



Voluntary Carbon Standard 2007.1
Validation Report Template

19 November 2007

Validation Report:

Name of Verification company:	Date of the issue:
SIRIM QAS INTERNATIONAL SDN BHD	31 st March 2010
Report Title:	Approved by:
Bundled Wind Power Project in Tamilnadu, India, co-ordinated by Tamilnadu Spinning Mills Association (TASMA V1A) Report no: SQAS-VCS-ES12880111	Mr. Parama Iswara Subramaniam
Client:	Project Title:
Tamilnadu Spinning Mills Association (TASMA)	Bundled Wind Power Project in Tamilnadu, India, co-ordinated by Tamilnadu Spinning Mills Association (TASMA V1A)

Summary:

Tamilnadu Spinning Mills Association (TASMA) has engaged SIRIM QAS International Sdn. Bhd. to undertake the validation of the project titled "Bundled Wind Power Project in Tamilnadu, India, co-ordinated by Tamilnadu Spinning Mills Association (TASMA V1A)" (hereinafter the project) under the Voluntary Carbon Standard (VCS) 2007.1. The purpose of the validation is to perform an independent, third party assessment of whether the project activity confirms to the qualification criteria set in the VCS 2007.1 standard and related requirements to attain real, measurable, additional, and permanent emission reduction. The validation exercise was not meant to provide any consulting to the project participants. However, the stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

The validation consisted of three phases;

i) a document review of the project documents and preparation of validation protocol, ii) on-site visit to the project activity and interviews with the project developer and the project consultant, and, iii) resolution of outstanding issues and the issuance of final validation report and validation opinion

The project activity is the installation of 84 WTGs totalling to 48.1 MW. The project is located across the state of Tamilnadu, India. The entire electricity generated from the project activity will be fed to the Southern Grid, replacing the equivalent amount of fossil fuel dominated grid electricity.

The validation process, from contract review to the issuance of validation report and validation opinion was conducted in accordance with SIRIM QAS's internal procedures. The first output of the validation process was a list of corrective action requests and clarification requests (CAR and CL) which is presented in Appendix V of this report. As a result of these findings, the PD was revised by the client.

In summary, it is the opinion of SIRIM QAS Intl. that the proposed VCS project activity has correctly applied the baseline and monitoring methodology (ACM 0002 Version 10) for the project activity and meets the relevant VCS 2007.1 requirements. Total GHG emission by the project is 837,722 tonnes of CO₂ over a 10-year period. The estimated GHG reductions from the project would be real, measurable, permanent and additional.

Work carried out by:

Number of pages:

Dr. G. Vishnu (Validation Team Leader)
Mr. R. Vijayaraghavan (Technical Expert)
Mr. Jayaraman (Financial Expert)

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Abbreviations

ACM	Approved Consolidated Methodology
CAR	Corrective Action Request
CEA	Central Electricity Authority
CL	Clarification Request
CO ₂	Carbon Dioxide
CO _{2e}	Carbon Dioxide Equivalent
EB	Executive Board
EF	Emission Factor
GHG	Greenhouse gas(es)
INR	Indian Rupees
IREDA	Indian Renewable Energy Development Agency
IRR	Internal Rate of Return
kW	Kilowatt
kWh	Kilowatt hour
MoEF	Ministry of Environment and Forests
NOC	No Objection Certificate
PD	Project Description
PLF	Plant Load Factor
QA/QC	Quality Assurance/Quality Control
RBI	Reserve Bank of India
SIRIM QAS Intl.	SIRIM QAS International SDN BHD
TASMA	Tamilnadu Spinning Mills Association
VCS	Voluntary Carbon Standard
VCU	Voluntary Carbon Unit
VER	Verified Emission Reduction
WTG	Wind Turbine Generator

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Introduction

Tamilnadu Spinning Mills Association (TASMA), (hereinafter referred to as the 'Project Proponent') has contracted SIRIM QAS Intl., Malaysia to undertake the validation of its project titled "Bundled Wind Power Project in Tamilnadu, India, co-ordinated by Tamilnadu Spinning Mills Association (TASMA V1A)" (hereinafter referred to as the project activity) under the Voluntary Carbon Standard (VCS) 2007.1 standard^[1]. This report describes the validation work undertaken.

1.1 Objective

The purpose of the validation is to perform an independent, third party assessment of whether the project activity confirms to the qualification criteria set in the VCS 2007.1 standard to attain real, measurable, additional and permanent emission reduction.

The validation statement / opinion is a written assurance that the project complies with all the applicable VCS requirements and has the ability to generate the emission reductions stated over the projects crediting period.

1.2 Scope and Criteria

The validation scope includes an independent and objective review of the Project VCS project description (PD), the project's baseline study, monitoring plan and other relevant documents. Specifically, the objectives of the validation work involve:

- To verify whether the project activity meets the requirements of VCS 2007.1 standard^[1] including additionality, proof of title and compliance with local laws.
- To assess whether the baseline and monitoring plan are in conformance with the methodology applied from the VCS approved GHG program.
- To certify that the information presented are complete, consistent, transparent and free of material error.

The Project Description was reviewed against VCS 2007.1 standard and the VCS program guidelines and the applied CDM methodology^[2], ACM 0002 Version 10. SIRIM QAS Intl. has performed the validation based on a risk based approach focusing mainly on the significant risks to meet the qualification criteria and the ability to generate VCUs. The work carried out by SIRIM QAS Intl. is free from any conflict of interest.

1.3 VCS project Description

The project activity is the installation of 84 WTGs totalling to 48.1 MW. The project is located across the State of Tamilnadu, India. The entire electricity generated from the project activity will be fed to the Southern Grid, either through energy wheeling or energy selling, replacing the equivalent amount of fossil fuel dominated grid electricity. The project activity is expected to generate and displace 886,339 MWh of electricity over the period of 10 years thereby displacing the equivalent amount of electricity from the power deficit; fossil fuel dominated Southern Grid. The project will lead to GHG emission reduction of about 837,722 tCO₂e over the period of 10 years and thus contributes to climate change mitigation efforts. The project applies the simplified baseline and monitoring methodology ACM 002 Version 10.0. The project falls under sectoral scope no. 1 Energy industries (renewable/non-renewable sources).

1.4 Level of assurance

In line with VCS 2007.1 requirements and as per ISO 14064-3:2006 Para A.2.3.2, a reasonable level of assurance has been followed for the validation of the project. Based on the desired level of accuracy SIRIM QAS Intl. has established an internal quality control process and assures that the information given in the PD is materially correct and is a fair representation of the of the actual project details, and is prepared in accordance with the VCS requirements and the applied CDM methodology for information pertaining to additionality, GHG quantification, monitoring and reporting.

The validation report is carried out as per this requirement and details are presented in the validation statement in section 4 below:

2 Methodology

The SIRIM QAS Intl.'s validation process consists of the following phases:

- a document review of the project description and preparation of validation protocol;
- on-site visit to the project activity and interviews with project developer, project consultant; and relevant stakeholders
- resolution of outstanding issues and the issuance of final validation report and opinion

In order to ensure transparency, a validation protocol was customised for the project according to the VCS 2007.1 guidelines. The protocol in the form of Table 3 describes the findings, criteria (requirements), means of verification, results from the validating and how the identified criteria, have been met in a transparent manner. The validation protocol serves the following purposes:

- it organizes, details and clarifies the requirements of a VCS project is expected to meet;
- it ensures a transparent validation process where the validator will document how a particular requirement has been validated and the result of the validation.

The validation protocol consists of Appendix V, where findings established during the validation were classified as non-fulfilment of validation protocol criteria or where risks to the fulfilment of project objectives were identified. Corrective Action Request (CAR) was issued, where:

- mistakes have been made that directly impact on the project results; or
- validation protocol requirements have not been met; or
- there was a risk that the project would not be accepted as a VCS project or that emission reductions will not be certified.

The validation team has also raised "Clarification" (CL), where additional information is needed to fully clarify an issue.

The following team members from SIRIM QAS Intl. were involved in identifying the following:

Name	Role	Components reviewed
Dr. G. Vishnu	Lead Auditor	Completeness check, desk review, onsite inspection, interview with project representatives & stakeholders, issuance of findings, report preparation
Mr. R. Vijayaraghavan	Technical Expert	Desk review, onsite inspection, interview with project representatives, report preparation
Mr. Jayaraman	Financial expert	Additionality issues
Mr. K. Sudheendra	Technical Reviewer	Technical issues related to project

2.1 Review of Document

The first PD^{/3/} version 1.0 submitted by the client and additional background documents related to the project design and baseline were reviewed as an initial step of the validation process. As a result of review and findings, PP had submitted the PD version 2.0^{/4/}

A desk review was further done to assess the following parameters:

1. Project details as per VCS PD template
2. Applicability and Appropriateness of methodology used
3. Compliance with relevance laws and regulation
4. Correctness of application of baseline and monitoring methodology

5. Demonstration of additionality
6. Monitoring Plan
7. Stakeholders' comment
8. Proof of title
9. Supporting documents mentioned in the PD (Grid emission factor, commissioning certificate etc.)

A complete list of all the documents reviewed is attached in Section 5.0 of this report.

2.2 Follow-up Interviews

After the review of the Project Description and documents, a site visit was carried out from 5th to 7th March 2010. During the site visit to Coimbatore, Erode, Didigul and Tirunelveli physical inspection of the project components followed by interviews with the on-site personnel was carried out to verify the project details. A follow-up meeting was also conducted with the project representatives. The following persons were interviewed.

Name & Designation	Company	Details of Interview
Mr. Bharathi Kannan Head – CDM/VCS Projects	TASMA	Technical details, monitoring system, calibration frequency, grid connectivity & power evacuation system / infrastructure, loan sanction documents, Power Purchase Agreement, land ownership details, Purchase Order details, overall Project management.
Mr. Selvaraj - Analyst- CDM/VCS Projects		baseline, additionality, barrier analysis, CER calculations, financial calculations, Proof of Title.

During the site visit, the actual on-site practices adopted and followed for the operation of the project were compared with the description given in the PD. The grid-connectivity, metering practices, calibration and level of accuracy were examined. The archived data of the energy generated was also reviewed.

2.3 Resolution of Corrective Action Requests and Clarifications

The objective of this phase of the validation is to resolve the request for corrective actions and clarification and any other outstanding issues which needed to be clarified prior to SIRIM QAS's conclusion on the project design based on the site inspection and review of documents, such that the project activity meets the VCS 2007.1 requirements. Eleven (11) Corrective Action Requests, four (4) Clarification Requests and one (1) Forward Action Request were raised by SIRIM QAS Intl. and the same were resolved during communication between the client and SIRIM QAS Intl.'s validation team. In order to ensure the transparency of the validation process, the concerns raised and responses have been documented in Appendix V of this report.

2.4 Internal Quality Control

SIRIM QAS Intl. has established an internal quality control process. A Technical Reviewer has been appointed to review the final draft validation report. The final draft report will also be tabled to the VCS Board after all findings have been resolved.

3 Validation Findings

3.1 Project Design

Project identification, design & development and implementation were evaluated as per the requirements of VCS 2007.1. The project activity involves the installation of 84 WTGs in the State of Tamilnadu, India. The project activity has a total installed capacity of 48.1 MW. The project activity is expected to generate and displace 886,339 MWh of electricity over the period of 10 years thereby displacing the equivalent amount of electricity from the power deficit; fossil fuel dominated Southern Grid. The project will lead to GHG emission reduction of about 837,722 tCO₂e over the period of 10 years and thus contributes to climate change mitigation efforts. The project applies the simplified

baseline and monitoring methodology ACM 002 Version 10.0. The project falls under sectoral scope no. 1 Energy industries (renewable/non-renewable sources).

The technical specifications of the WTGs were verified with the purchase orders^{/5/} and cross verified during the on-site visit. These were found to be correct and consistent. The location of the project activity was physically verified during validation site visit. The geographical coordinates of the project activity as mentioned in the PD were crosschecked with globally accessible satellite based imagery data software and found to be consistent. The details of the investors, capacity, and location were checked and furnished in Appendix I.

During the on-site visit, the project supporting documents were verified. The validation team reviewed the commissioning certificates^{/6/} of all the WTGs and found that electricity generated from the WTGs are supplied to the grid. The details of project including Make, HTSC no, date of commissioning (DOC) are reported in Appendix I of this report.

The validation team reviewed all the commercial operation dates and concluded that the earliest commercial operation date of all the units be taken as start date of the project activity, i.e. HTSC no 606; capacity 1 x 0.25 MW; owned by Warsaw International; Date of commissioning 2nd April, 2008. This was also confirmed by the review of the commissioning certificate of the individual units.

PP has chosen a fixed crediting period of 10 years starting from 2nd April 2008 to 1st April 2018. The validation team has accepted this considering the technical life of the WTGs is 20 years.. In line with the VCS requirements, proof of title of the individual investors was verified with the Purchase Orders^{/5/}, Commissioning Certificates^{/6/} and PPA^{/7/}.

The project has until now not created any other form of environmental credit. But, the project will seek for registration under CDM separately in the near future. However, the VCUs revenue will be considered only for the period during which no CDM/CER benefits are claimed. The VCS crediting period will be terminated in between if the project activity achieves CDM registration.

To ensure that the environmental credits generated by the project are not double counted under VCS, an undertaking letter^{/10/} was provided by TASMA indicating that the project activity is not claiming credits from other forms of GHG programmes. The project has not been rejected under any other GHG programme. The project meets the general requirements of VCS 2007.1 with respect to project start date, project scope and crediting period according to clause 5.1, 5.2 and 5.3.

Two CARs (CAR 2, CAR 3) and one FAR (FAR 1) were raised for issues related to project identification, project description, project design parameters assumption, double counting and crediting period which were adequately addressed, resolved and closed in revised PD version 2. The resolution of each CAR and CL is represented in Appendix V: Resolution of Corrective Actions and Clarification Requests.

3.2 Baseline

The project applies the approved consolidated baseline and monitoring methodology ACM0002 Version 10^{/2/}. Following are the details how the project activity fulfills the applicability conditions of ACM 0002.

No	Criteria	Validation by DOE
1	This methodology is applicable to grid-connected renewable power generation project activities that (a) install a new power plant at a site where no renewable power plant was operated 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).	❖ From the on-site visit to the project sites and review of the commissioning certificates ^{/6/} and Power Purchase Agreements ^{/7/} and Energy Wheeling Agreements ^{/8/} , it was confirmed that all the WTGs are greenfield wind energy projects supplying electricity to the Southern Grid. Therefore, it complies with this condition.
2	The methodology is applicable under the	❖ It was confirmed from the on-site visit

No	Criteria	Validation by DOE
	following conditions: The project activity is the installation, capacity addition, retrofit or replacement of a power plant/unit of one of the following types: hydro power plant/unit (either with a run-of-river reservoir or an accumulation reservoir), wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;	and commissioning certificates^{/6/} that the project activity is the installation of wind energy power plant supplying electricity to the Southern Grid. Therefore, it complies with this condition.
3	In the case of capacity additions, retrofits or replacements: the existing plant started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion or retrofit of the plant has been undertaken between the start of this minimum historical reference period and the implementation of the project activity;	❖ From the Techno Commercial Offer letters^{/9/}, Purchase Orders^{/5/}, land documents^{/10/} and commissioning certificates^{/6/}, it was verified that the project activity is a greenfield plant and that it did not involve a capacity addition or a retrofit or a replacement of an existing plant. Therefore, this condition is not relevant to the project activity
4	In case of hydro power plants, one of the following conditions must apply: 1. The project activity is implemented in an existing reservoir, with no change in the volume of reservoir; or 2. 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; or 3. 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.	It was confirmed from the onsite visit and commissioning certificates^{/6/} that the project activity is a wind power plant and not a hydro power plant. Therefore, this condition is not relevant to the project activity.
5	The methodology is not applicable to the following: • Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; • Biomass fired power plants; • Hydro power plants that result in new reservoirs or in the increase in existing reservoirs where the power density of the power plant is less than 4 W/m².	❖ From the onsite visit to the project sites and commissioning certificates^{/6/}, it was confirmed that the project activity only contains the renewable components i.e. wind units and not fuel switch or biomass fired project or hydro project. Therefore, this condition is not relevant to the project activity.
6	In the case of retrofits, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is “the continuation of the current situation, i.e. to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance”.	From the on-site visit to the project sites and the commissioning certificates^{/6/} it was confirmed that the project activity is a greenfield project. Therefore, this condition is not applicable.

The validation team by reviewing the purchase orders, commissioning certificates and power purchase agreements has concluded that the project activity is grid-connected wind power generation by installation of new power plant at a site where no renewable power plant was operated prior to the implementation of the project activity (i.e. greenfield plant).

The electricity generated from the project activity will be supplied to the Southern Grid of India. The grid connectivity was verified through the power purchase agreements^{/7/} and energy wheeling agreements^{/8/} and physical connection to the grid at sites. Thus the validation team has concluded that the project activity complies with all the requirements of selected methodology ACM 0002 Version 10.0^{/2/}.

As per the applied methodology, the project boundary is defined as “the spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the project power plant is connected to”. It includes the wind turbine installations, transformers, metering equipment and regional electricity grid. The project activity is a renewable energy project and hence there are no emissions resulting from its implementation. The emissions of gases (CO₂) are attributed to the electricity produced in the Southern Grid. The project boundary was found to be in accordance with the requirements of the applied methodology which was confirmed during the on-site visit. Thus, the validation team concludes that the PD correctly describes the project boundary, including the physical delineation of the proposed CDM project activity.

As per the applied methodology, if the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is electricity delivered to the grid by the project activity that would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the “Tool to calculate the emission factor for an electricity system”(Version 2.0)^{/11/}. The validation team therefore confirms that the selected baseline scenario (Southern Grid) reasonably represents what would happen in the absence of the project activity. Baseline emissions include only CO₂ emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity.

In this section, one CAR (CAR 4) was raised for issues related to applicability conditions which were adequately addressed, resolved and closed in revised PD version 2. The resolution of each CAR and CL is represented in Appendix VI: Resolution of Corrective Action and Clarification Requests.

Additionality

As mentioned in the ACM0002, Additionality tool version 05.2^{/12/} is used for the justification of additionality of the concerned project activity. Since the baseline was predefined in the selected methodology, no further analysis was done in identifying the alternatives. For the project activity, Southern Grid is the baseline.

The project has proved additionality based on the following

- Investment analysis
- Common practice analysis

1) Investment Analysis

Choice of benchmark

The validation team has assessed the suitability of investment analysis approach being selected by the PP to prove that the project is additional, choice of benchmark and its input value. Table below provides the explanation and justification for the applied values for the project activity. The benchmark analysis has been chosen by PP since the project generates financial or economic benefits other than CDM related income and the alternative to the project is not considered as an investment.

The justification of choosing the benchmark is given below:

Parameter	Justification by the validation team
Investment decision Source: Respective board resolutions ^{/13/}	The validation team has reviewed the respective board decisions installing which are in accordance with the details mentioned below and considered appropriate for serious consideration of seeking carbon credit. The investment decision dates for each WTG is reported in Appendix II of this report
Choice of approach selected for proving the proposed project is additional= Investment analysis. (for all the sub projects) Source: "Tool for the demonstration & assessment of additionality" version 5.2. ^{/12/}	PP has selected investment analysis to prove that the project is not financially feasible. The project participant has chosen to demonstrate additionality through application of additionality tool version 5.2 ^{/12/} and Guidelines on the assessment of investment analysis EB 51 Annex 58 ^{/14/} . The project activity has demonstrated additionality through investment analysis in step 2 of the additionality tool and has not opted for barrier analysis; the validation team has accepted the approach.
Appropriate Analysis method = Benchmark analysis (for all the sub projects) Source: "Tool for the demonstration & assessment of additionality" version 5.2 ^{/12/}	PP had the option of choosing simple cost analysis, investment comparison analysis or benchmark analysis. The validation team found that the PP has selected benchmark analysis. The validation team has assessed the rationale behind choosing benchmark analysis method as the appropriate analysis method to prove that the project is not financially feasible. Simple cost analysis method is appropriate if the proposed project activity generate no financial benefits other than CDM related income. As the project activity generates revenue by selling the electricity to the grid, the rationale behind opting out of simple cost analysis is accepted by the validation team. Investment comparison analysis method is appropriate if the proposed baseline scenario leaves the PP no other choice than to make an investment to supply the same (or substitute) products or services. As the baseline identified for the project activity is importing electricity from the grid and which does not involve an investment, the rationale behind the opting out of investment comparison analysis method is accepted by the validation team. Benchmark analysis method is appropriate if the alternative to the project activity is the supply of electricity from a grid. As the alternative for the project activity is supply of electricity from a grid, the rationale behind choosing benchmark analysis is accepted by the validation team.
Risk free return (for all the sub projects) Source: Reserve bank of India website ^{/16/}	The risk free rate is understood as the rate of return on an asset that is theoretically free of any risk. Therefore, the rate of interest on central government securities can be considered as risk free rate. PP considered month-end yield to maturity of transaction in central government

	securities for various residual maturities for the risk free rate. The maturity period of 20 years is found to be matching with life time of the project (20 years). The validation team found that the input value was available at the time of investment decisions which is in line with para 6 of investment guideline. Hence the validation accepts the value as correct and reasonable. The risk free return for each WTG is reported in Appendix IV.
Market return (for all the sub projects) Source: BSE 500 indices^{/16/}	The expected market returns have been arrived using the share prices that prevailed during the period prior to the time when the investment decision was taken. To reflect the true rate of return of the market, the BSE 500 wherein all the power companies are included in the index hence accepted. In view of the above findings, the validation team accepted the BSE 500 index to calculate the market return. The market return for each WTG is reported in Appendix IV.
Beta (for all the sub projects) Source: BSE 500 indices- Bloomberg^{/17/}	Beta indicates the sensitivity of the company to market risk factors. The project activity type is wind power generation therefore the approach should be based on the beta values of listed wind power generation companies in India. As the project activity belongs to power generation and five listed power generation companies were taken to evaluate Beta. Beta values are evaluated using the following formula Beta = Covariance between monthly market return and monthly stock return / Variance of monthly market return. The applicable Beta value is found to be determined as the average of the Beta values of the power generating companies. The period of five years is considered for the project activity as it is the maximum period that covers all the five power companies selected for the beta calculation and is considered appropriate. The beta for each WTG is reported in Appendix IV.
Expected cost of equity Source: CAPM model^{/18/}	Cost of equity = Risk free return + Beta x (Market return – Risk free return) Based on the evidence provided for the cost of equity available at the time of decision making, the benchmark was confirmed to be available at the time of investment decision and appropriate to the financial indicator selected for the project activity. Therefore, the validation team concludes that the benchmark selected by PP is suitable for the financial indicator and the selected benchmark is appropriate and correct. The cost of equity for each WTG is reported in Appendix IV.

One CL (CL 3) was raised for issues related to benchmark which was adequately addressed, resolved and closed in revised PD version 2. The resolution of each CAR and CL is represented in Appendix V: Resolution of Corrective Action and Clarification Requests.

Choice of financial Indicator

The validation team assessed the timing of availability of the input values like capacity, number of machines, O&M cost and its escalation, insurance charges, tariff, project cost, Tax Depreciation rate, Book depreciation rate, Income tax rate and found that the values were readily available to the PP during the investment decision meeting in which the PP took the investment decision. The assessment and evaluation of the input parameters used in the IRR calculations has been done in conformance with VCS requirements. All the input parameters applied in the IRR calculations were found to be suitable and accurate; these were cross-checked with the supporting documents and publically available sources. Table below provides the explanation and justification for the applied values for the project activity.

Parameter / Value/ Source		Justification
Financial indicator		PP has opted for post tax equity IRR for all the sub projects. As per Para 9 and 10 of the investment guidelines ^{/14/} (EB 51 annex 58), the validation team has accepted the approach as correct.
	Financial indicator	
Sub project 1	Post tax equity IRR	
Sub project 2	Post tax equity IRR	
Sub project 3	Post tax equity IRR	
Capacity of WTG (for all the WTGs)		The validation team reviewed the Techno Commercial Offers provided by the WTG suppliers to the PP and the purchase orders for the project. The documents indicated the number of WTGs and capacity in each Sub- project. PP considered the capacity of WTGs from the techno commercial letters offered by the WTG supplier which was available at the time of investment decision and was found to be matching with the respective purchase orders ^{/5/} and cross verification during the onsite visit. Hence, the capacity of the project activity is confirmed to be correct. The capacity of each WTG is reported in Appendix II of this report.
Source: Respective techno commercial offers ^{/9/}		
Period of assessment = 20 years		The validation team checked the input value against the requirement of paragraph 3 of investment guideline which stipulates that the period of assessment shall at least be in tune with the life time of the project activity. PP has taken the period of assessment of financial indicator (i.e post-tax equity IRR) in tune with the operational lifetime of the respective WTGs. By considering the period of assessment of 20 years based on the latest tariff order available at the investment decision of the respective WTGs, the input value is complying with the requirement of para 3 of investment guideline. The validation team accepted the input value as appropriate.
Source:		
WTGs for which investment decision prior to 20th March 2009	TNERC tariff order dated 15th May 2006 ^{/18/}	
WTGs for which investment decision after 20th March 2009	TNERC tariff order dated 20th March 2009 ^{/18/}	
Capital cost = INR 51 Million/MW to 70 Million/MW (for all the WTGs)		The offered price of the project was found to be readily available at the time the investment decision was taken by the investors. The validation team verified the offer letters and found it to be in accordance with paragraph 6 of Guideline EB 51 Annex 58. The validation team cross-checked the input values with the actual values by reviewing the purchase orders ^{/5/} and found that the % departure of individual WTGs are included in its respective sensitivity analysis, hence the validation team has accepted
Source: Respective techno commercial offers ^{/9/}		

	the value. The project cost/ MW of each WTG is reported in Appendix II of this report. The validation team has crosschecked the capital cost with that prescribed in TNERC tariff order dated 20 th March, 2009, and found that the capital cost is mentioned as INR 53.5 Million/MW. The validation team has found that the resultant equity IRR for each WTG with this value is also less than its validated benchmark.											
Plant Load Factor (PLF) = 20.9% to 27.15% Source: Respective Third party assessment report ^{/19/}	The PLF applied is considered from the Third party assessment report^{/19/} prepared by SG Associates, Tirupur Tamilnadu for each sub project. The validation team verified the document and found to be in line with the requirements of paragraph 3 (b) of “Guidelines on Reporting and Validation of Plant Load Factors” EB 48 Annex 11^{/20/}. The validation team has cross-checked the input values with their actual annual PLF by reviewing generation reports^{/21/} for each WTG from the commissioning dates until December 2009 and found that even with actual values of PLF, the financial indicator does not cross its respective validated benchmark. Hence, the validation team accepted the values as correct. The PLF of each WTG is reported in Appendix II of this report. The validation team has crosschecked the capital cost with that prescribed in TNERC tariff order dated 20th March, 2009, and found that the PLF is mentioned as 27.15%. The validation team has found that the resultant equity IRR for each WTG with this value is also less than its validated benchmark.											
Debt/Equity ratio= 70:30 (for all the WTGs) Source:	The input values are sourced from their respective tariff orders referred. The referred documents are found to be available to the wind investors at the time of their investment decisions respectively. The debt applied are hence are in line with paragraph 6 of investment guideline. The validation team has cross-checked the input value with their respective loan sanction letters and found that the resultant financial indicators with the actual debt component does not cross the benchmark. In view of the above results, the validation team accepted the input value as reasonable.											
<table><tr><td>WTGs for which investment decision prior to 20th March 2009</td><td>TNERC tariff order dated 15th May 2006^{/18/}</td></tr><tr><td>WTGs for which investment decision after 20th March 2009</td><td>TNERC tariff order dated 20th March 2009^{/18/}</td></tr></table>				WTGs for which investment decision prior to 20th March 2009	TNERC tariff order dated 15th May 2006 ^{/18/}	WTGs for which investment decision after 20th March 2009	TNERC tariff order dated 20th March 2009 ^{/18/}					
WTGs for which investment decision prior to 20th March 2009	TNERC tariff order dated 15th May 2006 ^{/18/}											
WTGs for which investment decision after 20th March 2009	TNERC tariff order dated 20th March 2009 ^{/18/}											
Tariff												
<table><tr><td>WTGs</td><td>Tariff</td><td>Source</td></tr><tr><td>WTGs which are captive in nature</td><td>INR 3.50/kWh</td><td>Electricity bills^{/22/}</td></tr><tr><td>WTGs which are sale to grid and investment decision prior to 20th March</td><td>INR 2.90/kWh</td><td>TNERC tariff order dated 15th May 2006^{/18/}</td></tr></table>				WTGs	Tariff	Source	WTGs which are captive in nature	INR 3.50/kWh	Electricity bills ^{/22/}	WTGs which are sale to grid and investment decision prior to 20th March	INR 2.90/kWh	TNERC tariff order dated 15th May 2006 ^{/18/}
WTGs	Tariff	Source										
WTGs which are captive in nature	INR 3.50/kWh	Electricity bills ^{/22/}										
WTGs which are sale to grid and investment decision prior to 20th March	INR 2.90/kWh	TNERC tariff order dated 15th May 2006 ^{/18/}										
By reviewing the financial sheets, the validation team has found that for the WTGs which are captive in nature, input values are sourced from the electricity bills and for the WTGs which are sale to grid, input values are sourced from latest TNERC tariff orders available at the time of its investment decisions. The validation team has reviewed the electricity bills^{/22/}, tariff orders^{/18/} and found that input values are as per para 6 of investment guidelines. The validation team cross checked the input value latest electricity bills^{/22/} (for WTGs which are captive in nature) and with respective energy purchase agreements^{/7/} (EPA) signed (for WTGs which are sale to grid) and found that the value is exactly matching and hence accepted the input values.												

<table><tr><td>2009</td><td></td><td></td></tr><tr><td>WTGs which are sale to grid and investment decision after to 20th March 2009</td><td>INR 3.39/kWh</td><td>TNERC tariff order dated 20th March 2009^{/18/}</td></tr></table>			2009			WTGs which are sale to grid and investment decision after to 20th March 2009	INR 3.39/kWh	TNERC tariff order dated 20th March 2009 ^{/18/}				
2009												
WTGs which are sale to grid and investment decision after to 20th March 2009	INR 3.39/kWh	TNERC tariff order dated 20th March 2009 ^{/18/}										
Wheeling charges			The validation team reviewed the tariff orders ^{/18/} and found that for the WTGs which are captive in nature, wheeling charge of 5% is applicable. The validation team has crosschecked the input value with the latest invoices and found to be matching.									
<table><tr><td>WTGs</td><td>Wheeling charges</td><td>Source</td></tr><tr><td>WTGs whose investment decision prior to 20th March 2009</td><td>5%</td><td>TNERC tariff order dated 15th May 2006^{/18/}</td></tr><tr><td>WTGs whose investment decision after to 20th March 2009</td><td>5%</td><td>TNERC tariff order dated 20th March 2009^{/18/}</td></tr></table>				WTGs	Wheeling charges	Source	WTGs whose investment decision prior to 20th March 2009	5%	TNERC tariff order dated 15th May 2006 ^{/18/}	WTGs whose investment decision after to 20th March 2009	5%	TNERC tariff order dated 20th March 2009 ^{/18/}
WTGs	Wheeling charges	Source										
WTGs whose investment decision prior to 20th March 2009	5%	TNERC tariff order dated 15th May 2006 ^{/18/}										
WTGs whose investment decision after to 20th March 2009	5%	TNERC tariff order dated 20th March 2009 ^{/18/}										
(for all the WTGs which are captive in nature)												
O & M expenses =1.1% of the project cost			The O&M charges were mentioned in the latest tariff orders ^{/18/} available at the time of its investment decision. The validation team verified the document and found it to be in accordance with paragraph 6 of Guideline EB 51 Annex 58. The validation team has cross-checked with the actual values by reviewing the signed copy of O&M agreements ^{/23/} and independently calculated the financial indicator with the actual scenario and found that even with the actual scenario, the resultant financial indicator does not cross its validated benchmark. Hence, the applied value is acceptable. To substantiate further, the sensitivity analysis has been done as per para 20 and 21 of investment guideline and found that even the decrease of 10% from the base value does not bring the IRR beyond the benchmark. Hence, the applied value is reasonable and acceptable.									
<table><tr><td>WTGs</td><td>Source</td></tr><tr><td>WTGs for which investment decision prior to 20th March 2009</td><td>TNERC tariff order dated 15th May 2006^{/18/}</td></tr><tr><td>WTGs for which investment decision after 20th March 2009</td><td>TNERC tariff order dated 20th March 2009^{/18/}</td></tr></table>				WTGs	Source	WTGs for which investment decision prior to 20th March 2009	TNERC tariff order dated 15th May 2006 ^{/18/}	WTGs for which investment decision after 20th March 2009	TNERC tariff order dated 20th March 2009 ^{/18/}			
WTGs	Source											
WTGs for which investment decision prior to 20th March 2009	TNERC tariff order dated 15th May 2006 ^{/18/}											
WTGs for which investment decision after 20th March 2009	TNERC tariff order dated 20th March 2009 ^{/18/}											
Annual insurance =0.75% of the project cost			The insurance values are mentioned in the latest tariff order available at the time of its investment decision. The validation team verified the document and found it to be in accordance with paragraph 6 of Guideline EB 51 Annex 58.									
<table><tr><td>WTGs</td><td>Source</td></tr><tr><td>WTGs for which investment decision prior to 20th March 2009</td><td>TNERC tariff order dated 15th May 2006^{/18/}</td></tr><tr><td>WTGs for which</td><td>TNERC tariff</td></tr></table>				WTGs	Source	WTGs for which investment decision prior to 20th March 2009	TNERC tariff order dated 15th May 2006 ^{/18/}	WTGs for which	TNERC tariff			
WTGs	Source											
WTGs for which investment decision prior to 20th March 2009	TNERC tariff order dated 15th May 2006 ^{/18/}											
WTGs for which	TNERC tariff											

The input value of each WTG was cross checked with its zero premium and the resultant financial indicator is not crossing the validated benchmark hence it is acceptable.

investment decision after 20th March 2009	order dated 20th March 2009 ^{/18/}	
Interest rate =11.5% to 13.625% (for all the WTGs) Source: RBI website ^{/24/}	It was verified that the interest rate of each WTG is sourced from the RBI website ^{/24/} available at the time of its investment decision. The validation crosschecked the input value of each WTG with corresponding loan sanction letters and calculated the financial indicator with the actual values and found that the resultant values are not crossing its validated benchmark, hence accepted the input value. The repayment years and moratorium values are sourced from the latest tariff orders ^{/18/} available at the time of its investment decision.	
Loan processing charges =1.12% of debt portion (for all the WTGs) Source: IREDA document	The loan processing charges are taken from IREDA document ^{/25/} which is available at the time of investment decision and is the most authentic source and hence accepted by the validation team.	
Book depreciation = 4.5 % (for all the WTGs) Source: Draft discussion paper sent to State Advisory Committee ^{/26/}	Annual book depreciation is sourced from draft discussion papers which are available at the time of investment decision. Hence, the applied value is accepted as reasonable. The validation team also found that the fair value of the project cost (salvage value) at the end of the assessment period is included as a cash inflow in the final year which is in line with para 4 of EB 51 Annex 58. The validation team also found that the book depreciation which is deducted in estimating profit before tax on which tax is calculated, is added back to profit after tax for the purpose of calculation of financial indicator.	
Tax depreciation=80% (for all the WTGs) Source: Appendix I of Income tax act ^{/26/}	The applicable tax depreciation rate is sourced from Income Tax Act and the calculation is correctly implemented. Hence considered reasonable. The data was also available to the PP at the time of investment decision.	
Corporate Tax =33.99% (for all the WTGs) Source: Assessment and Rate of Income Tax ^{/26/}	The applicable corporate tax is sourced from Income Tax Act available at the time of investment decision and the calculation is correctly implemented. Hence considered reasonable. The data was also available to the PP at the time of investment decision.	
Minimum Alternate Tax (MAT)= 11.33% (for all the WTGs) Source: Assessment and Rate of Income Tax ^{/26/}	The applicable MAT is sourced from Income Tax Act and the calculation is correctly implemented. Hence considered reasonable. The data was also available to the PP at the time of investment decision.	

The equity IRR in comparison with the Benchmark with VCS revenue and without VCS revenue is depicted in the Appendix III of this report.

Four CARs (CAR 5, CAR 7, CAR 8 and CAR 9) and three CLs (CL 1, CL 2, CL 4) were raised for issues related to additionality which were adequately addressed, resolved and closed in revised PD version 2. The resolution of each CAR and CL is represented in Appendix VI: Resolution of Corrective Action and Clarification Requests.

Sensitivity analysis:

As per para 20 and 21 of the investment guideline, the variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be

subjected to reasonable variation. The departure variations in the sensitivity analysis should at least cover a range of +10% and -10%. A sensitivity analysis was conducted on variables that constitute more than 20% of either project costs or project revenues. The project cost, PLF, Tariff and O&M cost are the parameters that are subjected to reasonable variation and the results are documented in the PD and found to be reproducible in the financial sheets. Variations in the sensitivity analysis cover a range of +10% and -10%, and results show that the project activity does not cross the benchmark in any of the scenarios. These results of sensitivity analysis were evaluated and were found to be correct. They indicate conservativeness and robustness of the parameters used for the investment analysis. The revenues of project activity would be insufficient to justify the required investment and it is observed that with the benefits of VCS the project is favorable option to invest. Hence, the project is concluded to be additional and VCS revenue is considered imperative to bridge the gap between IRR and the benchmark. The result of the sensitivity analysis is indicated in Appendix III of this report.

Based on the evaluation, it was evidenced that returns from the project without the revenue from VCS VER are less than the benchmark. Hence, it is confirmed that proposed VCS project activity would not be economically feasible, without the revenue from the sale of verified emission reductions (VER). In this context, the project activity is considered additional.

During the validation, one CAR (CAR 6) was raised for issues related to sensitivity analysis which was adequately addressed, resolved and closed in revised PD version 2. The resolution of each CAR and CL is represented in Appendix VI: Resolution of Corrective Action and Clarification Requests.

2. Common practice analysis

The common practice has been analyzed based on “Tool for the demonstration and assessment of additionality “Version 5.2^{12/} (hereinafter referred to as the additionality tool) for the measures that are listed in paragraph 6 of the “Demonstration and assessment of Additionality” tool as the project activity uses of renewable technology (wind power). As the proposed project activity is a large scale project activity (i.e., 48.1 MW), PP has furnished a common practice analysis as required by the additionality tool. PP has done common practice analysis to complement the investment analysis.

From the aggregate installed capacity for each investor in the State of Tamilnadu, specific project activities greater than 15 MW were identified using publically available sources such as UNFCCC website, etc. The data on 27 investors whose installations are greater than 15 MW (in Tamilnadu) has been obtained from UNFCCC website. It can be seen that, without exception, all private investors in the State of Tamilnadu with installations greater than 15 MW have developed the projects as CDM or VCS projects.

Capacity MW / Name of Owner	Whether applied for CDM or VCS
Capacity =142.350 MW Owner: Investor: Madras Cement Ltd.	Yes
Capacity = 51.600 MW Owner: Simran wind power project	Yes
Capacity= 36.000 MW Owner: Super wind power project	Yes
Capacity=34.500 MW Owner: DLF Home developers	Yes
Capacity= 33.850 MW Owner: Soundararaja Mills Ltd.	Yes
Capacity= 32.250 MW Owner: KPR Mill Pvt. Ltd.	Yes
Capacity=31.000 MW Owner: Grace Infrastructure (P) Ltd.	Yes
Capacity=29.275 MW Owner: Vishal Export Overseas Ltd	Yes
Capacity=25.500 MW Owner: Shanmugavel Group	Yes

Capacity=25.000 MW Owner: Best & Co.	Yes
Capacity=23.400 MW Owner: Bannari Amman Spinning Mills Ltd.	Yes
Capacity=23.000 MW Owner: Lakshmi Machine Works Ltd	Yes
Capacity=22.850 MW Owner: Premier Fine Yarns Pvt. Ltd.	Yes
Capacity=21.000 MW Owner: Sapthagiri Distilleries	Yes
Capacity=20.750 MW Owner: TCS Textiles Ltd.	Yes
Capacity=20.450 MW Owner: Loyal Textile Mills Ltd	Yes
Capacity=20.025 MW Owner: Ashok Leyland Fin. Ltd	Yes
Capacity=19.350 MW Owner: Arvind A Traders	Yes
Capacity=18.750 MW Owner: Muthoot Fincorp Ltd.	Yes
Capacity=17.600 MW Owner: CPCL	Yes
Capacity=17.500 MW Owner: Suzlon Infrastructure Limited	Yes
Capacity=16.250 MW Owner: Premier Spinning & Weaving Mills Pvt. Ltd	Yes
Capacity=16.250 MW Owner: Rasi Seeds (P) Ltd.	Yes
Capacity=15.400 MW Owner: Ambika Cotton Mills Ltd.	Yes
Capacity=15.000 MW Owner: Jayajyoti & Co. Ltd	Yes
Capacity=25.70 MW Owner: NEG Micon India Private Limited	Yes
Capacity=16.5 MW Owner: Powerica Limited	Yes

It can be seen all private wind farm installations, in the similar regulatory and investment climate as that of the project activity and with capacity of over 15 MW in the State of Tamilnadu, are CDM/VCS projects. Hence, all similar wind energy large scale project activities in the State of Tamilnadu without approaching CDM/VCS revenue is not a common practice in the region.

During validation, one CAR (CAR 10) was raised for issues related to common practice analysis which was adequately addressed, resolved and closed in revised PD version 2. The resolution of each CAR and CL is represented in Appendix VI: Resolution of Corrective Action and Clarification Requests.

3.3 Monitoring Plan

Parameters determined ex-ante

The following parameters were available during the validation and will remain fixed throughout the crediting period:

1. Grid emission factor for Southern Grid (EF_{grid}, = 0.94515 tCO₂/MWh)

2. Operating margin CO₂ emission factor for Southern Grid (EF_{grid OM}, y = 0.98756 tCO₂/MWh)
3. Build margin CO₂ emission factor for Southern Grid (EF_{grid BM}, y = 0.81792 tCO₂/MWh)

The grid emission factor (EF_{grid}) was calculated from the operating margin (OM) CO₂ emission factor and build margin (BM) CO₂ emission factor, referenced from “CO₂ Baseline Database for Indian Power Sector”^{27/} Version 5 by Central Electricity Authority (CEA). The weighting of operating margin emission factor and weighting of build margin emission factor are 0.75 and 0.25, respectively. The calculation of OM and BM is as per the version 2 of “Tool to calculate Emission Factor for an Electricity System”^{11/}. The grid emission factor (combined margin) was verified and was found to be correct. The validation team confirmed that parameters, values chosen were appropriate, transparent and conservative.

Parameters determined ex-post

The project uses the monitoring methodology based on “Approved consolidated baseline and monitoring methodology ACM0002 Version 10”^{2/}

With respect to the project activity the only parameter that requires a continuous measurement and monthly recording is the amount of electricity (EG_y in MWh) that is generated by the project activity. The electricity supplied to the grid by each WTG is calculated from the metered reading connected at the respective transformers which can be cross checked with invoices. This approach is applied for the all the WTGs. In addition, the grid emission factor (EG_{grid,CM,y}) is taken *ex-ante*.

According to the ACM 0002 methodology, there are only 2 variables that a windmill project needed for the calculation of emission reduction. These are EG_y (Energy Generated) and EF_{grid,CM,y} (Grid Emission Factor). EF_{grid,CM,y} has been taken as *ex-ante* and remains constant throughout the crediting period. EG_y is monitored and measured as explained above. The on-site visit confirmed that net electricity supplied to the grid is measured through the meter readings of the energy meters installed by electricity board, which have facility to record export and import of energy.

Project participant has provided for electronic archiving of all the monitored data and its availability 2 years after the end of the last crediting period. The monitoring plan also describes requirements for calibration of all the measurement equipment used for monitoring the project activity variables. The main meters will be calibrated as per as per guidelines provided by CEA. The accuracy class of the main meters is not inferior to 0.5s and the calibration frequency is 5 years. The monitoring frequency for EG_y matches with that of the methodology, viz. hourly measurement and monthly recording. The cross checking is provided through the use of the invoices receipts. Project participant has included a few other variables in the monitoring plan (Total electricity imported, Total electricity Exported) to account for the uncertainty where the dates of the recorded data may not coincide with the verification period. The PD also describes additional procedures to deal with data uncertainty, to address the failure of measuring and monitoring equipment etc. The validation team therefore agrees that the project activity meets all the applicability conditions and all other stipulations of the selected approved methodology ACM0002 Version 10.

The validation team physically verified the metering system installed at the WTG and at the substation of the project activity. The validation team confirmed that the description in the revised PD version 2 represents the metering system available at the project activity sites.

The generated electricity data will be directly used for calculation of Baseline emissions after cross checking with the electronic records maintained at the site. EF_{grid,CM,y} is fixed on *ex-ante* basis for the crediting period which is in line with the Emission Factor tool as required by the methodology. PP has provided for electronic archiving of all the monitored data and its availability 2 years after the end of the last crediting period. The validation team therefore concludes that the monitoring plan adequately describes the collection and archiving of the data used for the calculation of the baseline emission.

The Project Document describes the responsibility and authority for registration, monitoring, measurement, reporting and archiving in Section 3.4 of the PD.

3.4 Calculation of GHG Emissions

The GHG source for calculation of the baseline has been chosen as CO₂ and no other sinks or reservoirs for either the baseline or the project activity have been identified. As per ACM0002, the baseline emission sources considered are CO₂ emissions from electricity generation in fossil fuel fired power plants that is displaced due to the project activity. As required under ACM0002, project participant has calculated the baseline emissions by multiplication of the electricity supplied by the project activity and the grid emission factor.

As described in ACM0002, the project emissions are to be considered as zero. With reference to this methodology, project does not lead to any leakage. The validation team assessed the calculations of estimated VCUs as provided by project participant in a spreadsheet.

The estimated CER is 837722 tCO₂e over the crediting period of 10 years which represents a reasonable estimation using the assumptions given by the project. All the assumptions for this estimate either come from the assumptions used for investment analysis or grid emission factor as taken from CEA website. The validation team confirms that the estimates of baseline emissions can be replicated using the information provided and the formulas are correctly applied and the calculations done in a transparent way.

During the validation in this section, two CARs (CAR 1 and CAR 11) were raised on the issue of VER estimation used in the PD based on review of the emission reduction calculation sheet. The issue was adequately addressed, resolved and closed in revised PD version 2. The resolution of the relevant CAR is represented in Appendix VI: Resolution of Corrective Action and Clarification Requests.

The only identified parameter contributing to uncertainty of GHG calculations is the PLF, which has been taken in a conservative way such that the anticipated emission reductions are not over estimated.

3.5 Environmental Impact

As per the Ministry of Environment and Forests (MoEF), Government of India notification ^{/28/} dated 14 September 2006 regarding Environment Impact Assessment studies as per the Environment Protection Rule, 1986 (Published in the Gazette of India, Extraordinary, Part-II, and Section 3, Sub-section (ii) MINISTRY OF ENVIRONMENT AND FORESTS), the project is not categorized to conduct EIA. The no objection certificate^{/29/} (NOC) was obtained for each WTG from Tamilnadu Electricity Board which is also verified by the validation team.

There were no significant environmental impacts of the project on the environment.

3.6 Comments by stakeholders

An on-site local stakeholder questionnaire survey was conducted by TASMA on 10th December 2009 for collecting comments about the project activity. TASMA has their regional representatives located in various districts of Tamilnadu where WTGs are located. The stakeholders were farmers, fishermen, teaching institutions, local body representatives, media, government officials, NGO/Trade Unions and professionals. In order to obtain the feedback transparently, TASMA instructed their regional representatives to circulate the questionnaire randomly to the local stakeholders in villages/towns near the installed WTG sites. The regional representatives also provided a significant number of Questionnaires to the local village Panchayat office and requested them to notify local residents to provide their feedback on the proposed project activity. The regional representatives collected the completed Questionnaires from the stakeholders who were willing to provide their feedback. All documentation was in English and further translated into the regional language wherever necessary by the regional representatives of TASMA.

A total of 75 duly filled in Questionnaires with signatures and addresses were received from stakeholders. A brief introduction of the VCS project activity was given along with the questionnaire.

Summary of the comments received:

The stakeholders provided their feedback on the initiative taken up by the PP. All the stakeholders expressed that they were glad to know the proposed project would contribute to mitigate global warming and improving the local economy driven by the installations of WTGs by TASMA members. This was also verified during the onsite visit by the validation team. The feedback in the questionnaire also reflects that the stakeholders agreed that the project activity is helpful in the socio-economic upliftment of the people in the neighboring area and also supported the project as they believe the project is environmentally sound and it would lead to an overall development of the area by generating employment and improving infrastructure. The local village people unanimously agreed that due to this project activity the employment opportunities for the local people have increased to some extent. No negative comments were received from the local villagers about the project activity.

4 Validation conclusion

SIRIM QAS Intl. performed a validation of the proposed VCS project “Bundled Wind Power Project in Tamilnadu, India, co-ordinated by Tamilnadu Spinning Mills Association (TASMA V1A)”. The validation was carried out to independently assess whether the project confirms to the qualification criteria and requirements of the Voluntary Carbon Standard (VCS) 2007.1, including the baseline and monitoring methodology applied. The VCS program provides the standard and framework for independent validation based on ISO 14064-2:2006 and ISO14064-3:2006 standards.

The validation was performed using a risk based approach, the review of the project description and the subsequent follow-up interviews provided SIRIM QAS Intl. with sufficient evidence to determine the fulfillment of the stated criteria.

The project participant is Tamilnadu Spinning Mills Association (TASMA). The project applies the approved baseline and monitoring methodology “Consolidated baseline methodology for grid-connected electricity generation from renewable sources” ACM 0002 Version 10.

The project activity is a bundled VCS project activity by PP which involves installation of 84 WTGs totaling to 48.1 MW. The project will result in the reduction of greenhouse gas emissions that are real, measurable and give long term benefits to the mitigation of climate change. It is demonstrated that the project faces an investment barrier that would prevent its implementation without the VCU revenue, as the financial indicator is lower than the validated benchmark. Emissions reductions from the project are hence additional to any that would occur in the absence of the project activity.

The GHG emission calculations are documented in a complete and transparent manner. The formulae and methodologies for accounting GHG emissions are appropriate and emission factors are deemed to be of sufficient accuracy. The total emission reductions from the project if implemented as envisaged in the PD version 2 dated 15th March 2010 are 837,722 tCO₂e over the 10-year crediting period. The emission reductions forecast has been checked and it is deemed likely that the stated amount is achievable on the basis that the underlying assumptions do not change.

The monitoring plan is in line with the approved monitoring methodology of ACM 0002 Version 10. The plan adequately addresses all necessary information for monitoring and reporting of emissions reductions due to the project activity. Responsibilities and authorities for project management, monitoring and reporting, and the data quality control and quality assurance procedures have been described in the PD.

There is no requirement for an EIA by the host country. The project is not likely to create any significant adverse environmental impacts. The project complies with all environmental regulations of India.

In summary, it is SIRIM QAS Intl.’s opinion that the “Bundled Wind Power Project in Tamilnadu, India, co-ordinated by Tamilnadu Spinning Mills Association (TASMA V1A)”, as described in the PD version 2 dated 15th March 2010, meets all relevant VCS 2007.1 requirements, is eligible as category I of the Large scale renewable energy generation project type and correctly applies the baseline and monitoring methodology specified in ACM 0002 (version 10).

As such, SIRIM QAS Intl. recommends the registration of the project as a VCS project activity.

Prepared by :



Dr. G.Vishnu
(Validation Team Leader)

Approved by :



Parama Iswara Subramaniam
(VVB Representative)

5.0 References

Ref. No.	Document or Type of Information
/1/	VCS 2007.1 Standard, Program guidelines, Registration and Issuance guidance document
/2/	CDM approved consolidated baseline methodology ACM 0002 Version 10
/3/	VCS Project Description (PD) Version 1 and annexures
/4/	VCS Project Description (PD) Version 2 and annexures
/5/	Purchase orders
/6/	Commissioning certificates
/7/	Power Purchase agreements/ Energy wheeling agreements
/8/	Offer letters
/9/	Land documents
/10/	Undertaking letter from TASMA
/11/	Tool to calculate the emission factor for an electricity system Version 2.0
/12/	Tool for the demonstration and assessment of additionality (Version 5.2)
/13/	Board resolution letters
/14/	Guidelines for Investment analysis (Version 3)
/15/	RBI website for Risk free return
/16/	BSE 500 indices for market return
/17/	BSE 500 indices for beta –Bloomberg
/18/	TNERC Tariff orders 2006/2009
/19/	PLF reports
/20/	Guidelines for PLF estimation EB 48 Annex 11
/21/	Generation reports
/22/	Electricity bills
/23/	O&M agreements
/24/	RBI website for interest rates
/25/	IREDA guidelines
/26/	Income tax act
/27/	CEA database version 5.0
/28/	MoEF notification
/29/	No Objection Certificate

Appendix I: Project Description

Sl. No.	Company Code	Name of the Mills/ Companies	No. of WT Gs	Capacity (In MW)	Total Capacity (In MW)	HTSC. No	Commissioning Date / Captive or sale to grid	WTG Make	WTG Location	Latitude (N)	Longitude (E)
Sub project 1											
1	A1	Ambika Cotton Mills Limited.,	2	0.800	1.600	183	09-Jan-09/Captive	ENERCON	Muthunaickenpatty Village, Dindigul	11.73	76.65
2	A1	Ambika Cotton Mills Limited.,				183	09-Jan-09/Captive	ENERCON	Muthunaickenpatty Village, Dindigul	11.73	76.69
3	A2	Bright Castings	1	0.600	0.600	2651	08-Aug-08/Captive	VESTAS RRB	Kulayaneri Village, Tirunelveli	9.00	77.42
4	A3	Concorde Agencies	1	0.225	0.225	2675	25-Sep-08/Sale to grid	VESTAS RRB	Kulayaneri Village, Tirunelveli	8.99	77.42
5	A4	Concorde Textiles	2	0.225	0.450	2628	21-May-08/Sale to grid	VESTAS RRB	Kulayaneri Village, Tirunelveli	8.99	77.42
6	A4	Concorde Textiles				2621	30-Apr-08/Sale to grid	VESTAS RRB	Kulayaneri Village, Tirunelveli	8.99	77.41
7	A5	Hemalatha Mills Pvt. Ltd.,	1	0.225	0.225	774	30-Sep-08/Captive	VESTAS RRB	Puliampatti Village, Coimbatore	10.94	77.23
8	A7	Pavathal Spinning Mills Pvt. Ltd.,	1	0.250	0.250	1545	19-Sep-08/Captive	PIONEER WINCON	Moolarapatti Village, Erode	10.77	77.41
9	A9	Santhi Casting Works	1	0.600	0.600	2612	09-Apr-08/Captive	VESTAS RRB	Alaganeri Village, Tirunelveli	8.24	77.60
10	A12	SRG Apparels Pvt. Ltd.,	2	0.250	0.500	2618	26-Apr-08/Sale to grid	CHIRANJEEVI WIND	Perungudi Village, Tirunelveli	8.28	77.62
11	A12	SRG Apparels Pvt. Ltd.,				2618	26-Apr-08/Sale to grid	CHIRANJEEVI WIND	Perungudi Village, Tirunelveli	8.28	77.60
12	A13	Sri Dhanalakshmi Sizing & Spinning Mill	3	0.600	1.800	2620	29-Apr-08/Captive	VESTAS RRB	Thanakkarkulam Village, Tirunelveli	8.24	77.64
13	A13	Sri Dhanalakshmi Sizing & Spinning Mill				2630	23-May-08/Captive	VESTAS RRB	Thanakkarkulam Village, Tirunelveli	8.25	77.62

14	A13	Sri Dhanalakshmi Sizing and Spinning Mill				2638	16-Jun-08/ Captive	VESTAS RRB	Thanakkarkulam Village, Tirunelveli	8.23	77.63
15	A14	Thangamman Process	1	0.250	0.250	728	10-Apr-08/ Captive	CHIRANJEEVI WIND	Varapatti Village, Coimbatore	10.90	77.17
16	A19	Warsaw International	1	0.250	0.250	606	02-Apr-08/ Sale to grid	PIONEER WINCON	Panikkampatti Village, Coimbatore	10.94	77.25
Sub project 2											
17	B1	Associated Autotex Ancillaries Pvt. Ltd.,	1	0.800	0.800	164	27-Sep-08/ Captive	ENERCON	Melkaraipatti Village, Dindigul	10.58	77.44
18	B2	Auto Coats	1	0.800	0.800	172	30-Sep-08/ Sale to grid	ENERCON	Kozhumankondan Village, Dindigul	10.58	77.44
19	B3	Doller Industries Ltd.,	1	1.250	1.250	2688	27-Sep-08/ Sale to grid	SUZLON	Udayathoor Village, Tirunelveli	8.16	77.45
20	B4	KG Entertainment Company (P) Ltd.,	1	1.250	1.250	1546	20-Sep-08/ Sale to grid	SUZLON	Chinnaputhur Village, Erode	10.74	77.43
21	B5	Narasu's Roller Flour Mills	1	0.800	0.800	161	12-Sep-08/ Captive	ENERCON	Kozhumankondan Village, Dindigul	10.57	77.44
22	B6	Sushrushah Medicare Centre Pvt. Ltd.,	1	0.250	0.250	2793	28-Mar-09/ Sale to grid	CHIRANJEEVI WIND	Pazhavor Village, Tirunelveli	8.22	77.60
Sub project 3											
23	C000 1	A. Duraisamy Modern Rice Mill	1	0.225	0.225	1677	06-Jul-09/ Captive	SOUTHERN WIND	Moolarapatti Village, Tirupur	10.76	77.39
24	C000 4	Ahill Knit Exports	1	0.250	0.250	1615	21-Mar-09/ Sale to grid	PIONEER WINCON	Moolarapatti Village, Erode	10.78	77.40
25	C000 8	Archana Jewel Craft	1	0.250	0.250	839	08-Sep-09/ Sale to grid	PIONEER WINCON	Kethanur Village, Tirupur	10.89	77.27
26	C000 9	Arul Steels	1	0.600	0.600	82	30-Sep-08/ Sale to grid	RRB	Ayyanaruthu Village, Tuticorin	8.97	77.69
27	C001 0	Arun Textiles Pvt. Ltd.,	2	0.600	1.200	649	17-Feb-09/ Captive	SUZLON	V. Kallipalayam Village, Coimbatore	10.89	77.33
28	C001 0	Arun Textiles Pvt. Ltd.,				660	26-Mar-09/ Captive	SUZLON	V. Vadamalaipalayam Village, Coimbatore	10.92	77.36

29	C001 1	Aruna Alloy Steels Pvt. Ltd.,	1	1.650	1.650	12	28-Mar-09/ Captive	VESTAS	Vallalnathi Village, Theni	9.93	77.54
30	C001 9	C. Dorairaj	1	0.600	0.600	838	04-Sep-09/ Sale to grid	RRB	Mallegoundanpalladam Village, Tirupur	10.93	77.20
31	C002 0	C. Natarajan	1	0.225	0.225	2816	30-Mar-09/ Sale to grid	RRB	Pazhavor Village, Tirunelveli	8.15	77.36
32	C002 3	Cheran Textile Mills	1	0.600	0.600	719	29-Sep-09/ Sale to grid	RRB	Vavipalayam Village, Tirupur	10.88	77.27
33	C002 4	Chiranjivevi Wind Energy Ltd.,	2	0.250	0.500	662	28-Mar-09/ Sale to grid	CHIRANJIVEVI WIND	Vadhambacheri Village, Coimbatore	10.55	77.15
34	C002 4	Chiranjivevi Wind Energy Ltd.,				129	31-Mar-09/ Sale to grid	CHIRANJIVEVI WIND	Varapatti Village, Coimbatore	10.54	77.11
35	C002 6	Coimbatore Pioneer Fertilizers Ltd.,	2	0.600	1.200	656	26-Mar-09/ Sale to grid	RRB	Vadhambacheri Village, Coimbatore	10.90	77.25
36	C002 6	Coimbatore Pioneer Fertilizers Ltd.,				657	26-Mar-09/ Sale to grid	RRB	Vadhambacheri Village, Coimbatore	10.89	77.25
37	C002 7	Concorde Textiles	2	0.600	1.200	2818	30-Mar-09/ Sale to grid	RRB	Serndamangalam Village, Tirunelveli	9.06	77.42
38	C002 7	Concorde Textiles				2925	08-Sep-09/ Sale to grid	RRB	Poigai Village, Tirunelveli	9.05	77.41
39	C002 9	Divya Spinning Mill Pvt. Ltd.,	1	1.250	1.250	1708	26-Sep-09/ Sale to grid	SUZLON	Chinnaputhur Village, Erode	10.72	77.43
40	C003 0	Dollar Industries Ltd.,	1	1.250	1.250	2935	22-Sep-09/ Sale to grid	SUZLON	Sundankurichi Village, Tirunelveli	8.96	77.67
41	C003 2	Eveready Spinning Mills Pvt. Ltd.,	1	0.600	0.600	713	25-Sep-09/ Sale to grid	RRB	Vavipalayam Village, Coimbatore	10.88	77.27
42	C003 3	Eveready Textiles	1	0.600	0.600	695	22-Aug-09/ Sale to grid	RRB	Vavipalayam Village, Tirupur	10.88	77.27
43	C003 7	Green Energy	1	0.250	0.250	3018	14-Dec-09/ Sale to grid	PIONEER WINCON	Poigai Village, Tirunelveli	9.04	77.38
44	C004 4	Jayanthi Textile Products Unit II	1	1.250	1.250	219	29-Mar-09/ Captive	SUZLON	Mettubavi Village, Coimbatore	10.85	77.12

45	C004 5	Jayavarma Textiles Pvt. Ltd.,	1	1.250	1.250	791	27-Mar-09/ Captive	SUZLON	Vadavalli Village,Coimbatore	10.86	77.15
46	C004 9	Karpagham Tex	1	0.600	0.600	705	23-Sep-09/ Sale to grid	RRB	Varapatti Village,Coimbatore	10.91	77.19
47	C005 2	Lakshminarayan Gaurishanker Enterprises Pvt. Ltd.,	4	0.250	1.000	818	26-May-09/ Sale to grid	PIONEER WINCON	Kethanur Village,Tirupur	10.95	77.27
48	C005 2	Lakshminarayan Gaurishanker Enterprises Pvt. Ltd.,				799	28-Mar-09/ Sale to grid	PIONEER WINCON	Kethanur Village,Coimbatore	10.95	77.26
49	C005 2	Lakshminarayan Gaurishanker Enterprises Pvt. Ltd.,				789	26-Mar-09/ Sale to grid	PIONEER WINCON	Kethanur Village,Coimbatore	10.95	77.27
50	C005 2	Lakshminarayan Gaurishanker Enterprises Pvt. Ltd.,				788	26-Mar-09/ Sale to grid	PIONEER WINCON	Kethanur Village,Coimbatore	10.94	77.26
51	C005 4	Madras Hardtools Pvt. Ltd.,	2	0.250	0.500	120	28-Sep-08/ Sale to grid	CHIRANJEEVI WIND	Vadhambacheri Village,Coimbatore	10.54	77.15
52	C005 4	Madras Hardtools Pvt. Ltd.,				2889	31-Jul-09/ Sale to grid	CHIRANJEEVI WIND	Poigai Village,Tirunelveli	9.02	77.40
53	C006 0	Micro Colour Makers	1	0.250	0.250	1544	11-Sep-08/ Sale to grid	PIONEER WINCON	Moolarapatti Village,Erode	10.78	77.41
54	C006 2	N. Leelavathy	1	0.225	0.225	2815	30-Mar-09/ Sale to grid	RRB	Pazhavor Village,Tirunelveli	8.14	77.36
55	C006 3	N. Muthukumaar	1	0.600	0.600	718	29-Sep-09/ Sale to grid	RRB	Varapatti Village,Coimbatore	10.91	77.19
56	C006 4	Narasu's Spinning Mills	1	0.600	0.600	1653	30-Mar-09/ Captive	SUZLON	Kethalrev Village,Erode	10.76	77.43
57	C006 5	P. Periyaswamy HUF	1	0.600	0.600	707	23-Sep-09/ Sale to grid	RRB	Varapatti Village,Tirupur	10.91	77.19
58	C006 9	P.S.K. Engineering Construction & Co.,	1	1.500	1.500	230	28-Sep-09/ Sale to grid	SUZLON	Mettubavi Village,Coimbatore	10.85	77.15

59	C007 0	Pallava Textile Ltd.,	1	1.650	1.650	38	26-Sep-09/ Captive	VESTAS	Jangalpatti Village, Theni	9.90	77.48
60	C007 4	Perfect Gears (Chennai) Pvt. Ltd.,	1	0.250	0.250	2773	25-Mar-09/ Sale to grid	PIONEER WINCON	Ayakudi Village, Tirunelveli	9.01	77.32
61	C007 6	Shristi Cotspinn Pvt. Ltd.,	1	0.600	0.600	133	31-Jul-09/ Captive	RRB	Vadhambacheri Village, Coimbatore	10.88	77.25
62	C008 3	Raju & Co.,	1	0.600	0.600	81	30-Sep-08/ Sale to grid	RRB	Ayyanaruthu Village, Tuticorin	8.96	77.69
63	C008 6	S C Energiaa Pvt. Ltd.,	1	0.250	0.250	252	28-May-09/ Sale to grid	CHIRANJEEVI WIND	Aralivaimozhi Village	8.14	77.33
64	C008 8	Sabari Jewellery	1	0.250	0.250	1658	31-Mar-09/ Sale to grid	PIONEER WINCON	Athukinathupatti Village, Coimbatore	10.69	77.31
65	C009 2	Salona Cotspin Ltd.,	1	0.600	0.600	687	24-Jul-09/ Captive	RRB	Vadhambacheri Village, Tirupur	10.90	77.25
66	C009 3	Santhi Casting Works	2	0.600	1.200	107	26-Mar-09/ Sale to grid	RRB	Ayyanaruthu Village, Tuticorin	8.96	77.69
67	C009 3	Santhi Casting Works				106	26-Mar-09/ Sale to grid	RRB	Ayyanaruthu Village, Tuticorin	8.95	77.73
68	C009 4	Saravana Textile Mills	2	0.600	1.200	693	22-Aug-09/ Sale to grid	RRB	Vavipalayam Village, Coimbatore	10.88	77.27
69	C009 4	Saravana Textile Mills				694	22-Aug-09/ Sale to grid	RRB	Vavipalayam Village, Tirupur	10.87	77.27
70	C009 5	Scientific MES Technik Pvt. Ltd.,	1	0.600	0.600	105	26-Mar-09/ Sale to grid	RRB	Ayyanaruthu Village, Tuticorin	8.98	77.68
71	C010 2	Siva Subramania Textiles	1	0.600	0.600	652	11-Mar-09/ Captive	RRB	Elavanthi Village, Tirupur	10.91	77.29
72	C010 4	Soundara Knit Wears	1	0.600	0.600	706	23-Sep-09/ Sale to grid	RRB	Varapatti Village, Coimbatore	10.90	77.18
73	C010 7	Sree Kandiamman Industries	1	0.250	0.250	2811	30-Mar-09/ Sale to grid	CHIRANJEEVI WIND	Perungudi Village, Tirunelveli	8.28	77.57
74	C010 9	Sri Dhanalakshmi Sizing and Spinning Mill	1	0.600	0.600	2859	20-Jun-09/ Sale to grid	RRB	Panagudi Village, Tirunelveli	8.20	77.34

75	C011 1	Sri Jagannatha Spinners	1	0.600	0.600	688	31-Jul-09/ Captive	RRB	Selakarachal Village,Coimbatore	10.91	77.14
76	C011 9	Srinivasan Associates Pvt. Ltd.,	1	0.600	0.600	836	03-Sep-09/ Sale to grid	RRB	V. Kallipalayam Village,Coimbatore	10.89	77.31
77	C012 0	Sripathi Paper and Boards Pvt. Ltd.,	1	0.600	0.600	817	22-May-09/ Captive	RRB	Elavanthi Village,Coimbatore	10.90	77.30
78	C012 4	Sun Chem Products (P) Ltd.,	1	0.250	0.250	2786	27-Mar-09/ Sale to grid	CHIRANJEEVI WIND	Ayakudi Village,Tirunelveli	8.98	77.31
79	C012 5	Sun Industrial Automations & Solutions	1	0.600	0.600	2922	02-Sep-09/ Sale to grid	RRB	Sambavarvadakarai Village,Tirunelveli	8.98	77.37
80	C012 9	T.N. Nantagopal & Sons,	1	0.600	0.600	2979	29-Sep-09/ Sale to grid	RRB	Sambavarvadakarai Village,Tirunelveli	9.02	77.39
81	C013 2	Thirupur Suriya Textiles Pvt. Ltd.,	1	1.250	1.250	128	30-Mar-09/ Captive	SUZLON	Vadavalli Village,Coimbatore	10.87	77.14
82	C013 4	Twowin Export	1	0.225	0.225	1652	29-Mar-09/ Sale to grid	SOUTHERN WIND	Munduelampatti Village,Erode	10.73	77.34
83	C013 5	Vellingiri Andavar Textiles Pvt. Ltd.,	1	0.600	0.600	692	07-Aug-09/ Captive	RRB	Selakarachal Village,Coimbatore	10.92	77.14
84	C014 0	VXL Systems	1	0.800	0.800	1704	25-Sep-09/ Sale to grid	ENERCON	Kethalrev Village,Coimbatore	10.75	77.44
			84		48.100						

Appendix II: Investment Analysis Input Values

S.No	Name of the Company	Company code	Total Capacity	Project Cost/MW as per PO (in INR Millions)	Project Cost/MW as per Offer (in INR Millions)	Plant Load Factor (PLF)	Interest Rate	Offer date	Investment decision date	Purchase Order Date
1	Ambika Cotton Mills Limited1.	A1	1.6	51.88	61.22	21.79%	12.375%	07-01-08	09-01-08	10-01-08
2	Bright Castings	A2	0.6	55.24	63.95	22.19%	12.375%	10-01-08	20-02-08	07-03-08
3	Concorde Agencies	A3	0.225	55.96	64.55	25.35%	12.375%	06-01-08	16-01-08	04-02-08
4	Concorde Textiles	A4	0.45	55.96	64.6	25.35%	12.375%	06-01-08	16-01-08	04-02-08
5	Hemalatha Mills Pvt. Ltd.,	A5	0.225	51.80	58.5	20.90%	12.375%	25-02-08	03-03-08	05-03-08
6	Pavathal Spinning Mills Pvt. Ltd.,	A7	0.25	53.70	61.25	21.84%	12.375%	01-08-07	02-01-08	02-07-08
7	Santhi Casting Works	A9	0.6	55.28	64	22.04%	12.375%	20-11-07	07-01-08	28-01-08
8	SRG Apparels Pvt. Ltd.,	A12	0.5	45.87	51.8	21.03%	12.375%	23-11-07	16-01-08	28-01-08
9	Sri Dhanalakshmi Sizing & Spinning Mill	A13	1.8	60	64	22.04%	12.375%	01-12-07	14-01-08	25-01-08
10	Thangamman Process	A14	0.25	53.81	61.1	22.87%	12.375%	15-12-07	01-02-08	15-02-08
11	Warsaw International	A19	0.25	51.48	53.25	21.11%	12.375%	25-01-08	25-03-11	23-02-08
12	Associated Autotex Ancillaries Pvt. Ltd.,	B1	0.8	51.88	60.5	21.79%	12.50%	15-10-07	04-07-08	21-07-08
13	Auto Coats	B2	0.8	51.88	57	21.79%	12.50%	15-10-07	04-07-08	21-07-08
14	Doller Industries Ltd.,	B3	1.25	50.73	56.7	24.93%	12.50%	01-07-08	07-07-08	16-07-08
15	KG Entertainment Company (P) Ltd.,	B4	1.25	51.15	58	24.02%	12.50%	24-11-07	09-04-08	21-05-08
16	Narasu's Roller Flour Mills	B5	0.8	53.40	64.4	22.84%	12.50%	17-12-07	15-05-08	04-06-08

17	Sushrushah Medicare Centre Pvt. Ltd.,	B6	0.25	42.60	51	21.03%	12.50%	18-07-08	21-07-08	25-07-08
18	A. Duraisamy Modern Rice Mill	C0001	0.225	57.51	60.30	22.20%	13.625%	10-04-09	16-04-09	01-05-09
19	Ahill Knit Exports	C0004	0.25	54.88	54.88	21.93%	13.625%	14-01-09	30-01-09	09-02-09
20	Archana Jewel Craft	C0008	0.25	58.57	60.88	22.82%	13.625%	13-07-09	21-07-09	31-07-09
21	Arul Steels	C0009	0.6	56.21	56.21	22.75%	13.00%	11-08-08	12-08-08	13-08-08
22	Arun Textiles Pvt. Ltd.,	C0010	1.2	61.48	64.45	24.45%	13.00%	15-07-08	25-07-08	03-08-08
23	Aruna Alloy Steels Pvt. Ltd.,	C0011	1.65	66.34	68.60	26.76%	13.625%	20-12-08	24-12-08	29-12-08
24	C. Dorairaj	C0019	0.6	56.72	57.65	22.16%	13.625%	27-07-09	29-07-09	03-08-09
25	C. Natarajan	C0020	0.225	56.34	58.50	24.89%	13.00%	02-07-08	05-08-08	18-08-08
26	Cheran Textile Mills	C0023	0.6	56.84	58.00	22.16%	13.625%	17-07-09	18-07-09	21-07-09
27	Chiranjeevi Wind Energy Ltd.,	C0024A	0.5	53.40	53.40	22.10%	13.625%	15-01-09	16-01-09	17-01-09
28	Coimbatore Pioneer Fertilizers Ltd.,	C0026	1.2	54.24	54.24	22.16%	13.625%	25-10-08	31-10-08	03-01-09
29	Concorde Textiles	C0027(A)	1.2	56.21	57.48	22.91%	13.00%	10-08-08	24-09-08	27-09-08
30	Divya Spinning Mill Pvt. Ltd.,	C0029	1.25	62.93	64.44	24.58%	13.625%	25-06-09	30-06-09	06-07-09
31	Dollar Industries Ltd.,	C0030	1.25	63.00	63.00	24.25%	13.625%	09-07-09	14-07-09	20-07-09
32	Eveready Spinning Mills Pvt. Ltd.,	C0032(A)	0.6	57.40	58.40	22.16%	13.625%	07-08-09	10-08-09	12-08-09
33	Eveready Textiles	C0033	0.6	56.93	57.45	22.16%	13.625%	22-06-09	23-06-09	26-06-09
34	Green Energy	C0037	0.25	58.95	60.14	22.98%	11.50%	21-09-09	03-10-09	28-10-09
35	Jayanthi Textile Products Unit II	C0044(A)	1.25	60.93	63.82	24.06%	13.625%	06-01-09	09-01-09	16-01-09
36	Jayavarma Textiles Pvt. Ltd.,	C0045	1.25	63.02	65.62	24.06%	13.00%	18-09-08	23-09-08	29-09-08
37	Karpagham Tex	C0049	0.6	58.96	61.85	22.82%	13.625%	14-08-09	17-08-09	23-08-09

38	Lakshminarayan Gaurishanker Enterprises Pvt. Ltd.,	C0052	1	55.88	56.20	22.82%	13.625%	12-02-09	16-02-09	30-03-09
39	Madras Hardtools Pvt. Ltd.,	C0054(A)	0.25	59.20	56.40	22.10%	13.00%	25-07-08	01-08-08	04-08-08
40	Madras Hardtools Pvt. Ltd.,	C0054(B)	0.25	59.20	58.45	24.24%	13.625%	20-03-09	03-04-09	27-04-09
41	Micro Colour Makers	C0060	0.25	54.88	54.88	21.93%	13.00%	16-07-08	21-07-08	02-08-08
42	N. Leelavathy	C0062	0.225	56.70	58.88	24.89%	13.00%	02-07-08	05-08-08	18-08-08
43	N. Muthukumaar	C0063	0.6	59.62	62.50	22.82%	13.625%	03-08-09	11-08-09	24-08-09
44	Narasu's Spinning Mills	C0064	0.6	64.13	65.82	25.12%	13.625%	09-11-08	27-11-08	12-12-08
45	P. Periyaswamy HUF	C0065	0.6	58.08	60.44	22.82%	13.625%	12-08-09	14-08-09	24-08-09
46	P.S.K. Engineering Construction & Co.,	C0069	1.5	64.58	68.13	27.15%	13.625%	03-08-09	04-08-09	09-08-09
47	Pallava Textile Ltd.,	C0070	1.65	66.63	70.00	26.76%	13.625%	19-08-09	22-08-09	26-08-09
48	Perfect Gears (Chennai) Pvt. Ltd.,	C0074	0.25	55.39	55.50	22.98%	13.625%	09-01-09	12-01-09	14-01-09
49	Preethi Cotspin Pvt. Ltd.,	C0076(A)	0.6	58.06	60.00	22.16%	13.625%	09-05-09	24-05-09	10-06-09
50	Raju & Co.,	C0083	0.6	56.21	56.21	22.75%	13.00%	08-08-08	09-08-08	13-08-08
51	S C Energiaa Pvt. Ltd.,	C0086	0.25	56.60	57.75	23.67%	13.625%	16-01-09	20-01-09	23-01-09
52	Sabari Jewellery	C0088	0.25	54.10	54.10	21.93%	13.625%	11-02-09	13-02-09	16-02-09
53	Salona Cotspin Ltd.,	C0092(A)	0.6	58.45	60.69	22.16%	13.625%	27-04-09	04-05-09	22-05-09
54	Santhi Casting Works	C0093	1.2	56.94	58.54	23.39%	13.00%	29-08-08	30-08-08	03-09-08
55	Saravana Textile Mills	C0094	1.2	56.96	58.00	22.16%	13.625%	22-06-09	23-06-09	26-06-09

56	Scientific MES Technik Pvt. Ltd.,	C0095	0.6	57.02	57.88	23.39%	13.625%	19-01-09	21-01-09	23-01-09
57	Siva Subramania Textiles	C0102	0.6	58.72	60.71	22.16%	13.625%	05-02-09	06-02-09	09-02-09
58	Soundara Knit Wears	C0104	0.6	58.40	61.25	22.82%	13.625%	19-08-09	20-08-09	23-08-09
59	Sree Kandiamman Industries	C0107	0.25	55.75	56.34	22.17%	13.625%	27-02-09	02-03-09	06-03-09
60	Sri Dhanalakshmi Sizing and Spinning Mill	C0109(B)	0.6	55.03	57.95	24.58%	13.625%	27-01-09	02-02-09	20-03-09
61	Sri Jagannatha Spinners	C0111	0.6	61.14	61.90	22.82%	13.625%	12-06-09	15-06-09	18-06-09
62	Srinivasan Associates Pvt. Ltd.,	C0119	0.6	57.77	60.00	22.48%	13.625%	03-07-09	08-07-09	17-07-09
63	Sripathi Paper and Boards Pvt. Ltd.,	C0120	0.6	60.66	61.85	22.16%	13.625%	17-03-09	23-03-09	26-03-09
64	Sun Chem Products (P) Ltd.,	C0124	0.25	56.49	58.80	24.24%	13.625%	22-12-08	26-12-08	03-01-09
65	Sun Industrial Automations & Solutions	C0125	0.6	62.84	62.84	24.50%	13.625%	14-07-09	15-07-09	18-07-09
66	T.N. Nantagopal & Sons,	C0129	0.6	60.04	61.33	22.91%	13.625%	20-07-09	21-07-09	24-07-09
67	Thirupur Suriya Textiles Pvt. Ltd.,	C0132	1.25	61.07	63.66	24.06%	13.625%	18-12-08	20-12-08	25-12-08
68	Twowin Export	C0134	0.225	55.58	56.54	22.20%	13.625%	20-02-09	25-02-09	02-03-09
69	Vellingiri Andavar Textiles Pvt. Ltd.,	C0135	0.6	60.45	62.30	22.82%	13.625%	08-06-09	12-06-09	15-06-09
70	VXL Systems	C0140	0.8	59.29	60.00	22.69%	13.625%	20-06-09	23-06-09	30-06-09

Appendix III: Results – Financial Indicator

S.No	Name of the Company	Company code	No .of WTGs	Capacity (in MW)	Equity IRR without VCS Revenue	Equity Project IRR with VCS Revenue	Sensitivity Analysis			
							PLF +10%	Tariff +10%	Project Cost -10%	O&M -10%
1	Ambika Cotton Mills Limited	A1	2	0.8	6.20%	16.52%	8.86%	8.87%	9.17%	6.53%
2	Bright Castings	A2	1	0.6	5.98%	13.89%	8.56%	8.57%	8.88%	6.32%
3	Concorde Agencies	A3	1	0.225	6.04%	17.74%	8.58%	8.59%	8.88%	6.41%
4	Concorde Textiles	A4	2	0.225	5.43%	17.04%	7.94%	7.95%	8.24%	5.79%
5	Hemalatha Mills Pvt. Ltd.,	A5	1	0.225	6.28%	16.74%	8.96%	8.97%	9.28%	6.61%
6	Pavathal Spinning Mills Pvt. Ltd.,	A7	1	0.25	6.29%	14.86%	8.94%	8.95%	9.27%	6.62%
7	Santhi Casting Works	A9	1	0.6	6.35%	15.59%	8.87%	8.87%	9.17%	6.62%
8	SRG Apparels Pvt. Ltd.,	A12	2	0.25	6.23%	16.70%	8.82%	8.84%	9.15%	6.57%
9	Sri Dhanalakshmi Sizing & Spinning Mill	A13	3	0.6	5.34%	13.08%	7.62%	7.62%	7.89%	5.65%
10	Thangamman Process	A14	1	0.25	7.15%	14.42%	9.78%	9.79%	10.11%	7.48%
11	Warsaw International	A19	1	0.25	7.81%	22.74%	10.83%	10.85%	11.20%	3.16%
12	Associated Autotex Ancillaries Pvt. Ltd.,	B1	1	0.8	6.60%	16.33%	9.08%	9.08%	9.36%	6.90%
13	Auto Coats	B2	1	0.8	4.72%	15.08%	7.24%	7.25%	7.53%	5.13%
14	Doller Industries Ltd.,	B3	1	1.25	7.98%	23.89%	11.05%	11.07%	11.48%	8.35%
15	KG Entertainment Company (P) Ltd.,	B4	1	1.25	6.48%	19.79%	9.15%	9.16%	9.49%	6.80%
16	Narasu's Roller Flour Mills	B5	1	0.8	7.63%	17.23%	10.42%	10.43%	10.76%	7.96%
17	Sushrushah Medicare Centre Pvt. Ltd.,	B6	1	0.25	6.24%	15.13%	8.90%	8.92%	9.22%	6.57%
18	A. Duraisamy Modern Rice Mill	C0001	1	0.225	8.02	14.74	10.88	10.97	11.21	8.17
19	Ahill Knit Exports	C0004	1	0.250	6.17	13.09	8.65	8.65	8.94	6.54
20	Archana Jewel Craft	C0008	1	0.250	8.87	16.31	11.80	11.80	12.14	9.21
21	Arul Steels	C0009	1	0.600	6.91	14.49	9.51	9.51	9.81	7.25
22	Arun Textiles Pvt. Ltd.,	C0010	2	0.600	8.69	16.29	11.68	11.78	12.29	9.06

23	Aruna Alloy Steels Pvt. Ltd.,	C0011	1	1.650	9.02	16.84	12.11	12.22	12.51	9.35
24	C. Dorairaj	C0019	1	0.600	9.59	17.61	12.75	12.75	13.16	9.94
25	C. Natarajan	C0020	1	0.225	8.21	17.04	11.08	11.08	11.42	8.56
26	Cheran Textile Mills	C0023	1	0.600	9.41	17.29	12.50	12.50	12.91	9.76
27	Chiranjivevi Wind Energy Ltd.,	C0024A	2	0.250	6.59	14.28	9.11	9.11	9.39	6.92
28	Coimbatore Pioneer Fertilizers Ltd.,	C0026	2	0.600	6.30	13.69	8.74	8.74	9.03	6.61
29	Concorde Textiles	C0027(A)	2	0.600	6.54	13.77	9.06	9.06	9.35	6.88
30	Divya Spinning Mill Pvt. Ltd.,	C0029	1	1.250	8.60	16.25	11.46	11.46	11.84	8.93
31	Dollar Industries Ltd.,	C0030	1	1.250	8.86	16.71	11.81	11.81	12.49	9.18
32	Eveready Spinning Mills Pvt. Ltd.,	C0032(A)	1	0.600	8.68	16.39	11.56	11.56	11.94	9.02
33	Eveready Textiles	C0033	1	0.600	9.69	17.80	12.89	12.89	13.30	10.04
34	Green Energy	C0037	1	0.250	11.23	20.70	15.08	15.08	15.56	11.62
35	Jayanthi Textile Products Unit II	C0044(A)	1	1.250	8.59	15.65	11.54	11.63	11.88	8.94
36	Jayavarma Textiles Pvt. Ltd.,	C0045	1	1.250	7.79	14.63	10.55	10.64	10.87	8.12
37	Karpagham Tex	C0049	1	0.600	8.44	15.53	11.27	11.27	11.60	8.78
38	Lakshminarayan Gaurishanker Enterprises Pvt. Ltd.,	C0052	4	0.250	6.16	13.41	8.55	8.55	8.86	6.47
39	Madras Hardtools Pvt. Ltd.,	C0054(A)	1	0.250	5.66	12.55	8.06	8.06	8.33	6.05
40	Madras Hardtools Pvt. Ltd.,	C0054(B)	1	0.250	11.34	21.39	15.23	15.23	15.69	11.72
41	Micro Colour Makers	C0060	1	0.250	6.60	13.89	9.14	9.14	9.43	6.94
42	N. Leelavathy	C0062	1	0.225	8.04	16.69	10.87	10.87	11.20	8.39
43	N. Muthukumaar	C0063	1	0.600	8.16	15.03	10.93	10.93	11.26	8.49
44	Narasu's Spinning Mills	C0064	1	0.600	9.11	16.56	12.17	12.27	12.57	9.46
45	P. Periyaswamy HUF	C0065	1	0.600	9.08	16.68	12.05	12.05	12.43	9.42
46	P.S.K. Engineering Construction & Co.,	C0069	1	1.500	10.43	19.14	13.93	13.93	14.36	10.78
47	Pallava Textile Ltd.,	C0070	1	1.650	8.37	15.77	11.29	11.37	11.65	8.52
48	Perfect Gears (Chennai) Pvt. Ltd.,	C0074	1	0.250	6.60	14.30	9.12	9.12	9.41	6.94
49	Preethi Cotspin Pvt. Ltd.,	C0076(A)	1	0.600	7.60	14.37	10.38	10.46	10.69	7.75

50	Raju & Co.,	C0083	1	0.600	6.91	14.49	9.51	9.51	9.81	7.25
51	S C Energiaa Pvt. Ltd.,	C0086	1	0.250	6.37	13.83	8.84	8.84	9.12	6.68
52	Sabari Jewellery	C0088	1	0.250	6.55	13.76	9.06	9.06	9.36	6.88
53	Salona Cotspin Ltd.,	C0092(A)	1	0.600	7.31	13.85	9.99	10.08	10.33	7.45
54	Santhi Casting Works	C0093	2	0.600	6.60	13.88	9.13	9.13	9.43	6.94
55	Saravana Textile Mills	C0094	2	0.600	9.41	17.29	12.50	12.50	12.91	9.76
56	Scientific MES Technik Pvt. Ltd.,	C0095	1	0.600	6.06	13.20	8.43	8.43	8.71	6.36
57	Siva Subramania Textiles	C0102	1	0.600	7.87	14.38	10.66	10.75	10.99	8.21
58	Soundara Knit Wears	C0104	1	0.600	8.70	16.01	11.59	11.59	11.93	9.05
59	Sree Kandiamman Industries	C0107	1	0.250	5.74	12.37	8.23	8.23	8.50	6.15
60	Sri Dhanalakshmi Sizing and Spinning Mill	C0109(B)	1	0.600	7.68	15.97	10.44	10.44	10.76	8.03
61	Sri Jagannatha Spinners	C0111	1	0.600	8.06	14.80	10.92	11.01	11.26	8.21
62	Srinivasan Associates Pvt. Ltd.,	C0119	1	0.600	8.33	15.76	11.14	11.14	11.47	8.66
63	Sripathi Paper and Boards Pvt. Ltd.,	C0120	1	0.600	6.92	13.07	9.48	9.56	9.78	7.23
64	Sun Chem Products (P) Ltd.,	C0124	1	0.250	6.50	14.10	9.00	9.00	9.28	6.83
65	Sun Industrial Automations & Solutions	C0125	1	0.600	9.76	17.93	13.02	13.02	13.75	10.11
66	T.N. Nantagopal & Sons,	C0129	1	0.600	8.78	16.14	11.68	11.68	12.02	9.12
67	Thirupur Suriya Textiles Pvt. Ltd.,	C0132	1	1.250	8.13	15.24	10.96	11.05	11.29	8.46
68	Twowin Export	C0134	1	0.225	5.67	12.27	8.17	8.17	8.44	6.08
69	Vellingiri Andavar Textiles Pvt. Ltd.,	C0135	1	0.600	7.39	13.99	10.10	10.20	10.43	7.53
70	VXL Systems	C0140	1	0.800	9.12	16.76	12.10	12.10	12.49	9.46

Appendix IV: Results – Benchmark

S. No	Name of the Company	Company code	No .of WTGs	Capacity (in MW)	Risk free return	Market return	Beta	Post tax return on Equity (Benchmark)
1	Ambika Cotton Mills Limited	A1	2	0.8	7.89%	27.05%	1.09	28.69%
2	Bright Castings	A2	1	0.6	7.89%	24.23%	1.09	25.64%
3	Concorde Agencies	A3	1	0.225	7.89%	27.05%	1.09	28.69%
4	Concorde Textiles	A4	2	0.225	7.89%	27.05%	1.09	28.69%
5	Hemalatha Mills Pvt. Ltd.,	A5	1	0.225	7.89%	23.90%	1.09	25.27%
6	Pavathal Spinning Mills Pvt. Ltd.,	A7	1	0.25	7.89%	27.05%	1.09	28.69%
7	Santhi Casting Works	A9	1	0.6	7.89%	27.05%	1.09	28.69%
8	SRG Apparels Pvt. Ltd.,	A12	2	0.25	7.89%	27.05%	1.09	28.69%
9	Sri Dhanalakshmi Sizing & Spinning Mill	A13	3	0.6	7.89%	27.05%	1.09	28.69%
10	Thangamman Process	A14	1	0.25	7.89%	24.23%	1.09	25.64%
11	Warsaw International	A19	1	0.25	7.89%	24.23%	1.09	25.64%
12	Associated Autotex Ancillaries Pvt. Ltd.,	B1	1	0.8	8.12%	19.60%	1.096	20.69%
13	Auto Coats	B2	1	0.8	8.12%	19.60%	1.096	20.69%
14	Doller Industries Ltd.,	B3	1	1.25	8.12%	19.60%	1.096	20.69%
15	KG Entertainment Company (P) Ltd.,	B4	1	1.25	8.12%	22.33%	1.096	23.69%
16	Narasu's Roller Flour Mills	B5	1	0.8	8.12%	23.60%	1.096	25.08%
17	Sushrushah Medicare Centre Pvt. Ltd.,	B6	1	0.25	8.12%	23.60%	1.096	25.08%
18	A. Duraisamy Modern Rice Mill	C0001	1	0.225	8.12%	15.62%	1.185	17.00%
19	Ahill Knit Exports	C0004	1	0.250	8.12%	13.82%	1.185	14.87%
20	Archana Jewel Craft	C0008	1	0.250	8.12%	19.34%	1.185	21.41%
21	Arul Steels	C0009	1	0.600	7.89%	20.74%	1.185	23.11%
22	Arun Textiles Pvt. Ltd.,	C0010	2	0.600	7.89%	20.69%	1.185	23.06%

23	Aruna Alloy Steels Pvt. Ltd.,	C0011	1	1.650	8.12%	14.52%	1.185	15.70%
24	C. Dorairaj	C0019	1	0.600	8.12%	19.34%	1.185	21.41%
25	C. Natarajan	C0020	1	0.225	8.12%	20.74%	1.185	23.07%
26	Cheran Textile Mills	C0023	1	0.600	8.12%	19.34%	1.185	21.41%
27	Chiranjivevi Wind Energy Ltd.,	C0024A	2	0.250	8.12%	13.82%	1.185	14.87%
28	Coimbatore Pioneer Fertilizers Ltd.,	C0026	2	0.600	8.12%	14.70%	1.185	15.92%
29	Concorde Textiles	C0027(A)	2	0.600	7.89%	18.76%	1.185	20.77%
30	Divya Spinning Mill Pvt. Ltd.,	C0029	1	1.250	8.12%	18.59%	1.185	20.53%
31	Dollar Industries Ltd.,	C0030	1	1.250	8.12%	19.34%	1.185	21.41%
32	Eveready Spinning Mills Pvt. Ltd.,	C0032(A)	1	0.600	8.12%	19.37%	1.185	21.45%
33	Eveready Textiles	C0033	1	0.600	8.12%	18.59%	1.185	20.53%
34	Green Energy	C0037	1	0.250	8.12%	19.22%	1.185	21.27%
35	Jayanthi Textile Products Unit II	C0044(A)	1	1.250	8.12%	13.82%	1.185	14.87%
36	Jayavarma Textiles Pvt. Ltd.,	C0045	1	1.250	8.12%	18.76%	1.185	20.73%
37	Karpagham Tex	C0049	1	0.600	8.12%	19.37%	1.185	21.45%
38	Lakshminarayan Gaurishanker Enterprises Pvt. Ltd.	C0052	4	0.250	8.12%	13.02%	1.185	13.93%
39	Madras Hardtools Pvt. Ltd.,	C0054(A)	1	0.250	7.89%	20.74%	1.185	23.11%
40	Madras Hardtools Pvt. Ltd.,	C0054(B)	1	0.250	8.12%	15.62%	1.185	17.00%
41	Micro Colour Makers	C0060	1	0.250	7.89%	20.69%	1.185	23.06%
42	N. Leelavathy	C0062	1	0.225	7.89%	20.74%	1.185	23.11%
43	N. Muthukumaar	C0063	1	0.600	8.12%	19.37%	1.185	21.45%
44	Narasu's Spinning Mills	C0064	1	0.600	8.12%	13.61%	1.185	14.63%
45	P. Periyaswamy HUF	C0065	1	0.600	8.12%	19.37%	1.185	21.45%
46	P.S.K. Engineering Construction & Co.,	C0069	1	1.500	8.12%	19.37%	1.185	21.45%
47	Pallava Textile Ltd.,	C0070	1	1.650	8.12%	19.37%	1.185	21.45%
48	Perfect Gears (Chennai) Pvt. Ltd.,	C0074	1	0.250	8.12%	13.82%	1.185	14.87%
49	Preethi Cotspin Pvt. Ltd.,	C0076(A)	1	0.600	8.12%	18.82%	1.185	20.80%
50	Raju & Co.,	C0083	1	0.600	7.89%	20.74%	1.185	23.11%

51	S C Energiaa Pvt. Ltd.,	C0086	1	0.250	8.12%	13.82%	1.185	14.87%
52	Sabari Jewellery	C0088	1	0.250	8.12%	13.02%	1.185	13.93%
53	Salona Cotspin Ltd.,	C0092(A)	1	0.600	8.12%	18.82%	1.185	20.80%
54	Santhi Casting Works	C0093	2	0.600	7.89%	20.74%	1.185	23.11%
55	Saravana Textile Mills	C0094	2	0.600	8.12%	18.59%	1.185	20.53%
56	Scientific MES Technik Pvt. Ltd.,	C0095	1	0.600	8.12%	13.82%	1.185	14.87%
57	Siva Subramania Textiles	C0102	1	0.600	8.12%	13.02%	1.185	13.93%
58	Soundara Knit Wears	C0104	1	0.600	8.12%	19.37%	1.185	21.45%
59	Sree Kandiamman Industries	C0107	1	0.250	8.12%	13.89%	1.185	14.96%
60	Sri Dhanalakshmi Sizing and Spinning Mill	C0109(B)	1	0.600	8.12%	13.02%	1.185	13.93%
61	Sri Jagannatha Spinners	C0111	1	0.600	8.12%	18.59%	1.185	20.53%
62	Srinivasan Associates Pvt. Ltd.,	C0119	1	0.600	8.12%	19.34%	1.185	21.41%
63	Sripathi Paper and Boards Pvt. Ltd.,	C0120	1	0.600	8.12%	13.89%	1.185	14.96%
64	Sun Chem Products (P) Ltd.,	C0124	1	0.250	8.12%	14.52%	1.185	15.70%
65	Sun Industrial Automations & Solutions	C0125	1	0.600	8.12%	19.34%	1.185	21.41%
66	T.N. Nantagopal & Sons,	C0129	1	0.600	8.12%	19.34%	1.185	21.41%
67	Thirupur Suriya Textiles Pvt. Ltd.,	C0132	1	1.250	8.12%	14.52%	1.185	15.70%
68	Twowin Export	C0134	1	0.225	8.12%	13.02%	1.185	13.93%
69	Vellingiri Andavar Textiles Pvt. Ltd.,	C0135	1	0.600	8.12%	18.59%	1.185	20.53%
70	VXL Systems	C0140	1	0.800	8.12%	18.59%	1.185	20.53%

Appendix 5 – Table 1: Requirements Checklist

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
General Requirements					
1.1 Project start date					
Is the project start date correctly specified in the PD as per VCS 2007.1?	5.2.1	DR	Yes, the start date of the project is correctly specified in the PD. To be checked by reviewing the commissioning certificates.		
		SV	By reviewing the commissioning certificates, the validation team has confirmed that start date of the project is correctly specified in the PD.	OK	OK
1.2 Project scope					
Have the project proponents applied an approved VCS Program methodology or a methodology from an approved GHG Program based on the list of current VCS Program approved GHG Programs and methodologies as set out on www.v-c-s.org ?	5.2.2	DR	Yes, the project has applied an approved methodology from an approved GHG Program based on the list of current VCS Program approved GHG Programs and methodologies. The project has applied an approved CDM methodology, ACM 002. Version 10.		
		SV	The project has applied an approved CDM methodology ACM version 10.	OK	OK
1.3 Methodology deviations and revisions					
Is any methodology deviations described and justified?	5.3 and 5.4	DR	No deviation is observed. To be checked during onsite.		
		SV	Site observation also confirmed that there is no deviation is observed	OK	OK
1.4 Standards and Factors					
Is the standards and factors used to arrive at the baseline and additionality?	5.5	DR	Yes, PP has used CEA data to determine baseline emissions which is correct.		
		SV	Onsite observation also confirmed the same.	OK	OK

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
1.5 Grouped projects					
Is this a grouped project?	5.6	DR	This is a grouped project.		
		SV	The project activity consists of 84 WTGs.	OK	OK
1.6 Content of the VCS PD					
Is the PD used as a basis for validation prepared in accordance with the latest template and guidance from the VCS?	5.7	DR	Yes, the project description has been prepared in accordance with VCS 2007.1		
		SV	The project description was confirmed during the onsite observation.	OK	OK
Is the template used for PD considers the requirements specified in the VCS 2007.1	5.7	DR	Yes. The template used has all the required information.		
		SV	The template used has all the required information	OK	OK
Is there a summary description of the project given?	5.7	DR	PP does not specify nature of grid connection to be checked during onsite.		
		SV	It is not correctly whether the WTGs are captive in nature or sale to grid	~~CAR 1~~	OK
		SV	PP is clarify how the project capacity, capacity of the individual WTGs and number of WTGs are in compliance with Investment guidelines	~~CL 1~~	OK
Is the sectoral scope and project type of the project given?	5.7	DR	The given sectoral scope and project type of the project are correct, Sectoral scope: 1 – energy industries (renewable sources).		
		SV	It is accepted by the validation team as the project is a wind energy project.	OK	OK
Is the project location and geographical boundaries indicated?	5.7	DR	It is provided in the PD. To be checked during onsite visit.		
		SV	It has been verified and confirmed at site that the project is not a grouped project.	OK	OK
Is the condition (existing) prior to project initiation described?	5.7	DR	The proposed project activity is a greenfield project and there is no activity undertaken prevailing prior to the project implementation,		

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
		SV	It is conformed that the proposed project activity is a greenfield project and there is no activity undertaken prevailing prior to the project implementation	OK	OK
Does PD describe how the project will achieve GHG emission reductions and/or removal enhancements?	5.7	DR	PD describes that wind project does not emit any emissions.		
		SV	It is also verified during onsite.	OK	OK
Is the contact information and roles/responsibilities for the project proponents given?	5.7	DR	The roles and responsibilities are described in the PD. To be checked during onsite with PD		
		SV	It is provided in the PD and that matches with the onsite observation.	OK	OK
Is the contact information and roles/responsibilities for any other entities involved in the development of the project given?	5.7	DR	The roles and responsibilities are described in the PD. To be checked during onsite with PD		
		SV	It is provided in the PD and that matches with the onsite observation.	OK	OK
Is the project start date specifying the day, month and year given?	5.7	DR	The project start date is correctly mentioned in the PDD. It is the first WTG that was commissioned among the WTGs.		
		SV	The validation team has verified the commissioning certificates and confirmed the start date.	OK	OK
Is the project crediting period specifying the day, month and year for the start and end dates and the total number of years given?	5.7	DR	The project start date of crediting period is correctly mentioned in the PDD. It is the first WTG that was commissioned among the WTGs.		
		SV	The validation team has verified the commissioning certificates and confirmed the start date.	OK	OK
Is the scale of the project (project or mega) and the estimated annual GHG emission reductions or removals for the project crediting period given?	5.7	DR	It is agreed that the scale of the project is 'project'. The estimated annual GHG emission reductions is mentioned in the PD.		
		SV	Onsite assessment confirmed the same.	OK	OK
Is a description of the project activity, including the	5.7	DR	The description of the project activity is mentioned in the PD. To discuss further at site.		

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
technologies or measures employed and how emission reductions/removals are achieved given?		SV	Details of the technologies and measures employed in the project activity provided in the PD are confirmed ok.	OK	OK
Is the lifetime of the project activity indicated?	5.7	DR	The lifetime of the project activity is given as 20 years. Please provide supporting evident. To discuss further at site.		
		SV	The lifetime of the project activity is given as 20 years. Please provide supporting evident.	OK	OK
Is it demonstrated that the project has not been implemented to generate GHG emissions for the purpose of their subsequent reduction?	5.7	DR	It is agreed that the project has not been implemented for the purpose of the subsequent reductions. But evidence was not provided. To be discussed during onsite.		
		SV	The PP needs to submit an undertaking to the DOE that should address the following • Avoidance of double counting of VCUs under any of the carbon mechanisms other than VCS. • The project activity has not been installed under obligations to any local or national laws. • The project activity does not yield any green benefits /renewable energy certificates. • Undertaking the ownership of all the green attributes related to the project activity.	CAR-2	OK
		SV	It has to be ensured that double counting of the emission reductions does not take place throughout the VCS crediting period as the PP may propose for CDM also	FAR 1	OK
Is it identified and demonstrated the compliance of the project with all relevant local, regional and national laws,	5.7	DR	The project is in compliance with all relevant local, regional and national laws, statutes and		

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
statutes and regulatory frameworks?			regulatory frameworks. The project proponent needs to provide copies of approval received from the relevant authorities. <i>To be verified further at site.</i>		
		SV	It has been verified during the site visit that the project is in compliance with all relevant local, regional and national laws, statutes and regulatory frameworks. The project proponent needs to provide copies of approval received from the relevant authorities.	OK	OK
Are the evidence of the right of use provided?	5.7	DR	The project proponent needs to provide evident on the 'right of use' with respect to the relevant GHG reductions or removals. <i>To discuss further at site.</i>		
		SV	The project proponent needs to provide evident on the 'right of use' with respect to the relevant GHG reductions or removals.	OK	OK
Is it demonstrated that the net reductions or removals will not be used for compliance with emission trading program or meet binding limits on GHG emissions?	5.7	DR	The net reductions or removals will not be used for compliance with emission trading program or meet binding limits on GHG emissions.		
		SV	It has been verified that the net reductions or removals will not be used for compliance with emission trading program or meet binding limits on GHG emissions. But undertaking letter was not provided	~~Depen~~ ~~ds of~~ ~~CAR-2~~	OK
Is it indicated whether the project has been registered, or is seeking registration under any other GHG program? If yes, provide registration number and details.	5.7	DR	The project has not been registered, or is seeking registration under any other GHG program.		
		SV	It has been verified that has not been registered, or is seeking registration under any other GHG program. But undertaking letter was not provided.	~~Depen~~ ~~ds~~ ~~CAR-2~~	OK
Is it demonstrated that the project neither has nor intends to generate any other form of GHG-related environmental	5.7	DR	The project neither has nor intends to generate any other form of GHG-related environmental		

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
credit for GHG emission reductions or removals claimed under the VCS Program, or that any such credit has been or will be cancelled from the relevant program?			credit for GHG emission reductions or removals.		
		SV	It has been verified that the project eligible for to generate emission reductions under CDM. But undertaking letter was not provided.	~~Depen~~ ~~ds~~ CAR-2	OK
Is it indicated whether the project has been rejected by any other GHG programs? If yes, provide the relevant information.	5.7	DR	The project has not been rejected by any other GHG programs.		
		SV	It has been verified that the project has not been rejected by any other GHG programs. But undertaking letter was not provided.	~~Depen~~ ~~ds~~ CAR-2	OK
Is it indicated whether any commercially sensitive information has been excluded from the public version of project description? If yes, briefly describe the items to which such information pertains.	5.7	DR	No. The information provided are not commercially sensitive in nature.		
		SV	The information provided are not commercially sensitive in nature.	OK	OK
Is any additional relevant legislative, technical, economic, sectoral, social, environmental, geographical, site-specific and/or temporal information that may have a bearing on the eligibility of the project, the net GHG emission reductions or removals, or the quantification of the project's net GHG emission reductions or removals included?	5.7	DR	Relevant information for the quantification of the project's net GHG emission reductions or removals has been included.		
		SV	Onsite observation conforms the same.	OK	OK
1.7 Additionality					
Has the PDD describe how the proposed CDM project activity is additional?	5.8	DR	Yes. The project activity uses investment barrier to demonstrate additionality. The financial indicator is less than the benchmark.		
		SV	Yes. The financial indicator is less than the benchmark.	OK	OK
Has the PP provide reliable, credible data, rationales, assumptions, justifications and documentation in the PDD to support the demonstration of additionality?	5.8	DR	To be assessed during onsite.		
		SV	For WTGs which were captive in nature the tariff used (prior to its implementation) in the calculation of financial indicator are not supported with evidence that were available to	~~CAR-3~~	OK

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
			the respective PPs during the investment decision.		
		SV	PP is requested to provide sensitivity analysis for sub project 1.	~~CAR-4~~	OK
		SV	For WTG under the subproject 3 owned by Arun Textiles Pvt. Ltd. (Company code C0010) the project cost used in the financial calculation does not match with the offered values.	~~CAR-5~~	OK
		SV	For WTGs owned by SRG Apparels Pvt. Ltd. and JM Agro Wind energy Pvt. Ltd. financial excel sheets are not accessible.	~~CAR-6~~	OK
		SV	Offer letters for Pavathal Spinning mills (Company code –A7 sub project 1) and Dollar industries (Company code- B3- Sub project 2) are not provided.	~~CAR-7~~	OK
		SV	For Sub-project (1) please furnish the relevant authentic URLs / evidences for the following assumed data: • O&M charges • Wheeling charges • Interest rate • Depreciation rate • Depreciation rate (Income tax Act) • MAT • IT rate • Surcharges & cess • DE ratio • Book depreciation • Insurance charges	~~CL-2~~	OK
		SV	For sub project 1 & 2 same benchmark value is considered whereas investment dates in the sub project 1 & 2 are phased in manner, Pls clarify.	~~CL-3~~	OK

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
		SV	Loan sanction letters are not provided for the following WTGs, For sub project 1: Concorde Agencies and Concord Textiles For sub project 2: Dollar Industries For sub project 3: Cheeranjeevi Wind Energy Ltd., Concord Textiles, Dollar industries and Lakshmi Narayan Gowrishankar Enterprises Pvt. Ltd.	GL-4	OK
Assess whether the geographical scope (e.g. the defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activity's technology or industry type. For certain technologies the relevant region for assessment will be local and for others it may be transnational /global. If a region other than the entire host country is chosen. Please explain why this region is more appropriate.	5.8	DR	Yes. The common practice analysis has been undertaken. To be checked during onsite.		
		SV	Common practice analysis is not adequately undertaken by the PP in the PD.	CAR-8	OK
1.8 Determining the baseline scenario					
Is the project boundary defined?	5.10	DR	The project boundary is clearly defined in the PD. To be checked during onsite.		
		SV	The onsite observation shows that project boundary as defined in the PD is correct.	OK	OK
Is the relevant GHG sources, sinks and reservoirs for the project and baseline scenarios (including leakage, if applicable) identified?	5.10	DR	PD describes the GHG sources, sinks, reservoirs etc.		
		SV	Onsite observation confirms the same.	OK	OK
Is the baseline scenario identified and justified?	5.10	DR	The applied methodology predefines the baseline.		

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
		SV	Since the WTGs are connected to the grid and baseline is southern grid which is accepted.	OK	OK
Is the additionality of the project undertaken in accordance with the applied methodology demonstrated and assessed?	5.10	DR	The additionality is undertaken as per the methodology.		
		SV	The onsite observation also conforms the same.	OK	OK
1.9 Monitoring the GHG project					
Is the monitoring plan described?	5.11	DR	To be checked during onsite visit.		
		SV	Onsite observation confirms the same.	OK	OK
Is the organizational structure, responsibilities and competencies identified?	5.11	DR	The organizational structure, responsibilities and competencies identified in the PD. To be confirmed during onsite.		
		SV	Onsite observation confirms the same.	OK	OK
Are the methods for generating, recording, storing, aggregating, collating and reporting data on monitored parameters described?	5.11	DR	The method for generating, recording, storing, aggregating, collating and reporting data on monitored parameters described in the PD.		
		SV	Onsite observation confirms the same.	OK	OK
Are procedures for handling internal auditing and non-conformities described?	5.11	DR	The procedures for handling internal auditing and non-conformities described in the PD.		
		SV	Onsite observation confirms the same.	OK	OK
1.10 Methodologies					
Is the title, reference and version number of the methodology or methodologies applied to the project	6.0	DR	The CDM approved methodology is applied in the project activity. Methodology ACM 002		

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
provided?			(version 10) is correctly quoted.		
		SV	Onsite observation confirms the same.	OK	OK
Is it demonstrated and justified that the project activity meets the applicability conditions of the methodology applied to the project?	6.0	DR	Not all applicable conditions are justified in the PD. To be checked during onsite.		
		SV	The applicability conditions of the selected methodology (ACM 002) are not sufficiently satisfied in the PD.	CAR-9	OK
1.11 Monitoring, quantification and reporting related to the methodology					
Is the procedure for quantification of the baseline emissions and/or removals described? Are all relevant equations included?	6.5	DR	The quantification of the baseline emissions is based on ACM 002 It is correctly applied. To be checked during onsite.		
		SV	CER table mentioned in the section 1.3 is not correct.	CAR 10	OK
		SV	Justification for not including wheeling charges into account when calculating the CER for each WTG which are captive in nature is not justified.	CAR 11	OK
Is the procedure for quantification of the project emissions and/or removals described? Are all relevant equations included?	6.5	DR	Project emissions is considered zero for wind project which is as per the applied methodology		
		SV	The onsite assessment confirms the same.	OK	OK
Is the procedure for quantification of the leakage emissions and/or removals described? Are all relevant equations included?	6.5	DR	Leakage emissions is considered zero for wind project which is as per the applied methodology		
		SV	The onsite assessment confirms the same.	OK	OK
Is the procedure for quantification of net GHG emission reductions and removals described? Are all relevant equations included?	6.5	DR	The procedure for quantification of net GHG emission reductions and removals is accordance to ACM 002.		

CHECKLIST QUESTION	VCS 2007.1	MoV*	COMMENTS	Draft Concl.	Final Concl.
		SV	The onsite assessment confirms the same.	OK	OK
Is the ex-ante (estimated) calculation of baseline emissions/removals, project emissions/removals, leakage emissions and net emission reductions and removals provided?	6.5	DR	To be further verified at site.		
		SV	The estimated calculation of baseline and project emissions/removals, leakage emissions and net emission reductions are provided.	~~Depen~~ ~~ds on~~ ~~CAR~~ ~~10 and~~ ~~CAR~~ ~~11~~	OK
Are all data and parameters available at validation described using the table?	6.5	DR	To be discussed further at site.		
		SV	Grid emission factor is calculated as per CEA data which is in line with the "Tool for emission factor for the electricity system."	OK	OK
Are all data and parameters monitored subsequent to validation described using the table?	6.5	DR	<i>To discuss further at site.</i>		
		SV	Data and parameters monitored subsequent to validation are Net quantity of electricity delivered to the grid, EGy	OK	OK
Are any environmental impact assessments carried out with respect to the project, where applicable, summarized?		DR	Environmental impact assessments are not required for the project activity.		
		SV	Environmental impact assessments are not required for the project activity. All the necessary approvals are received by the project activity.	OK	OK
Are relevant outcomes from stakeholder consultations and mechanisms for on-going communication summarized?		DR	To be checked during onsite.		
		SV	There is no comments from the	OK	OK

Table 2: Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by validation team	Ref. to Section of the table 1 / PD	Summary of project owner response	Validation team conclusion
<u>CAR 1</u> It is not correctly whether the WTGs are captive in nature or sale to grid (Refer Financial sheet folder)	Section 1.6/ Section 1.4 of PD	It is now correctly segregated in the folder which clearly reveals whether the WTG is captive or sale to board.	The validation team has reviewed the financial excel sheets which are segregated clearly, hence closed. Conclusion: CAR 1 closed.
<u>CAR 2</u> The PP needs to submit an undertaking to the DOE that should address the following • Avoidance of double counting of VCUs under any of the carbon mechanisms other than VCS. • The project activity has not been installed under obligations to any local or national laws. • The project activity does not yield any green benefits /renewable energy certificates. • Undertaking the ownership of all the green attributes related to the project activity.	Section 1.6/ Section 1.13 and 1.14 of PD	All the undertakings as required by the DOE is now submitted by the PP.	The submitted undertaking letter has been verified by DOE and found correct. Conclusion: CAR 2 closed.
<u>CAR 3</u> For WTGs which were captive in nature the tariff used (prior to its implementation) in the calculation of financial indicator are not supported with evidence that were available to the respective PPs during the investment decision.	Section 1.7/ Section 2.5 of PD	For WTGs which were captive in nature the tariff used (prior to its implementation) in the calculation of financial indicator are now supported with Electricity Bills as evidence that were available to the respective PPs during the investment decision.	For WTGs which were captive in nature the tariff used (prior to its implementation) in the calculation of financial indicator are supported with electricity bill as evidence that were available during the investment decision. The document has been

Draft report clarifications and corrective action requests by validation team	Ref. to Section of the table 1 / PD	Summary of project owner response	Validation team conclusion
			checked and found correct. Conclusion: CAR 3 closed.
<u>CAR 4</u> PP is requested to provide sensitivity analysis for sub project 1.	Section 1.7/ Section 2.5 of PD	PP has now provided the sensitivity analysis for sub-project 1.	Sensitivity analysis for sub project 1 has been conducted in the revised PD. Conclusion: CAR 4 closed
<u>CAR 5</u> For WTG under the subproject 3 owned by Arun Textiles Pvt. Ltd. (Company code C0010) the project cost used in the financial calculation does not match with the offered values.	Section 1.7/ Section 2.5 of PD	It is now corrected and revised financial sheet is submitted.	The corrected excel sheets are reviewed the validation team and has accepted. Conclusion: CAR 5 closed
<u>CAR 6</u> For WTGs owned by SRG Apparels Pvt. Ltd. and JM Agro Wind energy Pvt. Ltd. financial excel sheets are not accessible.	Section 1.7/ Section 2.5 of PD	The uncorrupted financial excel sheets for SRG Apparels Pvt. Ltd. and JM Agro Wind energy Pvt. Ltd., are now submitted to DOE.	For WTGs owned by SRG Apparels Pvt. Ltd. and JM Agro Wind energy Pvt. Ltd. financial excel sheets has been verified and now accessible. Conclusion: CAR 6 closed
<u>CAR 7</u> Offer letters for Pavathal Spinning mills (Company code –A7 sub project 1) and Dollar industries (Company code- B3- Sub project 2) are not provided.	Section 1.7/ Section 2.5 of PD	Offer letters are now provided for validation.	Offer letters are reviewed and accepted. Conclusion: CAR 7 closed
<u>CAR 8</u> Common practice analysis is not adequately undertaken by the PP in the PD.	Section 1.7/ Section 2.5 of PD	Approach for Common practice is reviewing all the wind projects in Tamilnadu which are above 15 MW that are claiming CDM or VCS credit and the common practice analysis is now added in detail in the PD.	The validation team has reviewed the revised PD and accepted the approach which is as per the additionality tool. Conclusion: CAR 8 closed

Draft report clarifications and corrective action requests by validation team	Ref. to Section of the table 1 / PD	Summary of project owner response	Validation team conclusion
<u>CAR 9</u> The applicability conditions of the selected methodology (ACM 002) are not sufficiently satisfied in the PD.	Section 1.10/ Section 2.2 of PD	It is corrected now.	The validation team has reviewed the PD, commissioning certificates, PPA/EPA and based on the documents reviewed, concluded all the applicability conditions are satisfied. Conclusion: CAR 9 closed.
<u>CAR 10</u> CER table mentioned in the section 1.3 is not correct.	Section 1.11/ Section 1.3 of PD	It is now corrected in accordance with the start date of credit (date of commissioning) of each WTG. The final CER sheet is now submitted.	The validation team has reviewed the PD and CER sheet and found to be correct. Conclusion: CAR 10 closed
<u>CAR 11</u> Justification for not including wheeling charges into account when calculating the CER for each WTG which are captive in nature is not justified.	Section 1.11/ Section 3.2 of PD	The wheeling charges are charges charged by the TNEB for using TNEB grid for transmitting electricity from the point of injection to the point of delivery. The wheeling charges are not a loss and being consumed. By the way, transformer losses, transmission losses and import if at all any are not claimed for credit.	The validation team has accepted approach as correct. Conclusion: CAR 11 closed
<u>CL 1</u> PP is clarify how the project capacity, capacity of the individual WTGs and number of WTGs are in compliance with Investment guidelines.	Section 1.6/ Section 2.5 of PD and financial sheets	It is corrected and revised excel sheets are now submitted.	The financial excel sheets are reviewed and found to be as per para 6 of investment guidelines. Conclusion: CL 1 closed
<u>CL 2</u> For Sub-project (1) please furnish the relevant authentic URLs / evidences for the following assumed data:	Section 1.7/ Section 2.5 of PD and financial sheets	The authentic URLs / evidences for all the assumed data for sub-project 1 is now submitted to DOE.	The authentic URLs / evidences for all the assumed data for sub-project 1 has been furnished verified and found correct.

Draft report clarifications and corrective action requests by validation team	Ref. to Section of the table 1 / PD	Summary of project owner response	Validation team conclusion
• O&M charges • Wheeling charges • Interest rate • Depreciation rate & Depreciation rate (Income tax Act) , MAT, IT rate • Surcharges & cess • DE ratio • Book depreciation • Insurance charges			Conclusion: CL 2 Closed
<u>CL 3</u> For sub project 1 & 2 same benchmark value is considered whereas investment dates in the sub project 1 & 2 are phased in manner, Pls clarify.	Section 1.7/ Section 2.5 of PD and financial sheets	For sub project 1 & 2 the benchmark value now considered is as per investment dates and the same is now submitted to the DOE.	For sub project 1 & 2 the benchmark value has been considered as per the investment dates, checked found correct. Conclusion:CL 3 Closed
<u>CL 4</u> Loan sanction letters are not provided for the following WTGs, For sub project 1: Concorde Agencies and Concord Textiles For sub project 2: Dollar Industries For sub project 3: Cheeranjeevi Wind Energy Ltd., Concord Textiles, Dollar industries and Lakshmi Narayan Gowrishankar Enterprises Pvt. Ltd.	Section 1.7/ Section 2.5 of PD and financial sheets	At the time of investment decision, PP had considered 70:30 which as per tariff order. But during the actual implementation, the project is funded with 100% equity. So there is no loan sanction letters for those WTGs.	The validation team has calculated the financial indicator with 100% equity and found that even with actual values; the resultant financial indicator does not cross its validated benchmark. Conclusion: CL 4 Closed
<u>FAR 1</u> It has to be ensured that double counting of the emission reductions does not take place throughout the VCS crediting period as the PP may propose for CDM also.	Section 1.6/ Section 1.13 of PD and 1.14 of PD	PP ensures that double counting of the emission reductions for the proposed project activity will not take place throughout the VCS crediting period.	PP ensures that the same shall be checked during verification of the project activity. FAR shall be closed during the verification period.