Pvt. Ltd has been verified and found ok hence the change is deemed acceptable	
2	Classic Knit India (P) Ltd. on 24.12.2012 (Name Change)	574 600 601	Certificate of incorporation and approval from state electricity utilities of Sri Gowarishankar Agencies Pvt. Ltd has been verified and found ok hence the change is deemed acceptable	
3	Royal Classic Mills on 01.04.2010 (Name Change)	368	Certificate of incorporation and approval from state electricity utilities of Royal Classic Mills (P) Ltd has been verified and found ok hence the change is deemed acceptable	
4	Asian Fabrix Private Limited on 11.11.2009 and subsequently to Asian Wind Energy Private Limited on 22.10.2012 (Name Change)	581	Certificate of incorporation and approval from state electricity utilities of Asian Wind Energy Private Limited on 22.10.2012 has been verified and found ok hence the change is deemed acceptable	
<u>Full Name:</u> Full name of the following WEG owners has been updated				
Sl. No.	Full Name	WEG Capacity in MW	HTSC No.	Assessment
1	Kongoor Textiles Process	0.750	446	The full names of the WEGs owners has been included for clarity the same has been verified form the Certificate of Incorporaion and from the communications from state utility hence the same change is acceptable.
2	GVG Industries Private Ltd	0.750	359	
3	GVG Paper Mills Private Ltd.	0.750 x2	402 841	
4	SVPB Spinners Private Ltd	0.750	357	
5	SVA Syntex Private Ltd	0.750	358	
6	City Mills Private Limited	0.750 x3 1.650 x1	425 395 397 824	
7	Interocean Navigation Ltd	0.950	689	

Requested Deviations / Changes #1

	8	Interocean Shipping India Pvt. Ltd	1.650	602	
	9	Sri Kannapiran Mills Ltd	1.650	613	
	Project Participant name changes: The assessment of the project participant name changes and the inclusion of Annex I participant of the project activity is presented below				
	Sl. No.	Project Participant Name as per registered PDD	Name Changed To		
	1	Vestas Wind Technology India Private Limited	Certificate of incorporation of Vestas Wind Technology India Private Limited dated 09/11/2006 has been verified and found ok. The same is also verified during the first monitoring period and the same is assessed in the respective verification report for which the issuance has been issued. Hence the change is deemed acceptable.		
2	-	The LOA of Swedish Energy Agency obtained on 13/12/2012 has been verified which is available on UNFCCC project view page also the MoC Annex 2 has been verified and found that Swedish Energy Agency has been added as project participant on 14/02/2013 hence the change is deemed acceptable.			
MP/MM Compliance : Please check whether the corrected parameters are in accordance with the MM and/or MP		As assessed above the changes are only the ownership changes, ownership name changes and the change in the project participant names which has no relevance with the methodology and monitoring plan hence the change is considered appropriate.			
Appendix 1 PS: Check whether the affect the design of the PA.		As assessed above the changes are only the ownership changes, ownership name changes and the change in the project participant names which has no relevance with the project design hence the change is considered appropriate and acceptable			
C. Revised PDD					
Rev. of PDD: Check whether the changes have been fully addressed in a revised PDD.		☒ The changes have correctly been reflected in the revised PDD. ☐ A revision of the PDD is not required (in case of temp. changes). ☒ The revised PDD has been forwarded in (i) track-change and (ii) clean version.			
D. Prior Approval					
Prior approval: Assess whether the change requires prior approval of the board		☐ The post registration change requires prior approval ☒ The post registration change does not require prior approval			

3.2 Related Findings

No findings have been identified in this context.

4 CHANGE TO THE START DATE OF THE CREDITING PERIOD

The post registration changes do not fall under this category.

4.1 Related Findings

No findings have been identified in this context.

5 CHANGES TO THE PROJECT / PROGRAMME DESIGN

5.1 Assessment of Changes

Requested Changes to the project design #1

Type : ☒ *Changes to the project design*

☐ *Changes to the PoA design*

A. Description of post registration change

Start Date:

Please provide the start date of the change

2012-10-22

End Date:

Please provide the end date of the change, if applicable

-

Description:

Please give a detailed description of the changes esp. with regards to the effect on the project design.

As per the Registered PDD: The project activity involves installation of 28 nos (22 x 750 kW, 5 x 1650 kW and 1 x 950 kW) of WEGs total capacity of 25.70 MW. Out of 28 WEGs the electricity generated from 13 No's of the windmills have sold to grid through Power Purchase Agreement (PPA) made with Tamil Nadu Generation and Distribution Corporation Limited (TANGEDCO - Formerly known as Tamil Nadu Electricity Board (TNEB)) with a tariff of INR 2.70/kWh and 15 No's of the windmills exported to grid and consumed the electricity generated at their industrial division through Energy Wheeling Agreement made with TANGEDCO with a tariff of INR 3.50/kWh.

Current Monitoring Period: During the 3rd periodic verification two out of 13 WEGs (HTSC.No:801 & 581) though the generation is exported to grid as said in registered PDD, instead of sale to grid the energy exported to the grid is wheeled and adjusted in the bills of electricity consumed in the industrial division of the project participants.

Effect on Additionality: This adjustment of bills for captive use instead of sale is likely to affect the IRR projected for additionality as there is a change in the tariff. The verification team noted that originally, during the period of March 2005 signed Power Purchase Agreements (PPAs) for each of their WEGs (HTSC.No:801 & 581) in the project activity, for sale of electricity to grid of TNEB. However it has been identified that from 01/11/2012 M/s. Shri Gowrishankar Agencies Private Ltd (HTSC number 801) and M/s. Asian Wind Energy Private Limited (HTSC number 581) from 22/10/2012 has entered into energy wheeling agreement with the state utility by which they can consume the equivalent energy at their industrial division.

The project activity (UNFCCC NO: 1015) got registered by CDM EB dated on 07th July 2007 .The wheeling agreement with TANGEDCO for wheeling of electricity for the WEGs 801 and 581 was signed on 01/11/2012 a & 22/10/2012 . This change will not impact the overall operation/ability of the project activity to deliver emission reductions as

Requested Changes to the project design #1

	stated in the PDD Hence the project participants was not aware of the changes prior to registration .
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B. Applicability and application of the Approved Baseline Methodology

Description:

Please give a detailed description on how the changes affect the applicability and application of the approved Baseline Methodology. Check if the actual changes would adversely affect the conclusions during validation.

There is no change in physical operation, capacity and the applicability of the project activity as the WEGs (HTSC No: 801 &581) continues to export electricity to the grid. As the changes does not restrict the size of the project activity the changes do not affect the applicability and the application of the approved baseline methodology.

C. Additionality assesement

Description:

Please give a detailed description re-assessment of additionality, Check whether the actual changes would adversely affect the conclusions during validation. If required please make use of the assessment tables in the annex.

Methodology:

In the original project documentation the additionality was justified in line with the requirements of ACM 0002 Version 6. This methodology requires making use of the Tool for the demonstration and assessment of additionality version 03.

Decisive Route of Addtionality Justification

During the original validation of the project the additionality was justified on the basis both financial analysis and barrier analysis. A corresponding Excel file related financial analysis was presented and attached to the validation report. The equity IRR of this project activity was determined 13.57%.The barriers mentioned in the registered PDD is not relevant to the changes identified during verification. Even though the tariff barrier is little bit relevant to the changes the same has been covered under investment analysis via assessment of input financial parameters.

Re-Assessment of Additionality

During this validation regarding changes a revised version of the original validated Excel spreadsheet was considered which was provided by the PPs. The revised IRR calculations considering this said change from export to grid to wheeling for the two WEGs. During the registration of the project activity the investment analysis were carried out for 20 years i.e. for the period 2004 to 2023 considering the commissioning of the wind mills started on 2004 and start date of the project activity is in 2004. The post registration changes was occurred in October 2012 and November 2012 .Hence there were no changes carried out in the investment analysis spreadsheet for the period of 2004 to 2011.The changes in generation values and tariff have been carried out from year 2012 to 2023 in the excel sheet .The values are prorated conservatively in the year of 2012 though the changes occurred in October 2012. The tariff rate for sale to grid is INR 2.70/ kWh and INR 3.50/ kWh for captive during conceptualisation of the project activity .The same values have been used in the revised

Requested Changes to the project design #1

investment analysis for those who have not carried out any changes in the nature of agreement with State utility. For the two WEGs (HTSC .No : 581 & 801) the tariff INR 5.50/KWh has been taken which is sourced from the energy bills paid by the project participants and tariff order applicable at the time of decision making to change the nature of the agreement with state utility. Also as per Project standard para 226 *in the case of investment analysis, project participants shall only modify the key parameters in the original spreadsheet calculations affected by the proposed or actual modifications to the project activity*, thus the demonstration of the impacts of changes shall be based on all original input data and it does not requires any changes in the sensitivity analysis for power generation. However based on request other parameters like Tariff (for both Sale to board & Captive consumers) and operation and maintenance cost and their sensitivity analysis for $\pm 5\%$ were incorporated in revised PDD. Based on clarification raised by CDM EB regarding the sensitivity analysis for generation to a positive variation of 10% is not appropriate to consider with respect to first monitoring period data, considering the actual generation from the start date of first monitoring till the end of current monitoring period the actual generation is less (0.28%) than the estimated value in the registered PDD. Validation team has cross checked independently by applying the sensitivity of 10 % only from 2014 till the end of life time as the generation considered from 2004 to 2013 is conservative and found that the equity IRR (14.95%) is still below than the applied benchmark hence the considered variation of 5% at the time of registration is deemed appropriate and reasonable. Validation team has cross checked the sensitivity for Tariff as the WEGs supplying energy to grid has signed power purchase agreement with the state utility and the tariff is fixed for the life time hence sensitivity is not considered only by applying 10% from 2014 for captive consumers and found that the equity IRR (15.78%) is below the benchmark hence the considered variation of 5% at the time of registration is deemed appropriate and reasonable. Considering the inflation rate in the host country and the age of WEGs the considered variation of -5% is considered appropriate and acceptable. For a detailed analysis of the values applied and their verification pl. refer to annex 2.

Result of Additionality Re-Assessment

The verification team checked the revised IRR working submitted by the project participant at base case and sensitivity $\pm 5\%$ (as said in the registered PDD without the CDM revenues) and noted that the equity IRR is 14.48% for base case and 15.92% for sensitivity which has increased marginally, however within the benchmark (16%) as anticipated at the time of decision making prior to the registration of the project activity .Thus the validation team has arrived at the conclusion that the additionality of the project is not affected by the changes carried out as a deviation from the project design originally validated and registered.

Requested Changes to the project design #1

D. Scale of the Project activity

Description:

Please give a detailed regarding the effect of the changes on the scale of the PA (i.e. LSC or SSC).

This is a large scale project activity; therefore this criterion is not applicable in this case.

E. Revised PDD

Rev. of PDD:

Check whether the changes have been fully addressed in a revised PDD. In this context pl. refer to

- Changes in the effective output capacity.
- Addition of components or extension of technology
- In case of multiple site projects: Removal or addition of sites
- Operational parameters under the control of PPs differing from expected parameters
- Changes to the baseline Meth (e.g. addition of a new Meth or change of the BL scenario.
- Effects with regards to B, C and D above incl. compliance with the MP and level of accuracy and completeness of monitoring.

The post registration change has correctly been reflected in the revised PDD. This assessment is based on the following considerations:

The effective output capacity of the project activity remains same as said in the registered PDD which was verified during onsite visit by verification team.

There is no change in technology (Wind Energy) used for power generation which was verified during onsite visit by verification team.

There is no removal or additional sites in the project activity which was verified during onsite visit by verification team.

The applied methodology is still applicable irrespective of the changes from the sale to grid to wheeling and as the base line remains the same, the electricity delivered to the grid by the project would have otherwise been generated by the operation of grid-connected fossil fuel power plants. The project participants' industrial units still rely on imported power from the grid.

The monitoring plan is still in line with the applied approved monitoring methodology. Also the level of accuracy and completeness of actual monitoring has not changed with respect to changes identified during the monitoring period and the registered monitoring plan.

Traceability:

Check if the PPs have provided a revised PDD in both clean and track-change version.

☒ The revised PDD has been forwarded in (i) track-change and (ii) clean version.

F. Prior Approval

Prior approval:

Assess whether the change requires prior approval of the board.

The changes do not raise concerns with respect to aspects outlined in the PS:

- a. applicability and application of the Approved Baseline Methodology under which the project activity has been registered.
- b. additionality of the project
- c. scale of the CDM project activity and

Requested Changes to the project design #1

		Prior Approval by the Board is not required.
	☒	The post registration change requires prior approval.

5.2 Related Findings

No findings have been identified in this context.

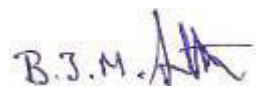
6 SUMMARY OF ASSESSMENT OPINIONS

The below listed changes have occurred after the registration of the project / PoA.

Type of Change occurred	Total No. of changes	No. of changes which require prior approval
☐ Temporary deviations from the MP		
☐ Temporary deviations from the MM		
☒ Corrections that do not affect the project	1	0
☐ Change to the start date of the crediting p.		
☐ Permanent changes from the MP		
☐ Permanent changes from the MM		
☒ Design changes to the project activity / PoA	1	1
☐ Changes specific to AR projects		

The above listed post registration changes require prior approval of the Board.

Chennai, 2014-04-08



B.J.M. Amarnath
TÜV NORD JI/CDM CP
Assessment Team Leader

Essen, 2014-04-08



Alexandra Nebel
TÜV NORD JI/CDM CP
Final Approval

7 REFERENCES

Table 7-1: Documents provided by the project participant

Reference	Document
/IRR/	IRR calculation sheet Version 01 dated
/PDD1/	Project Design Document named “25.70 MW Bundled Wind Power Project in Udumalpet, Tamilnadu” registered 07/07/2007
/PDD2/	Revised PDD reflecting the intended / implemented changes dated on 2014-04-01
/COM/	Letters from the Superintending Engineer of the respective electricity Distribution circle regarding commissioning of WEGs.
/NC/	• Agreement with the WEGs owners for sale of WEGs • Certificate of incorporation of names of owners for the name change and for full names
/PPA/	Energy Wheeling Agreement of Sri Gowarishankar Agencies Pvt. Ltd HTSC .No 801 with TANGEDCO dated on 01/11/2012. Energy Wheeling Agreement of Asian Fabricx HTSC .No 581 with TANGEDCO dated on 22/10/2012.
/TD/	Technical specifications of Wind Turbine Generator
/XLS/	Emission reduction calculation spreadsheet

Table 7-2: Background investigation and assessment documents

Reference	Document
/ACM 0002/	ACM 0002 Version 06 “Consolidated baseline methodology for grid-connected electricity generation from renewable sources”
/CPM/	TÜV NORD JI / CDM CP Manual (incl. CP procedures and forms)
/GCPI/	UNFCCC: Guidelines for completing CDM-PDD and CDM-NM
/TA/	Tool for the demonstration and assessment of additionality (Ver. 6).

Reference	Document
/PSI/	CDM Project Standard (Version 5.0)
/VAL/	Validation Report for CDM project “Fehler! Verwenden Sie die Registerkarte 'Start', um x ProjectTitle dem Text zuzuweisen, der hier angezeigt werden soll.” version 02, dated 2006-10-07
/VVS/	CDM Validation and Verification Standard (Version 05.0)

Table 7-3: Websites used

Reference	Link	Organisation
/MoEF/	http://cdmindia.nic.in/	DNA of INDIA
/unfccc/	http://cdm.unfccc.int	UNFCCC
/ipcc/	www.ipcc-nggip.iges.or.jp	IPCC publications
/CEA/	www.cea.nic.in	Central Electricity Authority
/tnerc/	http://tnerc.tn.nic.in/	Tamilnadu Electricity Regulatory Commission.

Table 7-4: List of interviewed persons

Reference	Mol ¹		Name	Organisation / Function
/IM01/	V	☒ Mr. ☐ Ms	Ashok Kumar. S	Site In charge- Vestas Wind Technology India Private Limited
/IM01/	V	☒ Mr. ☐ Ms	A.Karthick	Site In charge - Vestas Wind Technology India Private Limited
/IM01/	V	☒ Mr. ☐ Ms	G.Velmurugan	Site Engineer- Vestas Wind Technology India Private Limited
/IM02/	V	☒ Mr. ☐ Ms.	V.M.Narayanan	Asst Manager CDM Vestas Wind Technology India Private Limited
/IM02/	V	☒ Mr. ☐ Ms	Ashish Chaudhary	Senior Executive, Vestas Wind Technology India Private Limited.

¹⁾ Means of Interview: (**T**elephone, **E**-Mail, **V**isit)

APPENDIX

- A1:** Assessment of Financial Parameters
- A2:** Assessment of Barrier analysis
- A3:** Competence statements of involved personnel

APPENDIX 1: ASSESSMENT OF FINANCIAL PARAMETERS

Table A-1: Assessment of Financial Parameters (VVS, v. 2.0, §§ 120, 121 / in case financial parameters stem from FSR §122)

☐	No financial parameters are used for additionality justification					
☒	Assessment of all financial parameters see below					
Parameter	Value applied	Unit	Source of Information (please indicate document and page)	Reference	DOE ASSESSMENT	
					Correctness of value applied	Comment
Tariff (Sri Gowarishankar Agencies Pvt. Ltd & Asian Fabricx)	5.50	INR/KWh	TNERC Tariff Order 1 dated 30/03/2012. HT Energy Bills.	/ tnerc/ /HT/	☒	The HT tariff, as per energy bills paid by the PP to electricity board and also the tariff order ¹ in force at the time of decision making to change the nature of the agreement with TANGEDCO is Rs 5.50/kWh for captive consumption .Hence PP has used HT tariff of INR 5.50 per unit for substantiating additionality for the project activity. In India electricity tariff rate is fixed by the government and revised at irregular intervals on the advice of electricity regulatory commissions which are beyond the control of the PP. Further, it is very difficult to predict the possible changes in electricity tariff rates (HT tariff rates) in case of wheeling in the State of Tamilnadu. The generated electricity consumed by project promoter facilitated through wheeling agreements with TANGEDCO. The tariff rate of Rs.5.50 /kWh has been referred from the energy bills are applicable during the decision making and valid.

¹ <http://tnerc.tn.nic.in/orders/Tariff%20Order%202009/2012/T.O%20No.%201%20of%202012%20dated%2030-03-2012.pdf>

APPENDIX 2: ASSESSMENT OF BARRIER ANALYSIS

Table A-2: Assessment of Barrier Analysis (VVS, v. 2.0, §§ 124-127)

☒		No barrier parameters are used for additionality justification		
☐		Assessment of barriers see below		
Kind of Barrier (invest, tech, other)	Description of Barrier	Evidence used	Assessment of validation team	
			Appropriateness of information source	Explanation of final result
			☒	
			☒	

APPENDIX 3: STATEMENTS OF COMPETENCE OF INVOLVED PERSONNEL



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Mohinder Amarnath B. J.

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor	2013-06-21
VCS	Lead Assessor	2013-06-21

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
3.1	Energy Demand
4.1	Cement Sector
13.1	Waste Handling and Disposal

053 – Rev. 1, Date: 2011-06-20

001_F003_rev1_2010-04-19



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Stalin Sellamuthu

SCHEME	STATUS	VALID UNTIL
CDM	Lead Assessor (Validation, Verification)	2015-02-09
VCS	Lead Assessor	2015-02-09

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
1.2	Renewable Energies
2.1	Electricity distribution
2.2	Heat distribution
3.1	Energy demand
13.1	Waste handling and disposal

090 – Rev. 1, Date: 2012-02-10

006_301_F003_2012-02-10_rev1.doc



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Mr. Martin Saalmann

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2015-05-15
Ji	Senior Assessor Technical Reviewer	2015-05-15
VCS / ISO 14064-2	Senior Assessor Technical Reviewer	2015-05-15

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA	TR SUBCATEGORIES
1.2	Renewable energies	1.2.4 Solar
13.1	Waste management and disposal	13.1.1 Waste management 13.1.2 Waste water management

022 – Rev. 4, Date: 2012-05-16

002-001_F003_2012-05-16_rev4



Statement of Competence
Appointment and authorization according to the procedures
of the TÜV NORD JI/CDM Certification Program

Ms. Alexandra Nebel

SCHEME	STATUS	VALID UNTIL
CDM	Senior Assessor (Validation, Verification) Technical Reviewer	2014-08-24
Ji	Senior Assessor Technical Reviewer	2014-08-24
VCS	Senior Assessor Technical Reviewer	2014-08-24

Authorization status for technical areas within sectoral scopes:

CODE	TECHNICAL AREA
14.1	Forestry

095 – Rev. 3, Date: 2011-08-25

006_301_F003_2011-08-25_rev3