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# VALIDATION REPORT

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**SRF Limited**

**13.95 MW GRID CONNECTED WIND  
ELECTRICITY GENERATION BY  
SRF LIMITED**

**SGS Climate Change Programme**

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<b>Date of Issue:</b>		<b>Project Number:</b>	
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<b>Project Title:</b>			
13.95 MW grid connected wind electricity generation by SRF Limited			
<b>Organisation:</b>		<b>Client:</b>	
SGS United Kingdom Limited		SRF Limited	
<b>Publication of PDD for Stakeholders Consultation</b>			
<b>Commenting Period:</b>		26/07/2008 to 24/08/2008	
First PDD Version and Date:		Version 1, 23/07/2008	
Final PDD Version and Date:		Version 5, 27/03/2009	
<b>Summary:</b>			
<p>SRF Limited has commissioned SGS to perform the validation of the project: 13.95 MW grid connected wind electricity generation by SRF Limited</p> <p>Methodology used: AMS I. D.</p> <p>Version and Date: Version 13, 14/12/2007</p> <p>The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.</p> <p>The report is based on the findings of document reviews, the stakeholder consultation process and responses from the project participants to the findings raised in this report.</p> <p>The report and the annexed validation describes a total of 10 findings which include:</p> <ul style="list-style-type: none"> <li>• 3 Corrective Action Requests;</li> <li>• 7 New Information Requests; and</li> </ul> <p>All the findings raised have been closed out satisfactorily and the project will be recommended to the CDM Executive Board with a request for registration.</p>			
<b>Subject:</b>			
CDM Validation			
<b>Validation Team:</b>			
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## Abbreviations

BSE	Bombay Stock Exchange
CAPM	Capital Asset Pricing Model
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Electricity Authority
CER	Certified Emission Reductions
CUF	Capacity Utilization Factor
C-WET	Centre for Wind Energy Technology
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
DSCR	Debt Service Coverage Ratio
EIA	Environment Impact Assessment
GHG	Greenhouse Gas(es)
GWh	Giga Watt hour
I	Interview
IPCC	Intergovernmental Panel on Climate Change
IRR	Internal Rate of Return
ISHC	International Stakeholder Consultation
kWh	Kilo watt hour
MoEF	Ministry of Environment and Forest
MoV	Means of Verification
MP	Monitoring Plan
MW	Mega Watt
MT	Metric Tonnes
NGO	Non Government Organization
NIR	New Information Request
NOC	No Objection Certificate
NSE	National Stock Exchange
PDD	Project Design Document
PLF	Plant Load Factor
PWA	Power Wheeling Agreement
UNFCCC	United Nations Framework Convention for Climate Change
WACC	Weighted Average Cost of Capital
WaSP	Wind Atlas Analysis and Application Program
WTG	Wind Turbine Generators

**Table of Content**

1. Validation Opinion .....	5
2. Introduction .....	6
2.1 Objective .....	6
2.2 Scope .....	6
2.3 GHG Project Description .....	6
2.4 The Names and Roles of the Validation Team Members .....	6
3. Methodology .....	7
3.1 Review of CDM-PDD and Additional Documentation .....	7
3.2 Use of the Validation Protocol .....	7
3.3 Findings .....	7
3.4 Internal Quality Control .....	8
4. Validation Findings .....	9
4.1 Participation Requirements .....	9
4.2 Project Design .....	9
4.3 Eligibility as a Small Scale Project .....	9
4.4 Baseline Selection and Additionality .....	10
4.5 Application of Baseline Methodology and Calculation of Emission Factors .....	10
4.6 Application of Monitoring Methodology and Monitoring Plan .....	13
4.7 Choice of the Crediting Period .....	14
4.8 Environmental Impacts .....	14
4.9 Local Stakeholder Comments .....	14
5. Comments by Parties, Stakeholders and NGOs .....	16
5.1 Description of How and When the PDD was Made Publicly Available .....	16
5.2 Compilation of all Comments Received .....	16
5.3 Explanation of How Comments Have Been Taken into Account .....	16
6. List of Persons Interviewed .....	17
7. Document References .....	18

**Annexes:**

A.1 Annex 1: Local Assessment .....	20
A.2 Annex 2: Validation Protocol .....	22
A.3 Annex 3: Overview of Findings .....	444
A.4 Annex 4: Team Members Statements of Competency .....	444

## 1. Validation Opinion

SGS United Kingdom Ltd has been contracted by SRF Limited to perform a validation of the project: 13.95 MW grid connected wind electricity generation by SRF Limited in India.

The Validation was performed in accordance with the UNFCCC criteria for the Clean Development Mechanism (CDM) and host country criteria, as well as criteria given to provide for consistent project operations, monitoring and reporting.

SGS reviewed of the project design documentation, using a risk based approach and conducted follow-up interviews.

By installing Wind Turbine Generators, the project activity will result in reductions of greenhouse gas emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

In our opinion, the project meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. The project correctly applies methodology AMS I.D. version 13. It is demonstrated that the project is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The total emission reductions from the project are estimated to be 348,860 t of CO<sub>2</sub>e over a 10 year crediting period, averaging 34,886 tCO<sub>2</sub>e annually. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given the underlying assumptions do not change.

The project will hence be recommended by SGS for registration with the UNFCCC.

### Signed on Behalf of the Validation Body by Authorized Signatory



Signature:

Name: Siddharth Yadav

Date: 9<sup>th</sup> April 2009

## 2. Introduction

### 2.1 Objective

SRF Limited has commissioned SGS to perform the validation of the project: “13.95 MW grid connected wind electricity generation by SRF Limited” with regard to the relevant requirements for CDM project activities. The purpose of a validation is to have an independent third party assess the project design. In particular, the project's baseline, the monitoring plan (MP) and the project's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria. Validation is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of Certified Emission Reduction (CER). UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities and related decisions by the COP/MOP and the CDM Executive Board.

### 2.2 Scope

The scope of the validation is defined as an independent and objective review of the project design document, the project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against Kyoto Protocol requirements, UNFCCC rules and associated interpretations. SGS has employed a risk-based approach in the validation, focusing on the identification of significant risks for project implementation and the generation of CERs.

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

### 2.3 GHG Project Description

The project activity has been essentially conceived to implement and produce GHG free electricity from the Wind Turbine Generators (WTGs). The generated electricity from the implemented machines will be supplied to the southern regional grid of India through the nearest grid sub station. The generated electricity that is supplied to the grid will then be wheeled to SRF's units under their technical textile business. The project activity comprises of installation of 6 no's of 1.5 MW capacity S82 type of WTGs manufactured by Suzlon Energy Limited and 3 no's of 1.6 by Vestas 5 MW capacity commissioned between 27<sup>th</sup> March 2008 and 3<sup>rd</sup> June 2008 /10/.

### 2.4 The Names and Roles of the Validation Team Members

Name	Role	Affiliate
Kaviraj Singh	Lead Assessor	SGS India
Sachin Gupta	Local Assessor (till 19/11/2008)	SGS India
Ashok Kumar Gautam	Local Assessor (Trainee) (since 20/11/2008)	SGS India

### 3. Methodology

#### 3.1 Review of CDM-PDD and Additional Documentation

The validation is performed primarily as a document review of the publicly available project documents. The assessment is performed by trained assessors using a validation protocol.

A site visit is usually required to verify assumptions in the baseline.

A site visit was performed on 19<sup>th</sup> August 2008 by the Assessor and the installed turbines were checked at site including discussions with the project proponent and site in-charge on findings raised (enclosed as Annex 3), the results of the Local Assessment are also summarized under Checklist attached as Annex 1.

#### 3.2 Use of the Validation Protocol

The validation protocol used for the assessment is partly based on the templates of the IETA / World Bank Validation and Verification Manual and partly on the experience of SGS with the validation of CDM projects. It serves the following purposes:

- it organises, details and clarifies the requirements the project is expected to meet; and
- it documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of several tables. The different columns in these tables are described below.

Checklist Question	Ref ID	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements are linked to checklist questions the project should meet.	Lists any references and sources used in the validation process. Full details are provided in the table at the bottom of the checklist.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (Y), or a Corrective Action Request (CAR) due to non-compliance with the checklist question (See below). New Information Request (NIR) is used when the validation team has identified a need for further clarification.

The completed validation protocol for this project is attached as Annex A.1 to this report

#### 3.3 Findings

As an outcome of the validation process, the team can raise different types of findings

In general, where insufficient or inaccurate information is available and clarification or new information is required the Assessor shall raise a **New Information Request (NIR)** specifying what additional information is required.

Where a non-conformance arises the Assessor shall raise a **Corrective Action Request (CAR)**. A CAR is issued, where:

- I. mistakes have been made with a direct influence on project results;
- II. validation protocol requirements have not been met; or
- III. there is a risk that the project would not be accepted as a CDM project or that emission reductions will not be verified.

The validation process may be halted until this information has been made available to the assessors' satisfaction. Failure to address a NIR may result in a CAR. Information or clarifications provided as a result of an NIR may also lead to a CAR.

**Observations** may be raised which are for the benefit of future projects and future verification or validation actors. These have no impact upon the completion of the validation or verification activity.

Corrective Action Requests and New Information Requests are raised in the draft validation protocol and detailed in a separate form (Annex A.2). In this form, the Project Developer is given the opportunity to "close" outstanding CARs and respond to NIRs and Observations.

### **3.4 Internal Quality Control**

Following the completion of the assessment process and a recommendation by the Assessment team, all documentation will be forwarded to a Technical Reviewer. The task of the Technical Reviewer is to check that all procedures have been followed and all conclusions are justified. The Technical Reviewer will either accept or reject the recommendation made by the assessment team.

## 4. Validation Findings

### 4.1 Participation Requirements

The host Party for this project is India. India has ratified the Kyoto protocol on 26th Aug 2002. A Letter of Approval from Indian DNA was not submitted by the project proponent. CAR (01) was raised asking project proponent to submit the Letter of approval from Indian DNA. Project proponent has received the Host country approval letter for the present project activity dated 9<sup>th</sup> September 2008 issued by the Indian DNA (reference number 4/15/2008-CCC). This letter was checked regarding the content and the project activity title indicated in the HCA and in section A.1 of the PDD was found same. CAR (01) was closed.

No Annex I Party has been identified in the PDD and therefore no further Letter of Approval was available. As per the requirements of Marrakech accords para 40, the PDD was webhosted for ISHC at <http://cdm.unfccc.int/Projects/Validation/DB/LOJLZC5IEZPBH1W13DKACQ8MALCWNO/view.html> for a period of 30 days. No stakeholder comment was received. The Project document uses the latest PDD CDM-SSC-PDD template version 03 currently applicable and hence acceptable. Headings/logo, format/font follows the standard requirements.

NIR (02) was raised asking the PP to submit the letter pertaining to the Modalities of Communications related with the project. The PP submitted the letter dated 9<sup>th</sup> September 2008, the MoC letter and the submitted board note clearly describe the details of the authorized person to communicate with the CDM Board with regard to the project activity. NIR (02) was closed.

### 4.2 Project Design

The Project document uses the latest PDD CDM-SSC-PDD template version 03 currently applicable and hence acceptable. Headings/logo, format/font follows the standard requirements. The corresponding sections of the PDD are correctly filled and follow the guidelines for completing CDM-SSC-PDD version 05.

The project uses a unique identifiable title, "13.95 MW grid connected wind electricity generation by SRF Limited" and as per EB 41 paragraph 67 (definition of start date) started on 20/12/2007, when the purchase order for purchase of first turbine was placed. The project envisaged installation of a 15 MW wind farm, however, due to some legal issues (duly verified by the DOE that the circumstances were not conducive for 15 MW) with land clearances for some of the envisaged sites, a capacity of 13.95 MW wind farm was installed eventually. This included installation of 6 no's of 1.5 MW capacity S82 type of WTGs manufactured by Suzlon Energy Limited and 3 no's of 1.65 MW capacity, V82 type of Wind Turbine Generators (WTGs) manufactured by Vestas India Pvt. Ltd.

CAR (03) was raised to clarify the situation regarding project location. The project activity is located in Tirunelveli District of Tamil Nadu. Although Location (Latitude/Longitude) details of each turbine were given however, these were doubtful and did not correspond to the region in the project area. The PP clarified that the latitude and longitude values provided in the PDD were in UTM format and hence seemed doubtful, the same were then changed to latitude longitude (**dd° mm' ss.s"**) format in the revised PDD. CAR (03) was closed.

NIR (04) was raised to provide the documentary proof that project has received all the required legal approvals. The PP submitted CEIG approvals and NOC for installation of wind turbines along with the sale/purchase deeds of the land used for WTG's installation. NIR (04) was closed.

NIR (05) was raised to submit the proof that the project technology would not be substituted during the project period. In reply the PP submitted an undertaking clearly stating "non substitution" of technology dated 9<sup>th</sup> September 2008 and NIR (05) was closed out.

Project proponent in the PDD mentioned that project activity has not received any public funding from parties listed in Annex 1. NIR (06) was raised asking the project proponent to provide any documentary evidence that ODA was not used for the project activity. The project proponent has submitted an undertaking dated 9<sup>th</sup> September which states that no ODA was used for the project activity. The evidence was found acceptable and hence the NIR (06) was closed. During discussion it was also understood that while going ahead with the project the PP assumed the capital structure for the project as 50:50 (Equity:Debt), however, at a later

stage all the funds required for the project were used from the internal accruals and no debt funding was availed.

The PDD version 01 was not clear for the project boundary and included regional grid, thus NIR (10) was raised and clarification was sought for the same. In response, project proponent revised the PDD incorporating the proper boundary details in line with AMS I.D. and the project boundary now encompasses the physical, geographical site of the renewable generation source, the same was checked and found acceptable, thus NIR (10) was closed

### **4.3 Eligibility as a Small Scale Project**

The project activity envisages installation of WTG's. The generated electricity from the commissioned machines will be supplied to the southern regional grid of India through the nearest grid sub station. The generated electricity that is supplied to the grid will be then wheeled to PP's units under their technical textile business within the same region. The project is being described using approved SSC methodology i.e., AMS I D version 13 dated 14 December 2007 applicable currently. The project installed capacity during the investment decision making process was 15 MW, which was later changed to 13.95 MW following legal issues. The finally installed capacity of the project is 13.95 MW which is less than the maximum 15 MW limit for the small scale project activity. Therefore, it is established the project activity at all stages was not exceeding the maximum 15 MW limit for small scale project activity as per the category. It was also verified that the project is not a debundled component of a large scale project.

### **4.4 Baseline Selection and Additionality**

The project activity is a green field wind project and uses baseline as mentioned in the small scale methodology AMS I D version 13 valid from 14<sup>th</sup> December 2007 for "Grid connected Renewable Electricity generation" as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities. The project activity generates electricity from wind mills and supplies the same to the southern regional grid of India through the nearest grid sub station. The generated electricity that is supplied to the grid shall then be wheeled to PP's units under their technical textile business within the same region and thus the project replaces the electricity which would have otherwise come from the regional grid dominated mainly by fossil fuel and therefore the project contributes to conservation of fossil fuel. Thus project activity meets all eligibility criteria of the applied methodology AMS I D.

The project was envisaged to have a capital structure of 50:50 (equity/debt) and assumed interest rate of 10% for the debt part for a 15 MW project at a cost of INR 92 crores (INR 920 million) at the time of decision making or CDM consideration. The project cost was cross checked from the Letter of Intent (LoI) written by SRF to Suzlon Energy Limited on 30/11/2007 (Ref No: SRF/SUZLON/LOI/20071130). This estimated cost was also verified from the publicly available document at the web site of Bombay Stock Exchange (BSE), the information about the capital expenditure of the wind project was intimated by SRF to BSE (<http://www.bseindia.com/qresann/newsh.asp?newsid={A6183B36-F6B3-4CEF-9B06-AD2411EACAFE}&param1=1>). However, later the project did not use any debt and ended up using all equity that comes out to be INR 87.7 Crores (877 Million) with a 13.95 MW project due to legal issues with clearances of some sites (evident from the internal communication (email) dated 24/01/2008). The main assumptions used for calculating IRR were also cross checked from their sources as discussed hereafter.

- Insurance charges used @ 0.18% based on estimates from WEG manufacturers, TNERC in its order dated 15/05/2006 /21/ assumes 0.75% so taken 0.18% looks conservative.
- Operation and Maintenance (O&M) cost base year @1.63% and O& M escalation @ 5.0% were cross checked from LoI written by SRF to Suzlon Energy Limited on 30/11/2007 (Ref No: SRF/SUZLON/LOI/20071130) and found correct.
- Wheeling charges @ 5% was supported by TNERC order (15/05/2006) and used figure was accepted.
- The interest rate when the decision to go for this project activity was made, has considered @10.0% on a conservative basis, however the actual PLR was around 13% at that point of time (Nov, 2007) and it is evident from the web site of Reserve Bank of India <http://www.rbi.org.in/scripts/WSSView.aspx?Id=11936>.

- In the absence of the project activity SRF would have sourced the electricity from the regional electricity grid and paid a HT tariff of 3.5 INR / kWh along with an electricity duty of 0.18 INR / kWh. Hence this represents the economic benefit that SRF derives from setting up the wind farm. The HT Tariff data is publicly available at the website of Tamil Nadu Electricity Board ([http://www.tneb.in/template\\_3.php?tempno=3&cid=0&subcid=54](http://www.tneb.in/template_3.php?tempno=3&cid=0&subcid=54)). The tariff is also mentioned in the board decision document.
- The used figure for Income tax in India @ 33.99% is accepted. Book depreciation Rate; straight line method on all asset @ 4.50% and 90% of asset value were validated from TNERC order 15/05/2006. Incentives given to renewable energy generation such as 80% accelerated depreciation as well as 10 year tax holidays is also considered on project and equity cash flow.

The project IRR (at the time of investment decision for a project capacity of 15 MW) hence calculated works out to be 10.48%. The PP had initially submitted financial workings which showed the project IRR as 10.16%, however this analysis did not consider salvage value at the end of project life. The IRR workings were later on revised to incorporate the necessary corrections, after which the project IRR worked out to be 10.48%. The equity IRR during the investment decision making process worked out to be 11.02%.

The investment discussion is hence based on the assumption considered at the time of investment decision and using the investment decision data sources from the public domain which can be utilized by any of the project developer as per the EB Guidance on Assessment of Investment analysis (EB39 Annex 12 para 13) applied conservatively. As the actual project parameters like project capacity (13.95 MW in place or 15 MW) and debt to equity ratios are different than the estimates considered during investment decision, in-order to ensure the robustness of the investment analysis, the IRR of the project based on actual project parameters was also additionally reviewed (by DOE) during PDD preparation stage. It was noted that the actual project (and equity) IRR for the project would be 9.27%, which is also lower than the ones (WACC 14.73%) based on the assumptions applicable at the time of investment decision /12, 13, 22/.

The PP initially proposed Investment analysis to discuss the additionality of the present project activity (PDD version 1) and considered the CERC benchmark of 16% for the returns expected from the project i.e., equity IRR. The equity IRR for the project was calculated as 11.02% considering a term loan for 50% of the capital @ 10% rate of interest. However, in line with the EB guidelines (EB40, para 40), it was asked from the PP to re-justify the investment barrier as CERC benchmark of 16% could no longer be accepted. In order to get all the related documents on the basis of which the project was shown additional, CAR (07) was raised.

To support the benchmark figure of 16% (as taken in the first version of PDD), PP submitted one letter from IDFC (Infrastructure Development Finance Company), which is one of the financial Institution involved in financing renewable energy projects including wind projects in India in the past few years. The submitted letter was debatable in view of the fact that the letter was talking about renewable energy sector as a whole and was considering 16% return from these projects as their consideration to finance these projects in order to have sufficient DSCR. The PP was thus asked to substantiate the benchmark and expected returns from the investment made. In line with the guidance to investment analysis issued in EB 41, annex 45 (paragraph 11), the PP then presented weighted average costs of capital (WACC) as benchmark for the project IRR. Following the guidance under Para 13, that in cases where the project has more than one potential developer, the benchmark can not be based on internal cost of equity or WACC the PP made use of publicly available data sources in calculating the WACC applicable to project type. The PP has relied on principles of financing and investment decision making as provided in text books of corporate finance (the relevant pages have been stated in the PDD and reviewed) while arriving at the applicable benchmark for the project.

Cost of Equity - The CAPM economic model was used to determine the required/expected return on equity based on potential risk of an investment.

Risk Free rate - Long dated Indian government bond rates available at the project start date has been used as risk free rate, the same approach has also been advised in Page 188 of text book on "Corporate Finance Theory and Practice" by Dr. Aswath Damodaran, Stern School of Business, New York University. The long term government bond rate in the year 2006-07 (data available at the project start date) on the basis of the RBI data source <http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/80303.pdf> is verified to be 7.89%. The market risk premium has been calculated as the difference in compounded annual return between the BSE-Sensex and the Government bond rates. The approach as described in the PDD has also been advised in

Page 190 and 191 of the book, Corporate Finance Theory and Practice, Dr. Aswath Damodaran. On the basis of the above approach the market risk premium works out to 9.95%.

Beta - Average beta value (1.44), sourced from a third party, for all the listed power generating companies at the project start date has been used as applicable beta. The considered value of beta was verified from the source: Bloomberg sourced at Damodaran website (<http://www.stern.nyu.edu/~adamodar/pc/datasets/emergcompfirm.xls>). Here the aim is to arrive at a beta value applicable for investment in wind power projects. The approach should be to base on the beta values of listed wind power generation companies in India. However, there is no company listed on any stock exchange in India (BSE and NSE) which is exclusively into wind energy business. This information was also cross checked from the websites of BSE (<http://www.bseindia.com/about/datapdcts.asp>) and NSE (<http://www.nseindia.com>) as lastly accessed on 20/12/2008, wherein the annual report of the listed company of renewable energy sector is available. The next best option is to consider beta values of all electricity generating companies in India. These companies considered include renewable as well as conventional power generating companies. Given the higher risks in renewable energy projects relative to that for conventional power, the use of a Beta value that includes renewable as well as conventional power generating companies, is considered conservative. In view of the above the average of beta values of all listed electricity generating companies is accepted as a conservative reflection of the risk of the project type. The cost of equity based on above values of various parameters works out to 22.2%, the calculation of the same has been verified.

Cost of Debt - The prevailing bank PLR rate (13%) was considered as the cost of debt with sufficient documentary evidence of using publicly available data (Reserve Bank of India, <http://www.rbi.org.in/scripts/WSSView.aspx?id=11936>).

The WACC works out to 14.73% considering a general equity to debt ratio of 30:70, for wind power generation projects which is stipulated by several orders and regulations on wind power including the TNERC order. The WACC was further checked for its robustness and conservativeness using the project specific equity debt ratio of 50:50 and debt cost of 10% (assumed at the time of making investment decision). The WACC in this case further increased to 15.54%. Hence, on conservative assumptions the project benchmark can well be considered as 14.73%. Further, considering the project IRR of only 10.48%, the proposed project is financially unattractive for the PP and faces significant Investment barrier. Therefore, it can be concluded that project IRR (10.48%) during investment decision making is below the benchmark (WACC) considered for project activity 14.73%.

PP was also asked to present the sensitivity analysis in order to check the robustness of the expected returns from the project. As per the guidance to assessment of investment analysis, parameters that constitute more than 20% of either total project costs or total project revenues shall be included in the sensitivity analysis.

The base PLF for the project was considered as maximum of two professional studies (WAsP and CWET) concluded PLF to range between 25-30.72%. The maximum PLF factor (30.72%) has been considered while calculating the expected generation and the returns. The plant load factor was cross checked from the study conducted by Centre for Wind Energy Technology (C-WET) a Government of India agency; it reports the PLF as 25 to 27%. The PP argued that this approach rules out the requirement of sensitivity analysis. Further, during site interviews it was verified that in the past the PLF for already installed wind mills in the region has been in the range of 25-30%. The DOE noted that the PP had already chosen a PLF higher than the average for the base case, further, if a 10% increases in PLF is assumed then the PLF increases to 34%. The DOE has verified from wind resource assessment studies carried out by Centre for Wind Energy Technology (C-WET) a Government of India agency, for the project site that such high PLF is unlikely to be achieved. Though a 10% increase in generation is unlikely and not relevant for the sensitivity, the Project IRR at a 10% higher generation is 12.20%, which is well below the benchmark.

The PP has assumed a fixed HT tariff for calculation of IRR. The Indian Electricity Act stipulates the tariff to be based on cost to serve principles, however in India the HT tariff for industrial consumers is set at a higher rate than the cost of supply because of loading of the cross subsidy surcharge. The DOE has verified the Indian Electricity Act and has found that section 61(g) of the Act states *"the tariff should be set such that it progressively reflects the cost of supply of electricity and also, reduces and eliminates cross-subsidies"*. Further, it was verified from the TNERC order dated 15.05.2006 (<http://tnerc.tn.nic.in/orders/TRANSMISSION%20CHARGES%20TP1-Final.pdf>, page 6) that the cost to supply of HT consumers was Rs. 2.84 per unit. The HT tariff considered for Investment Analysis of the

project is Rs. 3.68 per unit, which is significantly higher than the cost of supply. Hence HT tariff is likely to witness a downward trend in the coming years. The PP has assumed a constant tariff which is significantly higher than the cost of supply; therefore sensitivity analysis of any increase in HT tariff is not relevant.

The estimated project cost was verified to be based on the final negotiated price as per the LOI placed to Suzlon /17/ and hence there is no scope of any reduction in the project cost. The DOE also noted that the actual purchase order placed with Suzlon was at the same negotiated price. Therefore the DOE accepted that a reduction in purchase cost was not possible and hence sensitivity on project cost is also not applicable. The DOE also noted that though the 10% decrease in project cost was not relevant scenario, the Project IRR, even at this unlikely variation is 12.42%, which is well below the benchmark. CAR07 was closed satisfactorily after reviewing the documentary evidences referred for financials calculations. Based on the above discussion and referred documentary evidences the fact was established that the project is not implemented as the requirement of law and faces investment barrier. Hence, the project was found additional.

In order to get the supporting evidence for the serious CDM consideration the Board note dated 17 December 2007, was collected along with SRF's annual report /14/, wherein it was clearly mentioned that viability of the project has been considered on the basis of CDM revenues expected from the project. The project proponent was already aware about the CDM since SRF has already got one CDM project registered (UNFCCC ref. no. 115). The seriousness of CDM consideration was also checked from one of the leading news paper of the country "The Hindu". The 18<sup>th</sup> December, 07 edition of the new paper published that SRF is setting up a wind mill project in Tamil Nadu as a CDM project (<http://www.hindu.com/2007/12/18/stories/2007121856011600.htm>). In addition to this, a Hindi daily newspaper namely "Dainik Bhaskar" also reported in its 19<sup>th</sup> December, 07 edition that SRF, after considering CDM, will generate the wind mill based power /20/. The e-mail communication between SRF and its CDM consultant (dated 29/05/07 & 06/12/2007) also supported the prior CDM consideration /18/. SRF is a public listed company and a notification regarding the decision to invest was also submitted to the stock exchange (<http://www.bseindia.com/qresann/newsh.asp?newsid={A6183B36-F6B3-4CEF-9B06-AD2411EACAFE}&param1=1>) was also collected as subjective evidence on account of serious CDM consideration while conceptualizing the project. The PP also provided a chronology of events to show that continual and real action towards securing CDM status was taken, right at the time of start of the project, along with project implementation without any delay. Therefore, the demonstrated CDM consideration was found serious and in line to the guidance provided by EB 41 annex 46.

#### **4.5 Application of Baseline Methodology and Calculation of Emission Factors**

The present project activity is about generating electricity using wind turbines and supplying it to southern grid and then wheeling it to their Technical Textile Business. The project has applied baseline methodology as mentioned in the small scale methodology AMS I-D version 13 dated valid from 14<sup>th</sup> December 2007 for "Grid connected Renewable electricity generation" as per Appendix B of the simplified modalities and procedures for small-scale CDM project activities. The project is of 13.95 MW capacity and supplies electricity generated to the southern regional grid, thus satisfying the condition for the baseline methodology.

Following the minor corrections requested by EB (<http://cdm.unfccc.int/Projects/DB/SGS-UKL1231860367.09/history>) the baseline emission factor for Southern Grid has been revised to 929.31 tCO<sub>2</sub>/GWh by project proponent in revised PDD Version 05 dated 27/03/2009 as per the CO<sub>2</sub> Baseline Database for the Indian Power Sector; Version 3.0 published by Central Electricity Authority (CEA), Government of India. It has been assessed and duly verified that this is the latest CO<sub>2</sub> baseline database for the Indian Power Sector when the validation commenced i.e. July 26, 2008. The weighted average emission rate for the Southern regional grid has been considered for emission reduction calculation. Three recent years (Year 2004-05, 2005-06 and 2006-07) simple Operating Margin has been averaged (1003.93 tCO<sub>2</sub>/GWh) and recent (Year 2006-07) one year Build Margin (705.45 tCO<sub>2</sub>/GWh) has been considered to determine Combined Margin for project activity. The weighting of 75% is given to simple Operating Margin and 25% to Build Margin as per the equation 13 (for wind project activity) of Tool to calculate the emission factor for an electricity system Version 01.1. The data (3 year Simple Operating Margin and recent Build Margin) for the same is provided by the CEA which can be referred at the link (<http://www.cea.nic.in/planning/c%20and%20e/Government%20of%20India%20website.htm>) thus the same

was acceptable. Thus, the grid emission factor for the project activity has been calculated and duly verified to be 929.31 tCO<sub>2</sub>/GWh as combined margin and fixed ex-ante.

The emission reductions spreadsheet has been revised by project proponent present realistic Emission reduction calculations. The calculations were checked for the values described such as the total generation, CUF/PLF and the emission factor and assumptions used were duly verified against their sources and were found acceptable

The baseline emission calculations and emission reductions were found to be in order during the desk review and during the local assessments at the site. The emission reduction figures would further be checked during verification. As per methodology AMS I-D version 13 valid from 14<sup>th</sup> December 2007; leakage due to project activity will be consider only when there is an equipment transfer from one place to another but this is not the case with present project activity as they are newly purchased (purchase orders 20/12/2007 /5/ and commissioning certificates dated 27/03/2008 and 03/06/2008), hence no leakage is considered.

#### **4.6 Application of Monitoring Methodology and Monitoring Plan**

The present CDM project activity uses monitoring methodology AMS I-D version 13 valid from 14<sup>th</sup> December 2007 for “Grid connected Renewable Electricity generation”. The PDD clearly mentions that leakage is not considered in present project activity as methodology AMS I-D version 13 mentions leakage due to project activity will be considered only when there is an equipment transfer from one place to another but this is not the case with present project activity hence no leakage is considered. This was acceptable.

It was observed during the review of version 1 of the PDD, that project proponent has not described in detail about the QA/QC procedures to be followed in order to maintain the integrity of the monitored data. NIR (08) was raised asking the project proponent to clarify the same. In response the project proponent explained that the EPC contractors employed for running and maintenance of the Wind farm are ISO certified entities and employ all quality procedures required to ensure the quality of monitored data. Further, the quality assurance is also required as per the Power Wheeling Agreement and Joint meter readings will be taken by the monitoring officials and the TNEB officials further, any mismatch or loss in data can be accounted from the secondary check meters. Also, annual calibration of all the meters shall be undertaken, archiving of data would be for two years after the end of crediting period while the data will be stored in hard copies as well as electronically. This was accepted and the corrections made were cross checked with the rephrased version of the PDD and found acceptable, hence NIR (08) was closed.

#### **4.7 Choice of the Crediting Period**

The project proponent is claiming credits from 01/03/2009 or from date of registration whichever is later. The present project activity has chosen Ten years fixed crediting period. This was validated during the site visit and discussion with the project proponent.

#### **4.8 Environmental Impacts**

The project proponent has mentioned in the PDD that the present project activity does not require EIA to be carried out. The same was checked with the EIA notification published by Ministry of Forests and Environment, Government of India, which mentions the project requiring EIA, and according to the notification wind projects do not require EIA to be carried out. The web-link for the notification is <http://envfor.nic.in/divisions/iass/eia/Annex1.htm>. Further, the project has received Host Country Approval from the DNA, which itself checks the meeting of all statutory laws and takes care of the requirement of “contribution to sustainable development”.

#### **4.9 Local Stakeholder Comments**

For the said project activity of 13.95 MW wind power project for electricity generation the identified stakeholders included the original landowners of the windmill farm, member of the local governing body, residents of village, representatives of the local school, TNEB Engineers, members of the Operation and Maintenance team of the EPC contractor, etc.

The PDD version 1 has described that local stakeholder consultation was carried out and no serious comments were observed, thus in order to validate the information provided NIR (09) was raised to provide the documentary evidences regarding media used to call for the stakeholders meeting and also the proof regarding occurrence of the same along with comments received on the project. In response the project proponent clarified that these invitations were delivered in person to all the stakeholders and they were informed about the consultation 15 days prior to the event. PP also submitted copy of Public Notice with stakeholder meeting notification as on 17/06/2008 and 18/06/2008 at Radhapuram and Surandai sites for Suzlon and Vestas Wind Turbines sites, respectively. MoM for Stakeholder consultation held on 17 and 18 June 2008 and Attendance sheet was also checked during site visit. All the documents submitted were found to be in order and No serious comments against the project was given by any of the stakeholders and a general consensus in favour of the project was observed among stakeholders. NIR (09) was closed.

## 5. Comments by Parties, Stakeholders and NGOs

In accordance with sub-paragraphs 40 (b) and (c) of the CDM modalities and procedures, the project design document of a proposed CDM project activity shall be made publicly available and the DOE shall invite comments on the validation requirements from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. This chapter describes this process for this project.

### 5.1 Description of How and When the PDD was Made Publicly Available

The Project Design Document for this project was made available on the UNFCCC website (<http://cdm.unfccc.int/Projects/Validation/DB/LOJLZC5IEZPBH1W13DKACQ8MALCWNO/view.html>) and was open for comments from 26/07/2008 until 24/08/2008.

### 5.2 Compilation of all Comments Received

No comment was received for the project activity during this ISHC period.

Comment Number	Date Received	Submitter	Comment

### 5.3 Explanation of How Comments Have Been Taken into Account

No comment was received for the project activity during this ISHC period.

## 6. List of Persons Interviewed

<b>Date</b>	<b>Name</b>	<b>Position</b>	<b>Short Description of Subject Discussed</b>
19-08-2008	Raju Rastogi	SRF employee	Project Financials and additionality issues
19-08-2008	Krithika Kaw	SRF employee	Project Financials and additionality issues
19-08-2008	K R Daniel	Suzlon Infrastructure	Project overview and quality systems employed
19-08-2008	P Subramanian	Suzlon Infrastructure	Project overview and quality systems employed
19-08-2008	S Chockalingam	Vestas	Project overview and quality systems employed
19-08-2008	Kripa Jagannathan	Consultant	Monitoring and baseline calculations

## 7. Document References

Category 1 Documents (documents provided by the Client that relate directly to the GHG components of the project, (i.e. the CDM Project Design Document, confirmation by the host Party on contribution to sustainable development and written approval of voluntary participation from the designated national authority):

- /1/ PDD version 1 dated 23/07/2008 (submitted for international stakeholder's comments)
- /2/ PDD version 2 dated 17/09/2008
- /3/ PDD version 3 dated 19/12/2008
- /4/ PDD version 4 dated 19/01/2009 (submitted with request for registration)
- /5/ Host Country Approval, reference number 4/15/2008-CCC dated. 09/09/2008
- /6/ Financials with (debt, equity equal) and Sensitivity Analysis CDM VAL2127
- /7/ Board note dated 17/12/2007 as CDM consideration proof
- /8/ Modalities of communication dated 09/09/2008
- /9/ Emission reduction calculation sheet (CER estimation SRF\_27.03.2009)
- /10/ PDD version 05 dated 27/03/2009 (submitted in response to correction requested by EB)

Category 2 Documents (background documents used to check project assumptions and confirm the validity of information given in the Category 1 documents and in validation interviews):

- /1/ Letter of undertaking for no use of ODA dated 09/09/2008
- /2/ Notice for stakeholder consultation process dated 17/06/2008 and 18/06/2008
- /3/ MoM and attendance sheet for stakeholder consultation process carried on 17/06/2008 and 18/06/2008
- /4/ Letter of undertaking for no change in technology dated 09/09/2008
- /5/ Purchase order for the project activity dated 20/12/2007
- /6/ ISO 9001:2000, OHSAS 18001:1999 for Vestas
- /7/ Power Wheeling Agreement for all the turbines in the project activity.
- /8/ Weblink <http://www.stern.nyu.edu/~adamodar/pc/datasets/emergcompfirm.xls>
- /9/ Weblink <http://www.rbi.org.in/scripts/WSSView.aspx?Id=11936>
- /10/ Commissioning certificates dated between 27/03/2008 and 03/06/2008
- /11/ NOC from CEIA and sale deed of the land used for installation of WTG's
- /12/ WACC calculation sheet

- /13/ Fax notification of the investment decision to NSE dated 17/12/2007
- /14/ SRF annual Report 2007-2008
- /15/ WaSP and CWET analysis report
- /16/ Bank view on investment return from IDFC, letter dated. 26.06.2008
- /17/ Letter of Intent placed to Suzlon dated 30th November 2007
- /18/ Relevant pages of engagement letter with PwC
- /19/ <http://www.bseindia.com/>
- /20/ Newspaper articles and email communications quoted
- /21/ TNERC order dated 15.05.06
- /22/ Relevant pages of the text book "Corporate Finance Theory and Practice" by Dr. Aswath Damodaran, Stern School of Business, New York University
- /23/ <http://rbidocs.rbi.org.in/rdocs/Publications/PDFs/80303.pdf>

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## A.1 Annex 1: Local Assessment

This checklist is designed to provide confirmation of in-country data and information provided in the Project Design Document for **13.95 MW grid connected wind electricity generation by SRF Limited**

It serves as a “**reality check**” on the project that is completed by a local assessor from **SGS INDIA**

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
1. Actual Commissioning dates, PDD mentions 31 <sup>st</sup> March 2008, Financial Sheet says 30 <sup>th</sup> March. Also, are all WTGs commissioned on same date?	All the WTGs were commissioned between 27 <sup>th</sup> March 2008 and 3 <sup>rd</sup> June 2008	Commissioning certificates of all the WTGs	NA
2. Total installed capacity for the project, PDD ver.1 mentions 13.95 MW, while financial sheet says 15 MW.	The project was envisaged to be of 15 MW during investment decision and the same is presented in the financial sheet applicable at the time of investment decision. However, due to legal issues with land clearances for some of proposed sites, the actual project of 13.95 MW was installed.	Discussion with the PP and verification of email regarding legal issues with the sites	NA
3. Location Check, including Latitude, Longitude. Locations are Udayathur and VK pundur as mentioned under PDD ver.1 section A.4.1.4 of VK Pundur and Thiruvambalapuram as in the table.	In the PDD ver.1 the coordinates were presented in UTM format.	Discussion with the PP and site verification	NA
4. Project ownership details. If the PP possess valid license to implement the project at the site.	The Ownership of the project belongs to SRF.	Sale deed of the WTGs site and equipment purchase orders.	NA
5. No other similar project activity exists nearby which has been implemented by the same PP.	No other similar project activity implemented by the SRF was found.	Site visit and discussion with the EPC contractors	NA

Issue	Findings	Source/Mean of Verification	Further Action / Clarification / Information Required?
6. Barrier if any other than the Investment Barrier as mentioned in the PDD.	No other significant barrier was found.	Site visit and discussion with the PP	NA
7. Interview with Site Incharge : Project, management structure, understanding on the project activity, Monitoring procedure, Handling of data, QA/QC procedures, backup meter, procedure to tackle emergencies which can lead to loss of monitored data	The EPC contractor are ISO:9000 certified and have established QA/QC procedures.	Discussion with the Site in-charge, ISO certificates.	NA
8. Discussion with the local stakeholders during the site visit on general understanding of the project activity and issues if any.	A general acceptance was observed for the project by the local stakeholders	MoM of the stakeholders, discussion with site incharge	NA

**A.2 Annex 2: Validation Protocol**

**Table 1 Participation Requirements for Clean Development Mechanism (CDM) Project Activities (Ref PDD, Letters of Approval and UNFCCC website)**

Requirement	Reference	Comments	Conclusion
1. All Parties (listed in Section A3 of the PDD) have ratified the Kyoto protocol and are allowed to participate in CDM projects	Marrakech Accords, CDM Modalities §30	India is Host Party and has ratified the protocol on 26 <sup>th</sup> August 2002 and is allowed to participate. <a href="http://maindb.unfccc.int/public/country.pl?country=IN">http://maindb.unfccc.int/public/country.pl?country=IN</a> last accessed 25 <sup>th</sup> July 2008	Y
2. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3 and be entered into voluntarily.	Marrakech Accords, CDM Modalities §29 and §30	It's a unilateral project, no Annex I Party is involved.	Y
3. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof, and be entered into voluntarily	Marrakech Accords, CDM Modalities §29 and §30  Kyoto Protocol Art. 12.2, Marrakech Accords, CDM Modalities §40a	The letter of Approval from host Country DNA is yet to be submitted.  CAR01: Please provide LoA from host country DNA  Letter provided so CAR01- closed	Y
4. Parties, stakeholders and UNFCCC accredited NGOs shall have been invited to comment on the validation requirements for minimum 30 days, and the project design document and comments have been made publicly available	Marrakech Accords, CDM Modalities, §40	Yes, the project was listed on UNFCCC website from 26 <sup>th</sup> July 2008 to 24 <sup>th</sup> Aug 2008  <a href="http://cdm.unfccc.int/Projects/Validation/D/B/LOJLZC5IEZPBH1W13DKACQ8MALC/WNO/view.html">website: http://cdm.unfccc.int/Projects/Validation/D/B/LOJLZC5IEZPBH1W13DKACQ8MALC/WNO/view.html</a>  Number of comments received: NIL	Y

Requirement	Reference	Comments	Conclusion
5. The project design document shall be in conformance with the UNFCCC SSC PDD format	1	The PDD uses SSC PDD template ver 3, which is also the current applicable and acceptable version. Headings/logo, format/font follows the standard requirements.	Y
6. The project participants shall submit a letter on the modalities of communication (MoC) before submitting a request for registration	EB-09 F_CDM_REG form	MoC letter needs to be submitted by Project Proponent.  NIR02: MoC letter needs to be submitted  NIR02- closed because the MoC was submitted.	Y
7. For AR projects, the host country shall have issued a communication providing a single definition of minimum tree cover, minimum land area value and minimum tree height. Has such a letter been issued and are the definitions consistently applied throughout the PDD?	NA	N/A	N/A

**Table 2 PDD**

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>I. General Description of Project Activity</b>					
<b>A.1. Project Title</b>					
A.1.1. Does the used project title clearly enable to identify the unique CDM activity?	1	DR	The project uses a unique identifiable title, "13.95 MW grid connecte[d wind electricity generation by SRF Limited"  This needs to be further checked in the LoA from DNA  LoA was checked and CAR01 closed.	Pending Closure of CAR01	Y CAR1 closed
A.1.2. Are there an indication of a revision number and the date of the revision?	1	DR	Yes, The webhosted PDD indicates Version 1 dated 17/06/2008 in Section A.1	Y	Y
A.1.3. Is this in consistency with the time line of the project's history?	1	DR / Site Visit	The start date of the project activity is 20/12/2007 and the PDD is dated 23/07/2008. The same is in time line.  Proof is required to support the start date.  The purchase order in support of project start date and minutes of board meeting for CDM consideration was checked.	Site Visit	Y
<b>A.2. Description of the Project Activity</b>					
A.2.1. Is the description delivering a transparent overview of the project activities?	01	DR / Site Visit	Information regarding the purpose of the project activity, type of technology used and contribution to sustainable development has been described.  The same would be further cross-checked during the site visit.  The contribution of the project activity to sustainable development was checked form LoA. The wind turbine specifications were also checked.	Site visit	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.2.2. Is all information provided in compliance with actual situation or planning?	1	DR / Site Visit	Section A.2 describes the project activity as installation of 6 nos 1.5 MW WTGs and 3 nos. 1.65 MW WTGs in the Southern regional grid. All the turbines are commissioned. However, actual date of commissioning and other details are to be checked and confirmed during site visit. The project activity was found commissioned at the site visit.	Site Visit	Y
A.2.3. Is all information provided consistent with details provided in further chapters of the PDD?	1	DR / Site Visit	The project activity details as mentioned in the PDD are consistent the same would be cross-checked during the site visit. The given details in the PDD was cross checked at site and found in order.	Site Visit	Y
<b>A.3. Project Participants</b>					
A.3.1. Is the table required for the indication of project participants correctly applied?	01	DR	The table is applied correctly.	Y	Y
A.3.2. Is all information provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	01	DR	The project proponent for the project is consistent throughout the PDD.	Y	Y
<b>A.4. Technical Description of the Project Activity</b>					
A.4.1. Does the information provided on the location of the project activity allow for a clear identification of the site(s)?	1	DR / Site Visit	The project activity is located in Tirunelveli District of Tamil Nadu. Although Location details of each turbine is given however, these are doubtful and does not correspond to the region in the project area. Latitude Longitude details to be checked and confirmed during site visit. CAR03: Provide correct location details of each turbine. The exact locations of the turbine were provided and the same was checked at site.	CAR03 CAR 03 closed.	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.4.2. Do the project participants possess ownership or licenses which will allow the implementation of the project at that site / those sites?	1	DR / Site Visit	To be confirmed during site visit. The ownership license was checked from the available documents at the site and found okay.	Site Visit	Y
A.4.3. Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance and is the explanation how the project will reduce greenhouse gas emission transparent and suitable?	1	DR	The project involves installation of Wind Turbine Generators. The generated electricity shall be wheeled using the regional grid mainly dominated by fossil fuel driven electricity and hence the electricity generated from renewable source shall be helpful in reducing the greenhouse gases.	Y	Y
A.4.4. Does the project design engineering reflect current good practices?	1	DR	The project involves Wind turbine generators. This technology is existent in the India and is safe and sound.	Y	Y
A.4.5. Is all information provided in compliance with actual situation or planning as available by the project participants?	1	DR / Site Visit	PDD describes the project to meet all local statutory laws. NIR04: Please provide statutory approval letters. CEIG approval letters for all WTGs and Sale deed of land used for WTGs installation were provided.	Site Visit NIR04 NIR04 closed	Y
A.4.6. Does the project use state of the art technology or would the technology result in a significantly better performance than any commonly used technologies in the host country?	1	DR	WTG are used in India and identified sites wherever wind power generation potential exists. The technology shall be replacing the other electricity generation technologies which are fossil fuel intensive. There is no Technology transfer as such.	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.4.7. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	01	DR	The lifetime of the project activity as mentioned in the PDD is 20 years.  NIR05 : Evidence is required that the project technology would not be substituted during the crediting period.  letter of undertaking for Non substitution of Technology" dt 9 <sup>th</sup> Sept. 2008	NIR05  NIR05 closed	Y
A.4.8. Does the project require extensive initial training and maintenance efforts in order to work as presumed during the project period?	01	DR / Interview	The project shall be maintained and operated by EPC contractors. No intensive training and maintenance is required.	Y	Y
A.4.9. Does the project make provisions for meeting training and maintenance needs?	01	DR	The EPC contractors are ISO certified and employ trained staff.	Y	Y
A.4.10. Is a schedule available on the implementation of the project and are there any risks for delays?	01	DR / Site Visit	The WEGs got commissioned by of June 2008. Commissioning report is required to be checked and date shall be confirmed.  The commissioning certificates were checked.	Site Visit	Y
A.4.11. Is the table required for the indication of projected emission reductions correctly applied?	01	DR	Yes, the table is applied correctly	Y	Y
<b>A.5. Public Funding</b>					
A.5.1. Does the information on public funding provided conform with the actual situation or planning as presented by the project participants?	1	DR / Site Visit	The PDD mentions that no ODA was used for the project activity.  NIR06: evidence is required that No ODA was used in the project activity.  Declaration for no ODA was checked and found okay.	NIR06  NIR06 closed.	Y
A.5.2. Is all information provided consistent with details provided by further chapters of the PDD (in particular annex 2)?	1	DR	Yes, the description regarding funding is consistent throughout the PDD	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.5.3. In case of public funding from Annex I Parties is it confirmed that such funding does not result in a diversion of official development assistance	1	DR	Pending NIR06	Pending NIR06 NIR06 closed.	Y
<b>A.6. Debundling</b>					
A.6.1. Is the small-scale project activity a debundled component of a large scale project activity	1, 3	DR / Site Visit	The PDD mentions that the project proponent does not have any other CDM project activity in the 1 km area from the present project activity. The same will be checked during the site visit. It is not a debundled component of a large scale project activity.	Site visit	Y
A.6.2. If the project is a debundled component of a larger project, does the larger project fall within the limits for small-scale CDM project activities	1, 3	DR / Site Visit	The PDD mentions that the project proponent does not have any other any other CDM project activity in the 1 km area from the present project activity. The same will be checked during the site visit. It is not a debundled component of a large scale project activity	Site visit	Y
<b>II. Baseline and Monitoring Methodology</b>					
<b>A.7. Choice and Applicability</b>					
A.7.1. Is the project using an approved simplified methodology?	1, 2	DR	The methodology used is AMS I D version 13; the same is an approved methodology and is valid.	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.7.2. Does the project activity qualify as small scale project?	1, 2	DR	The project uses AMS I D; the total capacity of the project is 13.95 MW which is less than the specified limit of 15 MW.  The same needs to be cross-checked during the site visit.  The installed capacity of the project activity turbine was found 13.95 MW.	Site visit.	Y
A.7.3. Is the category(ies) of the project activity correctly identified in accordance with Appendix B to the simplified modalities and procedures for small-scale CDM project activities?	1, 2 & 3	DR	The project activity envisages generation of electricity and supplying the same to grid. The methodology has appropriately been selected as AMS I D V13.	Y	Y
A.7.4. Is the project activity a bundle of several small scale activities and if so does it contain any sub-bundles	1, 3	DR	The project activity is not a bundle project activity as mentioned in the PDD, the same needs to be checked during site visit.  The project activity was not found a bundle activity.	Site visit	Y
A.7.5. If the project activity is a bundle of several small scale activities, does the sum of the total bundle (including any subbundles) fall within the limits for small scale projects	1, 3	DR	The project activity is not a bundle project activity as mentioned in the PDD, the same needs to be checked during site visit.  The project activity was not found a bundle activity	Site visit	Y
A.7.6. If the project activity is a bundle of several small scale activities, has the form with information related to the bundle been submitted and is it correctly used	1, 3	DR	The project activity is not a bundle project activity as mentioned in the PDD, the same needs to be checked during site visit.  The project activity was not found a bundle activity	Site visit	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A.8. Project Boundary</b>					
A.8.1. Has the project boundary of the project activity been based on the guidance of the applicable project category?	1, 2	DR	The PDD boundary is correctly applied and is in line with as required as per the methodology. NIR10 was raised in order to review the project boundary details. The project boundary was revised and NIR10 was closed out.	NIR10 NIR10 closed	Y
A.8.2. In case of grid connected electricity projects: Is the relevant grid correctly identified in accordance with EB guidance and the underlying methodology?	1	DR	The project activity generates electricity and supplies the same to the Grid. This shall therefore reduce the power requirement from the relevant grid, i.e., Southern Grid. The grid has appropriately been selected as per the Central Electricity Authority.	Y	Y
A.8.3. Are the project's spatial boundaries (geographical) and the project's system boundaries (components and facilities used to mitigate GHGs) clearly defined?	1	DR	The project boundary has been described clearly.	Y	Y
<b>A.9. Identification of the Baseline</b>					
A.9.1. Does the PDD discuss the identification of the most likely baseline?	1, 2	DR	The baseline selected is the continuation of generation in the Southern regional grid and is most likely the baseline scenario in the absence of the project activity.	Y	Y
A.9.2. Is the discussion and determination of the chosen baseline transparent and supported by the available data?	1, 2	DR	The baseline selected is Southern regional grid and is as per the CEA data.	Y	Y
A.9.3. Is conservativeness addressed in the way of identifying the baseline?	1, 2	DR	The baseline selected is Southern regional grid and is as per the CEA data.	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A.10. Additionality</b>					
<p>A.10.1. Is the discussion on additionality and the evidence provided consistent with the starting date of the project</p>	1	DR / Site Visit	<p>The start date for the project activity is 20/12/2007 ( PO date).</p> <p>Also, start date is to be rechecked in view of other relevant information after site visit and interview.</p> <p>CAR07 : Submit following details:</p> <ul style="list-style-type: none"> <li>- IRR / financial calculation sheet</li> <li>- Loan documents</li> <li>- Proof on estimated project cost</li> <li>- Proof of CDM consideration while conceptualizing the project is required to be submitted.</li> <li>- Life time of the project</li> <li>- Supporting document for Start Date of the project activity</li> <li>- Basis of assumption for PLF, sensitivity analysis would also be required</li> <li>- Copy of PWA</li> </ul> <p>The above mentioned supportive documents were provided and hence CAR07 was closed out. Please refer validation findings for CAR close out details.</p>	<p>CAR07 CAR07 closed.</p>	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.10.2. Is the discussion on additionality based on a comparison with realistic and credible alternatives?	1	DR	<p>Not all plausible alternatives are discussed. Pending CAR07</p> <p>The PDD discusses that project faces major barrier on account of low IRR than the benchmark mentioned by CERC. However, the CERC benchmark of 16% used to show the project financial unattractive is no longer acceptable by EB (para 40, meeting report of EB40).</p> <p>Further, section B.5 discusses benchmark in relation to conventional power generation; however, the current project is related with non-conventional power generation</p>	<p>Pending CAR07 CAR07 closed.</p>	Y
A.10.3. Does the discussion on additionality take into account relevant national and/or sectoral policies, macro-economic trends and political aspirations??	1	DR	The project activity conforms to local and national policies. There is no enforcement of power generation by a private entity.	Y	Y
A.10.4. Has it been shown that the proposed project activity faces barriers that prevent the implementation of this type of proposed project activity but would not have prevented the implementation of at least one of the alternatives?	1	DR	<p>Pending CAR07 CAR07 closed</p>	Pending CAR07	<p>Y CAR07 closed.</p>
A.10.5. Is it demonstrated/justified that the project activity itself is not a likely baseline scenario	1	DR	<p>Not all plausible alternatives are discussed. Pending CAR07</p> <p>Site visit</p> <p>After the site visit and review of the submitted documentation the CAR07 was closed out.</p>	Pending CAR07	<p>Y CAR07 closed.</p>

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A.11. Application of the Simplified Methodology</b>					
A.11.1. Has the simplified methodology been applied correctly for determining <b>baseline emissions</b> ?	1	DR	Yes, as per the methodology the grid emission factor as per CEA data has been used to estimate the correct baseline emissions. However, assumption on PLF needs to be substantiated. Pending CAR07 CAR07 closed out.	Pending CAR07	Y CAR07 closed.
A.11.2. Has the simplified methodology been applied correctly for determining <b>project emissions</b> ?	1	DR	Wind Turbine Generators uses renewable energy source and is free of any emissions.	Y	Y
A.11.3. Has the simplified methodology been applied correctly for determining <b>leakage</b> ?	1	DR	There are no emissions outside the project boundary which can be attributed to be the emissions due to the project activity.	Y	Y
A.11.4. Have all the methodological choices been explained, have they been properly justified and are they correct	1, 2	DR	Yes, the methodology has been applied correctly.	Y	Y
A.11.5. Are uncertainties in the GHG emissions estimates properly addressed in the documentation?	1, 2	DR	Pending closure of CARs/NIRs.	Pending CARs/NIRs	Y
<b>A.12. Ex-ante Data and Parameters Used</b>					
A.12.1. Are the data provided in compliance with the simplified methodology?	1, 2	DR	The PDD mentions use of grid emission factor on ex-ante basis and this is acceptable as per the applied methodology.	Y	Y
A.12.2. Is all the data derived from official data sources or replicable records and have these been correctly quoted?	1, 2 & 3	DR	The emission factor used is from CEA and the same is from an official source.	Y	Y
A.12.3. Is the vintage of the baseline data correct?	1	DR	Pending closure of CARs/NIRs.	Pending CARs/NIRs	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A.13. Calculation of Emissions Reductions</b>					
A.13.1. Has the approved methodology been applied correctly for determining <b>emission reductions</b> ?	1, 2	DR	Yes, the emission reduction estimation is in line with the methodology requirement. However, the clarification on assuming the PLF is required.  Pending CAR07.  WaSP and CWeT analysis report on expected PLF for the proposed wind farm of SRF; WaSP study expects the PLF of 30.72%, while CWeT expects the PLF to be between 25-27%.  CAR07 closed.	Pending CAR07	Y CAR07 closed.
A.13.2. Are the emission reduction calculations documented in a complete and transparent manner?	1, 2	DR	Yes, the emission reduction calculations are complete and transparent.	Y	Y
A.13.3. Have conservative assumptions been used to calculate emission reductions?	1, 2	DR	The clarification on assuming the PLF is required.  Pending CAR07 CAR07 closed.	Pending CAR07	Y CAR07 closed.
A.13.4. Is the projection based on provable input parameter?	1, 2	DR	Pending CAR07 CAR07 closed	Pending CAR07	Y CAR07 closed.
A.13.5. Is the projection based on same procedures as used for later monitoring or acceptable alternative models?	1, 2	DR	Pending CAR07 CAR07 closed	Pending CAR07	Y CAR07 closed.
A.13.6. Is the calculation of the emission reduction correct?	1, 2	DR	Pending closures of CARs/NIRs CAR07 closed	Pending closure of CARs/NIRs	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A.14. Emission Reductions</b>					
A.14.1. Will the project result in fewer GHG emissions than the baseline scenario?	1	DR	The PDD estimates 34886 tCO <sub>2</sub> e per annum emission reductions. Subject to closure of CAR07.  The estimated figure for ER has been revised (34,886 tCO <sub>2</sub> /anum) with the applicability of the latest CEF values	Pending CAR07	Y CAR07 closed.
A.14.2. Is the form/table required for the indication of projected emission reductions correctly applied?	1	DR	The table has been applied correctly.	Y	Y
A.14.3. Is the projection in line with the envisioned time schedule for the project's implementation and the indicated crediting period?	1	DR	The start date of crediting period is mentioned as 01/02/2009 or the date of registration, which is realistic but subject to successful closure of CAR/NIRs.  The start date has been revised in final PDD to 01/03/2009 considering the timeline for registration of project activity.	Y	Y
<b>A.15. Monitoring Methodology</b>					
A.15.1. Does the monitoring methodology provide a consistent approach in the context of all parameter to be monitored and further information provided by the PDD?	1, 2	DR / Site Visit	The same needs to be checked during the site visit.  The provided information was checked and required parameters, as per applied methodology, were found in order.	Site visit	Y
A.15.2. Does the monitoring methodology consistently apply the choice of the option selected for monitoring both of project and baseline emissions?	1, 2	DR / Site Visit	The same needs to be checked during the site visit.  The CEA value for CEF was taken for baseline estimation and has been fixed for doing the ex-post calculation. The net electricity export will be monitored.	Site visit	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A.16. Data and Parameters Monitored</b>					
A.16.1. Does the monitoring plan provide for the collection and archiving of all relevant data necessary for estimation or measuring the emission reductions within the project boundary during the crediting period?	1, 2	DR / Site visit	<p>The relevant data to be monitored as the approved methodology is included in the monitoring plan.</p> <p>Project Management Chart does mention about data archiving, however no details are provided in the PDD.</p> <p>NIR08 is raised:</p> <ul style="list-style-type: none"> <li>- Please detail in procedures in case of Monitoring problems like missing data or loss of data and the data archiving procedure.</li> <li>- Please provide the ISO certificate of EPC contractor.</li> <li>- Please detail in the QA/QC procedures which are to be employed by TNEB.</li> </ul> <p>The QA/QC procedures have been explicit in the revised version of the PDD so raised NIR08 was closed out.</p>	NIR08 NIR08 closed	Y
A.16.2. Are the choices of project GHG indicators reasonable and in conformance with the requirements set by the simplified methodology applied?	2	DR	No such choice is available in the approved methodology and hence not applicable.	Y	Y
A.16.3. Will it be possible to determine the specified project GHG indicators?	1	DR	The major parameter affecting the GHG reductions is the amount of net electricity generated by the WTGs. The net generation can be measured accurately and hence the estimate of GHG reduction.	Y	Y
A.16.4. Will the indicators enable comparison of project data and performance over time?	1	DR	The net electricity supplied from the project activity would be monitored thus this can be compared in the later years.	Y	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.16.5. Is the information given for each monitoring variable by the presented table sufficient to ensure the verification of a proper implementation of the monitoring plan?	1	DR	The same needs to be checked during the site visit. The monitoring plan seems to be implemented as per applicable methodology.	Site visit	Y
A.16.6. Is the information given for each monitoring variable by the presented table sufficient to ensure the delivery of high quality data free of potential for biases or intended or unintended changes in data records?	1	DR	To be checked during the site visit. The net electricity exported to the grid will be monitored.	Site visit	Y
A.16.7. Is the monitoring approach in line with current good practice, i.e. will it deliver data in a reliable and reasonably acceptable accuracy?	1	DR	Pending closure of CARs/NIRs. All CARs/NIRs closed.	Pending	Y
A.16.8. Are all formulae used to determine project emission clearly indicated and in compliance with the monitoring methodology.	1, 2	DR	Pending closure of CARs/NIRs All CAR/NIRs closed.	Pending	Y
<b>A.17. Quality Control (QC) and Quality Assurance (QA) Procedures</b>					
A.17.1. Is the selection of data undergoing quality control and quality assurance procedures complete?	1	DR	The company has employed an ISO certified EPC contractor for installation and maintaining the project. Further, TNEB shall employ their own QA/QC procedures, however, detail is not provided. NIR08 was raised to provide these QA/QC procedures. The ISO certificates was checked and found in order.	Pending NIR08 NIR08 closed	Y
A.17.2. Is the belonging determination of uncertainty levels done correctly for each ID in a correct and reliable manner?	1	DR	To be checked during the site visit. The uncertainty level of each ID was checked and found okay.	Site visit	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.17.3. Are quality control procedures and quality assurance procedures sufficiently described to ensure the delivery of high quality data?	1	DR	Pending NIR08 The same needs to be further cross-checked during the site visit. The set procedures were checked and site and found correct. NIR08 closed as above.	Pending NIR08 / Site visit	Y NIR08 closed.
A.17.4. Is it ensured that data will be bound to national or internal reference standards?	1	DR	Pending NIR08 The same needs to be further cross-checked during the site visit. NIR08 closed as above.	Pending NIR08 / Site visit	Y NIR08 closed.
A.17.5. Is it ensured that data provisions will be free of potential conflicts of interests resulting in a tendency of overestimating emission reductions?	1	DR	The state electricity board is to ensure the quality of data as per Power Wheeling Agreement and hence shall be free of any potential conflict of interest. Pending NIR08 NIR08 closed as above.	Pending NIR08	Y NIR08 closed.
<b>A.18. Operational and Management Structure</b>					
A.18.1. Is the authority and responsibility of project management clearly described?	1	DR	Management structure for the project activity has been described in the PDD under B.7.2.	Y	Y
A.18.2. Is the authority and responsibility for registration, monitoring, measurement and reporting clearly described?	1	DR	The same has been described under the section B.7.2.	Y	Y
A.18.3. Are procedures identified for training of monitoring personnel?	1	DR/I	No special Training is required, trained staff of EPC contractor shall take care of the plant operation. This shall be further discussed during site interview. I was concluded after the site personal interview at site that no training is required.	Site Interview	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
<b>A.19. Monitoring Plan (Annex 4)</b>					
A.19.1. Is the monitoring plan developed in a project specific manner clearly addressing the unique features of the CDM activity?	1	DR	Pending closure of CARs/NIRs. CARs/NIRs closed as above.	Pending CARs/NIRs	Y
A.19.2. Does the monitoring plan completely describes all measures to be implemented for monitoring all parameter required, including measures to be implemented for ensuring data quality?	1	DR	Pending closure of CARs/NIRs. CARs/NIRs closed as above.	Pending CARs/NIRs	Y
A.19.3. Does the monitoring plan provide information on monitoring equipment and respective positioning in order to safeguard a proper installation?	1	DR	The same needs to be checked during the site visit. The energy meter will be installed at the grid substation.	Site visit	Y
A.19.4. Are procedures identified for calibration of monitoring equipment?	1	DR	Pending NIR08. NIR08 closed.	Pending NIR08	Y NIR08 closed.
A.19.5. Are procedures identified for maintenance of monitoring equipment and installations?	1	DR	Pending NIR08 NIR08 closed.	Pending NIR08	Y NIR08 closed.
A.19.6. Are procedures identified for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	1	DR	The operational and Management Structure has been provided vide section B.7.2, the same would be cross-checked during the site visit. The management structure was checked and found okay.	Site visit	Y
A.19.7. Are procedures identified for dealing with possible monitoring data adjustments and missing data allowing redundant reconstruction of data in case of monitoring problems??	1	DR	Pending NIR08. NIR08 closed as above.	Pending NIR08	Y NIR08 closed.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.19.8. Are procedures identified for internal audits of GHG project compliance with operational requirements where applicable?	1	DR	The operational and Management Structure has been provided, However, no details regarding internal audit is provided. Pending NIR08. NIR08 closed as above.	Pending NIR08	Y NIR08 closed.
A.19.9. Are procedures identified for project performance reviews before data is submitted for verification, internally or externally?	1	DR	Pending NIR08. NIR08 closed.	Pending NIR08	Y NIR08 closed.
<b>A.20. Baseline Details</b>					
A.20.1. Is there any indication of a date when determine the baseline?	1	DR	It was determined on 23/07/2008 as mentioned under section B.8 of the PDD	Y	Y
A.20.2. Is this in consistency with the time line of the PDD history?	1	DR	The start date of the project activity is 20/12/2007 this is in time line with the project activity. The purchase order for wind mill was checked and found in order.	Pending CAR07	Y CAR07 closed.
A.20.3. Is all data required provided in a complete manner by annex 3 of the PDD?	1	DR	Yes, all baseline data is provided in complete and transparent manner under annex 3	Y	Y
<b>III. Duration of the Project / Crediting Period</b>					
A.20.4. Are the project's starting date and operational lifetime clearly defined and reasonable?	1	DR	The start date of the project activity is 20/12/2007 and was commissioned by June 2008 and the operation lifetime is 20 years as described in the PDD. Evidence is required for the start date of the project activity, Operational life of 20 years is reasonable for the type of project activity. CAR07 closed as above.	Pending CAR07	Y CAR07 closed.

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.20.5. Is the assumed crediting time clearly defined and reasonable (renewable crediting period of max 7 years with potential for 2 renewals or fixed crediting period of max. 10 years)?	1	DR	The crediting period chosen is 10 years fixed crediting period.	Y	Y
A.20.6. Does the project's operational lifetime exceed the crediting period	1	DR	The operational lifetime of the project activity exceeds the crediting period.	Y	Y
<b>IV. Environmental Impacts</b>					
A.20.7. Does the project comply with environmental legislation in the host country?	1	DR	The necessary government approvals and consents are required to be submitted.  Pending NIR04.  The document was submitted and NIR04 closed out.	Pending NIR04	Y  NIR04 closed.
A.20.8. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, is an EIA approved?	1	DR	No EIA is required for the current project activity as per local laws	Y	Y
<b>V. Stakeholder Comments</b>					
A.20.9. Have relevant stakeholders been consulted?	1	DR	The PDD mentions that stakeholder consultation was carried out; Proof of the same is required to be submitted.  NIR09 : - Please provide proof on invitation of comments by stakeholders. - Please provide MoM/ Compilation of local stakeholder comments received.  Local stakeholders consultation was demonstrated with supportive documents and NIR09 closed out.	NIR09  NIR09 closed	Y

Checklist Question	Ref. ID	MoV*	Comments	Draft Concl	Final Concl
A.20.10. Have appropriate media been used to invite comments by local stakeholders?	1	DR	Notice of the meeting was given to the identified stakeholders. Pending NIR09. NIR09 closed.	Pending NIR09	Y NIR09 closed.
A.20.11. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1	DR	Stakeholder consultation is not required by host country regulation; however the project proponent has carried the same as a part of CDM requirements. The same would be checked during the site visit. MoM for the stakeholder consultation carried out is required to be submitted. Pending NIR09 NIR09 closed as above.	Pending NIR09	Y NIR09 closed.
A.20.12. Is the undertaken stakeholder process described in a complete and transparent manner?	1	DR	Pending NIR09 NIR09 closed as above.	Pending NIR09	Y NIR09 closed.
A.20.13. Is a summary of the stakeholder comments received provided?	1	DR	Pending NIR09 NIR09 closed as above.	Pending NIR09	Y NIR09 closed.
A.20.14. Has due account been taken of any stakeholder comments received?	1	DR	Pending NIR09 NIR09 closed as above.	Pending NIR09	Y NIR09 closed.

## References

S.No	Title / Description	Reference No.	Comments
1.	PDD, version 1 dated 23/07/2008	Table 2 section A, B, C, D and E	Y
2.	AMS I D version 13	Table 2 section B	Y
3.	UNFCCC website ( <a href="http://cdm.unfccc.int/index.html">http://cdm.unfccc.int/index.html</a> )	Table 1, Table 2 section B	Y

### A.3 Annex 3: Overview of Findings

#### Findings Overview

Findings from validation of **13.95 MW grid connected wind electricity generation by SRF Limited**  
Each Table below represents a finding from the validation assessment. The findings are numbered consecutively, approximately in the order that they have been identified.

Description of Table:

Type	Findings are either New Information Requests (NIR) or Corrective Action Requests (CAR). CARs are items that must be addressed before a project can receive a recommendation for registration. NIRs may lead to the raising of CARs. Observations are included at the end and may or may not be addressed. They are primarily to act as signposts for the verifying DOE.
Issue	Details the content of the finding
Ref	Refers to the item number in the Validation Protocol
Response	Please insert response to finding, starting with the date of entry.

Rows for comments and further response will be appended to the table until the Findings has been addressed to the satisfaction of the Lead Assessor.

**Please Note:** This is an open list and more findings may be added as validation progresses.

Date:	08/08/2008	Raised by:	Sachin Gupta				
No.:	01	Type:	CAR	Issue :	Host Country Approval Letter	Ref.:	1.3
Lead Assessor Comment				Date: 08/08/2008			
Letter of approval from Host country DNA is required to be provided by project proponent.							
Project Participant Response:				Date: 22/09/2008			
The Host country Approval (HCA) letter is attached as <b>[Annexure 1]</b>							
Acceptance and Close out by Lead Assessor:				Date: 26/09/2008			
Information Provided: HCA approval letter Information Verified: The project titled, "13.95 MW grid connected wind electricity generation by SRF Limited" has been granted Host Country approval as required by the CDM modalities and procedures.						Verified Document Reference: Ref. no. 4/15/2008-CCC dt. 9 <sup>th</sup> Sept. 2008	
Reasoning for not acceptance or acceptance and close out: CAR is closed as HCA is obtained..							

Date:	08/08/2008	Raised by:	Sachin Gupta				
No.:	02	Type:	NIR	Issue :	Modalities of Communication	Ref.:	1.6
Lead Assessor Comment				Date: 08/08/2008			
Please provide MoC letter.							
Project Participant Response:				Date: 22/09/2008			
The MoC letter is attached as <b>Annexure 2.</b>							
Acceptance and Close out by Lead Assessor:				Date: 26/09/2008			

<p>Information Provided: MoC letter and supporting Board meeting note where in the Board has agreed for Mr. Roop Salotra (President and Chief Executive Officer) to communicate with the EB on matters related with this CDM project. Information Verified: MoC letter and the board note contain details of the authorized person to communicate with the CDM Board.</p>	<p>Verified Document Reference: MoC and Board meeting note Dt. 9<sup>th</sup> Sept. 2008</p>
<p>Reasoning for not acceptance or acceptance and close out: NIR is closed after procuring the MoC.</p>	

Date:	08/08/2008	Raised by:	Sachin Gupta				
No.:	03	Type:	CAR	Issue :	Details of physical location of the project activity	Ref.:	A.4.1
Lead Assessor Comment					Date: 08/08/2008		
<p>Latitude and longitude provided for each WTG is doubtful and does not correspond to the project area. Please provide the correct coordinates. Further, locations are Udayathur and VK pundur as mentioned under PDD ver.1 first paragraph of section A.4.1.4 but VK Pundur and Thiruvambalapuram as in the table. Please clarify.</p>							
Project Participant Response:					Date: 22/09/2008		
<p>The latitude and longitude values provided in the PDD were in UTM format and the same has been changed to latitude longitude (<b>hddd° mm' ss.s"</b>) format. The values provides (in UTM as well as in latitude longitude) correspond to the same wind farm area. The Suzlon wind mills are located at the village of Thiruvambalapuram in Radhapuram Taluk and the Vestas windmills are located at Melakalangal and Navaneethakrishnapuram villages of V K Pudur Taluk in Tirunelveli District. The same has been clarified in the revised PDD.</p>							
Acceptance and Close out by Lead Assessor:					Date: 26/09/2008		
<p>Information Provided: Updated Co-ordinates of the different WTGs in HH MM SS format along with clear location details of all the WTGs. Information Verified: The co-ordinates provided in HH MM SS format correspond to the correct location and the same was verified during the site visit. Further, the ambiguity regarding location details has been corrected and the Taluk details of all the WTGs were also verified during the site visit.</p>					<p>Verified Document Reference: Revised PDD ver. 2, dt. 17/09/2008</p>		
<p>Reasoning for not acceptance or acceptance and close out: CAR is closed after the revision in the PDD.</p>							

Date:	08/08/2008	Raised by:	Sachin Gupta				
No.:	04	Type:	NIR	Issue :	Statuary approvals from legal authorities	Ref.:	A.4.5
Lead Assessor Comment					Date: 08/08/2008		
<p>- All regulatory approvals required to run the plant in line with host country legal requirement needs to be submitted.</p>							
Project Participant Response:					Date: 22/09/2008		
<p>The documents have been checked by the DOE during site visit and a copy of the same has been submitted.</p>							
Acceptance and Close out by Lead Assessor:					Date: 26/09/2008		

Information Provided: Various Statuary approval letters Information Verified: All the statuary approvals have been granted to SRF wrt installation and running of all the WTGs	Verified Document Reference: CEIG approval letters for all WTGs and Sale deed of land used for WTGs installation
Reasoning for not acceptance or acceptance and close out: NIR is closed after reviewing the documents.	

Date:	08/08/2008	Raised by:	Sachin Gupta				
No.:	05	Type:	NIR	Issue :	No technology substitution	Ref.:	A.4.7
Lead Assessor Comment					Date: 08/08/2008		
The project technology will be substituted or not is not mentioned in the PDD. Proof to be provided.							
Project Participant Response:					Date: 22/09/2008		
The project technology will not be substituted during the entire life of the project activity <b>[Refer Annexure 3]</b> The same has been mentioned in the revised PDD.							
Acceptance and Close out by Lead Assessor:					Date: 26/09/2008		
Information Provided: Letter stating "No substitution of Technology" Information Verified: The letter signed by authorized signatory of SRF that the technology employed in the current project shall not be substituted during the entire life of the project activity.					Verified Document Reference: "Letter of undertaking for Non substitution of Technology" dated 9 <sup>th</sup> Sept. 2008		
Reasoning for not acceptance or acceptance and close out: NIR is closed with the declaration.							

Date:	08/08/2008	Raised by:	Sachin Gupta				
No.:	06	Type:	NIR	Issue :	ODA Funding	Ref.:	A.5.1
Lead Assessor Comment					Date: 08/08/2008		
Evidence is required to be submitted by PP that project doesn't uses ODA funds and neither the project causes any diversion of such fund.							
Project Participant Response:					Date: 22/09/2008		
The project has been funded entirely through internal accruals. The project does not use any ODA funds nor causes diversion of such funds. <b>[Refer Annexure 4]</b>							
Acceptance and Close out by Lead Assessor:					Date: 26/09/2008		
Information Provided: Letter of undertaking of non usage of Official development assistance Information Verified: The letter signed by authorized signatory of SRF that the project shall not make use of any funds from official development assistance and shall use funds through internal accruals amounting INR 88 crores.					Verified Document Reference: "Letter of undertaking of non usage of Official development assistance" dated 9 <sup>th</sup> Sept. 2008		
Reasoning for not acceptance or acceptance and close out: NIR is closed with the declaration letter.							

Date:	08/08/2008	Raised by:	Sachin Gupta				
No.:	07	Type:	CAR	Issue :	Additionality	Ref.:	B.4.1
Lead Assessor Comment					Date: 08/08/2008		

- Please submit the following investment related documents referred in section B.5. in order to validate the information provided and claims made in the section:

- IRR / financial calculation sheet
- Loan documents
- Proof on estimated project cost
- Proof of CDM consideration while conceptualizing the project is required to be submitted.
- Life time of the project
- Supporting document for Start Date of the project activity
- Basis of assumption for PLF, sensitivity analysis would also be required
- Copy of PWA

- The section B.5 discusses benchmark in relation to conventional power generation; however, the current project is related with non-conventional power generation. Please justify the applicability of the benchmark discussions to the current project which is actually a non-conventional power project.

- Further, the CERC benchmark of 16% used to show the project financial unattractive is no longer acceptable by EB (para 40, meeting report of EB40). Please justify the financial unattractiveness of the project in view of the above decision.

- How it was possible for PP to commit for funds in anticipation of receiving a positive validation opinion and go ahead with implementation of the project?

Project Participant Response: | Date: 22/09/2008

- IRR / financial calculation sheet – Already submitted
- Loan documents – The project is funded on 100% equity and there is no loan. The PDD mentions debt equity ratio as 50:50 as at the time of investment decision, a 1:1 ratio was assumed.
- Proof on estimated project cost – The estimated project cost is provided in the copy of the board resolution. **[Attached as Annexure 5]**
- Proof of CDM consideration while conceptualizing the project is required to be submitted. – The board resolution that clearly states that the decision to proceed with the project was taken based on the revenues to be accrued from CDM. A copy of the same is attached as **Annexure 5**. Apart from this SRF's annual report for the year 2007-08 also states that the wind project has been set up as a CDM initiative and the project's viability is linked to it being a CDM project. [please refer pages 6 and 17 of the annual report attached as **Annexure 6]**
- Life time of the project – The life time of the project has been taken as the design life time as per the technical specifications of the windmills which is 20 years. Please refer Suzlon's and Vestas's technical specifications document attached as **Annexure 7a and 7b respectively**.
- Supporting document for Start Date of the project activity – The starting date of the project activity as per the CDM glossary of terms has been taken as the date of placement of first purchase order 20/12/2007. A copy of the purchase order has been provided to the validator.
- Basis of assumption for PLF, sensitivity analysis would also be required – The PLF assumption was arrived at on the basis of two WaSP analysis conducted by Suzlon for estimating the electricity generation in the proposed sites for the project activity. Prior to the start of the project SRF limited had requested Suzlon to conduct a study on the estimated generation from its 1.5 MW turbines. The two WaSP analysis are attached as **Annexure 8a and 8b**. The PLF assumed is based on this data which is further corrected for grid availability, machine availability and other losses. A detailed excel sheet of the calculations of the estimated PLF has been given as **Annexure 9**. This value was used for the initial financial evaluation of the project at the time of investment decision. A sensitivity analysis has not been carried out as this is a small scale project and a sensitivity analysis is not a requirement for small scale projects. Further, at the time of investment decision SRF had two available sources for assumption of PLF; an analysis carried out by C-Wet on the estimated generation from Suzlon windmills at the proposed sites and Suzlon's WaSP analysis. The PLF as per these sources are as follows:
  - o CWet Analysis – 25-27%. Please refer excel sheet attached as **Annexure 10a and the supporting**

**CWET document attached as Annexure 10b.**

- WaSP analysis – 30.72%

As can be seen SRF has already taken the highest possible PLF for the investment analysis, hence it would not be appropriate to carry out sensitivity analysis.

As per the guidance to assessment of investment analysis, parameters that constitute more than 20% of either total project costs or total project revenues shall be included in the sensitivity analysis. The most crucial parameters in a wind project are PLF, project cost and tariff. The PLF sensitivity has been explained above.

Tariff - A fixed HT tariff for 20 years has been assumed for calculation of IRR. The Indian Electricity Act stipulates the tariff to be based on cost to serve principles, however in India the HT tariff for industrial consumers is set at a higher rate than the cost of supply because of loading of the cross subsidy surcharge<sup>1</sup>. This cross subsidy surcharge is then used to subsidise the tariff for agricultural and domestic consumers. The Electricity Act has mandates a progressive removal of cross subsidy surcharge and tariff setting based purely on cost to supply. The Indian Electricity Act section 61(g) states “the tariff should be set such that it progressively reflects the cost of supply of electricity and also, reduces and eliminates cross-subsidies”. This clearly means that the cross subsidy on HT tariff is likely to be phased out in coming years resulting in a decrease in HT tariff. Therefore the assumption of a constant HT tariff for the project tenure is conservative and a sensitivity analysis on this parameter will not be applicable.

Cost - The estimated project cost was based on the final negotiated price and hence there is no scope of any further changes in the project cost. The actual purchase order placed with Suzlon was also at the same negotiated price. Therefore sensitivity on project cost is not relevant.

- Copy of PWA – The project activity is wind electricity generation for captive purposes and SRF have signed a Power Wheeling Agreement with the TNEB for the electricity generated. This has been verified to the DOE at the site visit and a copy of the same has also been provided.

**Benchmark Issue**

According to the UNFCCC’s tool for demonstration of additionality benchmark can be derived from “Estimates of the cost of financing and required return on capital based on banker’s views on comparable projects”. IDFC (Infrastructure Development Finance Company Limited) which has been involved in financing renewable energy projects including wind projects in India in the past few years, has issued a letter stating their criteria on required rate of return for financing wind and other comparable renewable energy projects in India. **[Refer Annexure 11]** Accordingly the benchmark for the project can be taken as 16% equity IRR.

**Committing funds in anticipation**

SRF has an already registered project with the UNFCCC and are well aware of the CDM modalities and procedures. They were aware that wind power projects that supply electricity to the grid are eligible under the CDM. They conducted an initial feasibility study which showed that project would meet the requirements and additionality criteria of CDM. Hence the investment in the project was made assuming that CDM registration will occur and revenues will be generated. The board note clearly states that the project investment has occurred after considering the project as a CDM project.

Further as stated earlier the 2007-08 Annual Report **[Annexure 6]** also states that the project has been set up as a CDM initiative and that the viability of the project is linked to its ability to sell CERs.

Acceptance and Close out by Lead Assessor:	Date: 26/09/2008
Information Provided: <ul style="list-style-type: none"> <li>- IRR calculations based on expected investments and expected returns for whole of the life time of the project activity. Equity IRR without CDM is 11.02%.</li> <li>- Board Note for a proposed activity of setting up of a 15 MW wind</li> </ul>	Verified Document Reference: <ul style="list-style-type: none"> <li>- Financial calculation sheet</li> <li>- Board Note dt: 17.12.2007</li> <li>- SRF Annual Report for FY 2007-2008</li> </ul>

<sup>1</sup> <http://tnerc.tn.nic.in/orders/TRANSMISSION%20CHARGES%20TP1-Final.pdf>, this document in page 7 shows that HT consumers are loaded with a cross subsidy surcharge.

<p>farm in Tamilnadu.</p> <ul style="list-style-type: none"> <li>- SRF annual report providing brief on the proposed project activity of wind farm which has been considered as a CDM project.</li> <li>- WaSP and CWeT analysis report on expected PLF for the proposed wind farm of SRF; WaSP study expects the PLF of 30.72%, while CWeT expects the PLF to be between 25-27%.</li> <li>- Bank view on financing of renewable energy projects in support of considering a Benchmark of 16% for expected returns from the project activity.</li> </ul> <p>Information Verified:</p> <ul style="list-style-type: none"> <li>- The Financial calculation sheets considered while taking the investment decision have been presented. The equity IRR for the expected investment of 92 crores for a 15 MW wind farm considering a long term loan of 10% for 50% of the investment is 11.02%. If the revenue from the CER is also considered the equity IRR improves to 14.67%.</li> <li>- Board Note along with SRF's annual report for FY 2007-2008 clarifies that the project has been considered as a CDM project since the conceptualization of the project. Further, from Annual Report it was noted that SRF already have one registered CDM project and is well aware about CDM concept.</li> <li>- A detailed analysis was undertaken to arrive at the most feasible PLF for the proposed wind farm. Two studies undertaken suggest a maximum PLF for the proposed wind farm as 30.72%. The same maximum PLF factor has been considered while calculating the expected generation and the returns. Hence, this conservative approach rules out the requirement of sensitivity analysis and justifies the appropriateness of the selected PLF factor. Further, during site interviews it was verified that in the past the PLF for already installed wind mills in the region has been in the range of 25-30%.</li> <li>- IDFC Letter dt. 26.06.2008 from IDFC bank issued to M/s Enercon (India) Limited, stating that they expects a return of 16% on equity based upon their experience on renewable energy projects for which they are providing financing. It was also noted that the letter no where discusses about the CDM and related funds.</li> </ul>	<ul style="list-style-type: none"> <li>- WaSP and CWeT analysis report</li> <li>- Bank view on investment return from IDFC, letter dated. 26.06.2008</li> </ul>
<p>Reasoning for not acceptance or acceptance and close out:</p> <ul style="list-style-type: none"> <li>- The Banker's View letter of IDFC has been issued to M/s Enercon and not to SRF, Clarification is required in this regard that how it was possible for SRF to get this letter of non concerned parties.</li> <li>- The IDFC letter issue date is 26.06.2008, while investment decision was taken on 17.12.2007, justification is required that why a letter issued at a later date should be considered as a basis for expected returns from a project.</li> <li>- The IDFC letter talks about "Renewable Energy Projects", justification is required that this can well be applied to wind projects. This needs clarification against other renewable projects such as Hydro projects constituting most of the Indian Renewable Energy Sector.</li> <li>- The letter states that, "...we normally <b>expects bankable projects to have</b> a project IRR of atleast 12% and equity IRR of around 16% to ensure the economic viability of the project and provide an incentive to the developer. Projects with the above IRRs and suitable capital structure generally ensure adequate Debt Servicing Coverage Ratios for Lenders." The description makes us understand that it's a Banker view on the project for which they are providing financing and they <b>already</b> expect a return of 16% on equity for</li> </ul>	

renewable projects. Therefore, a further elaboration is required that how this letter can be considered in establishing the benchmark of 16% equity IRR for this project. Further, a justification is also required for the **basis of this expected return**.

- A copy of intimation to project investment decision to SEBI in support of the Board Note is required.

Project Participant Response:	Date: 25/10/2008
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Clarifications provided

- According to the additionality tool version 05 “Estimates of the cost of financing and required return on capital based on bankers views on comparable projects” can be taken as a benchmark. In this context, the letter from IDFC which is available in the public domain was used as evidence of the banker’s view as SRF’s project has been funded 100% through internal accruals (though the project was conceived with a 50% Debt component, the actual investment in the project has a 100% equity).
- The IDFC letter presents their general criteria for financing renewable energy projects. This has been submitted in the context (as defined in the additionality tool) that banker’s view on cost of finance and rate of return for similar projects can be used as a benchmark.
- Though the IDFC document talks about renewable energy projects, it is a letter submitted to Enercon (India) Limited which is in the business of wind energy. This provides clarification that the letter is applicable even for wind energy projects.
- IDFC or Infrastructure Development Finance Company Limited is one of the leading infrastructure financing institutions in India. IDFC has financed a number of renewable energy projects including wind energy projects. The letter presents their view on the minimum required project IRR and equity IRR for the projects which is based on their experience in the sector. Bankers generally do not reveal any further details of computation of these values. The letter is only to provide banker’s view on similar projects.
- Further the project can also be analysed using a WACC benchmark. The guidance to investment analysis issued in EB 41 (paragraph 11) states that weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR and Required/expected returns on equity are appropriate benchmarks for equity IRR. The guidance under Para 13 also states that in cases where the project has more than one potential developer, the benchmark can not be based on internal cost of equity or WACC and shall be based on publicly available data sources which can be clearly validated by the DOE. According to the guidance under the EB’s additionality tool, the benchmark should be based on parameters that are standard in the market, considering the specific characteristics of the project type. Hence, we have not used company or project specific parameters for the calculation of the benchmark (such as company WACC, project and company specific interest rates, etc.) and the weighted average cost of capital applicable to the project type can be considered as the appropriate benchmark. The WACC has been derived from the cost of capital of all listed power generating companies in India at the time of investment. The WACC works out to 14.73% (please see calculations attached as **Annexure 13**). The project IRR for this project is 10.48% which is lower than the WACC. This further substantiates that the project activity faces significant investment barriers. Further details of appropriateness of the benchmark and its calculations have been presented in the revised PDD.
- We would also like to submit the project IRR for this project is 10.48% which is inadequate for the project developer to be able to undertake the project without CDM benefits. This can be established by the fact that the project did not generate enough returns to even cover the prevailing bank prime lending rate at the time of investment. The average bank PLR at the time of investment decision of the project was 13% (Source: <http://www.rbi.org.in/scripts/WSSView.aspx?Id=11936>, Reserve Bank of India) much higher than the project IRR value of 10.48%. This clearly substantiates that the project activity would not have been undertaken without CDM. The same has been added in the revised PDD.

The letter of intimation to NSE issued by SRF limited regarding the investment in the project has been provided as **Annexure 14** (along with the fax receipt and the courier docket number) and the same can be verified through the screen shot of the NSE website provided as **Annexure 15** which announces the investment decision made by SRF.

Acceptance and Close out by Lead Assessor:	Date: 03/11/2008
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Information Provided: Substantiation on the “Banker view on investment” and further supportive benchmark calculation describing	Verified Document Reference: Public domain investment decision parameters available at: <a href="http://www.rbi.org.in/scripts/WSSView.aspx?Id=11936">http://www.rbi.org.in/scripts/WSSView.aspx?Id=11936</a> (last
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<p>the financial unattractiveness of the project. Information Verified: The supportive document (IDFC letter) presented for accepting the benchmark as 16% based on “Bankers view”, presents their view on the minimum required project IRR for the projects or general view of an investment in the sector i.e., renewable energy. The project however has project IRR of only 10.48% and hence it is quite unattractive for the PP but on the other hand the benchmark is debatable.</p> <p>In order to substantiate the financial unattractiveness the PP has further presented the WACC calculation in line with para 13 of the guidance on investment analysis using publicly available investment decision parameters. It was observed that the benchmark thus calculated is 14.73%.</p> <p>In order to further check the integrity of assumed parameters available from the public domain in the submitted WACC, the calculations were redone using the assumed interest rate of 10% and capital structure of 50:50 (as considered at the time of investment decision) in place of a bank PLR interest rate of 13% and capital structure of 30:70. The WACC in this further increased to 15.54%. Hence, on conservative assumptions the project benchmark can well be considered as 14.73%. Further, considering the project IRR of only 10.48% the proposed project is financially unattractive for the PP and faces significant Investment barrier.</p> <p>The details regarding intimation to NSE issued by SRF limited regarding the investment decision were checked and found to be correct.</p>	<p>accessed on 03/11/08) <a href="http://www.stern.nyu.edu/~adamodar/pc/datasets/emergcompfirm.xls">http://www.stern.nyu.edu/~adamodar/pc/datasets/emergcompfirm.xls</a> (last accessed on 03/11/08)</p> <ul style="list-style-type: none"> <li>- Letter to NSE informing the company investment decision. Ref. no. SRF/SEC-A/16 dated 17.12.2007</li> <li>- WACC calculation sheet</li> </ul>
<p>Reasoning for not acceptance or acceptance and close out: CAR is closed with the revision and submission of supportive documents.</p>	

Date:	08/08/2008			Raised by:	Sachin Gupta		
No.:	08	Type:	NIR	Issue	Monitoring Plan / QA QC	Ref.:	B.10.1
Lead Assessor Comment				Date: 08/08/2008			
<p>- Please detail in procedures in case of Monitoring problems like missing data or loss of data and the data archiving procedure.</p> <p>- Please provide the ISO certificate of EPC contractor. Please also provide information on any internal audit for ensuring the data quality, if planned.</p> <p>- Please detail in the QA/QC procedures which are to be employed by TNEB.</p>							
Project Participant Response:				Date: 22/09/2008			

<p>The metering of the electricity is conducted as per the procedures stated in the Power Wheeling Agreement signed between SRF and the TNEB. All trouble shooting procedures like in case of missing or loss of data, etc. during monitoring are handled as per the Power Wheeling Agreement. In case the main meter fails and the data is lost, then the readings of the check meter are used. Both these meters are of 0.2 accuracy class, are sealed, are tested by NABL accredited labs once every 6 months and calibrated once in a year. The metering arrangements and other procedures have been detailed in the revised PDD. The data will be maintained in hard copy in the form of Joint Meter Readings (JMR) as well as in the soft copy for a minimum period of 10+2 years. A copy of this data will be available at the site with the TNEB officials as well as with SRF at their site office in Manali. The ISO certificate of Suzlon was verified at the site visit and that of Vestas is attached as <b>Annexure 12</b>. A monthly review of the electricity will be carried out, wherein the data in the form of JMRs will be reviewed by the supervisors in the site as well as by the team in SRF. In case there is any drastic difference or anomaly in any data then the same will be reported to the site in-charge and the TNEB officials and the records will be rechecked. Along with this a checking of the meters will also be conducted to ensure that the metering equipment is functioning correctly. These are some of the procedures that are followed for The QA/QC procedures have been detailed in the revised PDD.</p>	
Acceptance and Close out by Lead Assessor:	Date: 26/09/2008
<p>Information Provided: The ISO certificates of SUZLON and Vestas which are the EPC contractors and who also take care of the running and maintenance of the Wind farm of the SRF. Revised PDD with details on QA/QC procedures to be adopted in order to ensure the quality of recorded data. Information Verified: The EPC contractors employed for running and maintenance of the Wind farm are ISO certified entities and employ all quality procedures required to ensure the quality of monitored data. Further, the quality assurance is also required as per the Power Wheeling Agreement and Joint meter readings are taken by the monitoring officials and the TNEB officials further, any mismatch or loss in data can be accounted from the secondary check meters. Also, annual calibration of all the meters shall be undertaken.</p>	<p>Verified Document Reference: ISO documents and Revised PDD ver.2 dated 17.09.2008</p>
<p>Reasoning for not acceptance or acceptance and close out: NIR is closed with the revision in the PDD.</p>	

Date:	08/08/2008	Raised by:	Sachin Gupta				
No.:	09	Type:	NIR	Issue :	Stakeholder Consultation	Ref.:	E.1.1
Lead Assessor Comment					Date: 08/08/2008		
<ul style="list-style-type: none"> <li>- Please provide proof on invitation of comments by stakeholders.</li> <li>- Please provide MoM/ Compilation of local stakeholder comments received.</li> </ul>							
Project Participant Response:					Date: 22/09/2008		
The invitation as well as the MoM has been provided to the validator.							
Acceptance and Close out by Lead Assessor:					Date: 26/09/2008		
<p>Information Provided: Public Notices and Minutes of Meeting. Information Verified: Stakeholders consultation was undertaken at Radhapuram site for Suzlon wind turbines on 17.06.2008 and at Surandai site for Vestas wind turbines on 18.06.2008. No serious comments against the project was given by any of the stakeholders and a general consensus on the project was observed.</p>					<p>Verified Document Reference: Public Notice with stakeholder meeting notification as on 17.06.2008 and 18.06.2008 at Radhapuram and Surandai sites for Suzlon and Vestas Wind Turbines. MoM for Stakeholder consultation held on 17 and 18 June 2008 Attendance sheets</p>		

Reasoning for not acceptance or acceptance and close out:  
 NIR is closed after reviewing the supportive documents.

Date:	26/09/2008			Raised by:	Sachin Gupta		
No.:	10	Type:	NIR	Issue	Project Boundary	Ref.:	E.1
Lead Assessor Comment				Date: 26/09/2008			
Please confirm if the project boundary includes the substation and Regional grid as well. This is in contrast to the description where in the generation details are recorded only at the WTGs locations and also the emission factor is fixed ex-ante.							
Project Participant Response:				Date: 25/10/2008			
According to the AMS I.D. the project boundary encompasses the physical, geographical site of the renewable generation source. Hence, the project boundary encompasses the 1.5 * 6 + 1.65 * 3 WTGs installed as part of the project activity. This has been corrected in the flow chart presented in Annex 5 of the revised PDD.							
Acceptance and Close out by Lead Assessor:				Date: 03/11/2008			
Information Provided: Updated project boundary details. Information Verified: The project boundary details are consistent with definition of Project Boundary in CDM glossary of terms.					Verified Document Reference: Revised PDD ver.3 dated 02/10/08		
Reasoning for not acceptance or acceptance and close out: NIR is closed with the above justification.							

**A.4 Annex 4: Team Members Statements of Competency**

### Statement of Competence

Name: Kaviraj Singh

SGS Affiliate: SGS India Pvt. Ltd.

**Status**

- Product Co-ordinator
- Operations Co-ordinator
- Technical Reviewer
- Expert

Validation                  Verification

- Local Assessor
- Lead Assessor
- Assessor
- /Trainee Lead Assessor

**Scopes of Expertise**

- 1. Energy Industries (renewable / non-renewable)
- 2. Energy Distribution
- 3. Energy Demand
- 4. Manufacturing
- 5. Chemical Industry
- 6. Construction
- 7. Transport
- 8. Mining/Mineral Production
- 9. Metal Production
- 10. Fugitive Emissions from Fuels (solid,oil and gas)
- 11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride
- 12. Solvent Use
- 13. Waste Handling and Disposal
- 14. Afforestation and Reforestation
- 15. Agriculture

Approved Member of Staff by Siddharth Yadav    Date: 05/09/2008

Name:Sachin Gupta

SGS Affiliate:SGS India

Status

- Product Co-ordinator
- Operations Co-ordinator
- Technical Reviewer
- Expert

Validation                      Verification

- Local Assessor
- Lead Assessor
- Assessor
- / Trainee Lead Assessor

Scopes of Expertise

- 1. Energy Industries (renewable / non-renewable)
- 2. Energy Distribution
- 3. Energy Demand
- 4. Manufacturing
- 5. Chemical Industry
- 6. Construction
- 7. Transport
- 8. Mining/Mineral Production
- 9. Metal Production
- 10. Fugitive Emissions from Fuels (solid,oil and gas)
- 11. Fugitive Emissions from Production and Consumption of Halocarbons and Sulphur Hexafluoride
- 12. Solvent Use
- 13. Waste Handling and Disposal
- 14. Afforestation and Reforestation
- 15. Agriculture

Approved Member of Staff by Siddharth Yadav Date: 31/08/2007