

# BUNDLED WIND POWER GENERATION PROJECT BY SAVITA OIL TECHNOLOGIES LTD., INDIA



TÜV NORD CERT GmbH  
 JI/CDM Certification Program  
 Langemarckstraße, 20  
 45141 Essen, Germany  
 Phone: +49-201-825-3335  
 Fax: +49-201-825-3290  
[www.tuev-nord.de](http://www.tuev-nord.de)  
[www.global-warming.de](http://www.global-warming.de)

<b>Project Title</b>	<i>Bundled Wind Power generation project by Savita Oil Technologies Ltd., India</i>
<b>Version</b>	<i>1</i>
<b>Report ID</b>	<i>8108918305- 12/226</i>

<b>Report Title</b>	Bundled Wind Power generation project by Savita Oil Technologies Ltd., India
<b>Client</b>	Savita Oil Technologies Limited
<b>Pages</b>	25
<b>Date of Issue</b>	2012-08-14
<b>Prepared By</b>	TUV NORD CERT GmbH
<b>Contact</b>	TÜV NORD CERT GmbH JI/CDM Certification Program

	<p>Langemarckstraße, 20 45141 Essen, Germany Phone: +49-201-825-3335 Fax: +49-201-825-3290</p>
Approved By	Mr. Stefan Winter
Work Carried Out By	<p>Mr. Prasad Jakkaraju (TL&amp; TE) Mr. Sukanta Das (TM) Ms. Richa Thakur (OT) Mr. N Premjit Singh (OR) Mr. Stefan Winter (TR)</p>

## Summary:

Savita Oil Technologies Limited has commissioned the TÜV NORD JI/CDM Certification Program to carry out the 1<sup>st</sup> verification of the project “Bundled Wind Power generation project by Savita Oil Technologies Ltd., India” with regard to the requirements of VCS 3 standard.

The project activity is a bundled project with the total installed capacity of 8.25 MW. The project involves installation of 3 nos. 1.25 MW Wind Turbine Generators (WTGs) in Sadawaghapur site in Satara district of Maharashtra and 3 nos. 1.5 MW Wind Turbine Generators (WTGs) at Thadichery & Koduvilarpatti site in Theni district of Tamil Nadu.

The scope of this verification covers the determination of voluntary greenhouse gas emission reductions generated by the above mentioned project. The verification is based on the registered CDM PDD<sup>/CDM-PDD/</sup>, VCS PD<sup>/VCS-PD/</sup>, Final validation report of CDM<sup>/FVR-CDM/</sup>, Monitoring report<sup>/MR/</sup>, Emission reduction calculation sheet<sup>/XLS/</sup> and other supporting documents like breakdown records<sup>/BR/</sup>, Calibration certificate<sup>/CAL/</sup>, Commissioning certificate<sup>/CL/</sup>, Credit note<sup>/INV/</sup>, made available to the verifiers by the project proponent.

As a result of the verification, the verifier confirms that:

- All operations of the project are implemented and installed as planned and described in the project design document<sup>/CS/, /TS/, /PPA/</sup>. The installed equipment essential for generating emission reductions runs reliable.
- The monitoring plan is in accordance with the applied approved CDM methodology AMS.I.D version 16
- The installed equipment essential for measuring parameters required for calculating emission reductions in Maharashtra are calibrated<sup>/CAL/</sup> once in a year and the meters in Tamil Nadu are calibrated once in three years as per the registered monitoring plan. The monitoring system is in place and functional<sup>/IM01/</sup>.

The project has generated GHG emission reduction and the emission reduction from the project activity is real, credible and long term for the whole crediting period <sup>/JMR/</sup>

- GHG emission reductions are calculated without any material misstatements in a conservative and appropriate manner <sup>/XLS//MR/</sup>.

Also, all the documents checked during on-site visit and verification process will be kept confidential and will not be disclosed at any time other than the project proponent consent or as required by VCS.

In the course of verification 04 Corrective Action Requests (CARs) were raised and closed successfully.

Reporting period: 18/03/2010 to 31/12/2011 (inclusive of both the dates)

Verified GHG emission reductions or removals in the above reporting period:

*The emission reduction in Maharashtra is as follows:*

Year	Net Electricity generation in MWh	Emission Reductions (tCO2)
18/03/2010 to 31/12/2011	12227.57	11278

*The emission reduction in Tamil Nadu is as follows:*

Year	Net Electricity generation in MWh	Emission Reductions (tCO2)
18/03/2010 to 31/12/2011	19923.82	18818

Total GHG emission reductions or removals	tCO <sub>2</sub>																			
Baseline emissions	<table border="1"> <thead> <tr> <th>Vintage period</th> <th>Tamil Nadu</th> <th>Maharashtra</th> <th>Overall</th> </tr> </thead> <tbody> <tr> <td>March 2010-Dec 2010</td> <td>9290.121</td> <td>4501</td> <td>13791.12</td> </tr> <tr> <td>Jan 2011-Dec 2011</td> <td>9527.927</td> <td>6777.77</td> <td>16305.6</td> </tr> <tr> <td></td> <td></td> <td></td> <td>30096.72</td> </tr> </tbody> </table> <p><b>The ER value after rounded down comes as 30096.</b></p>				Vintage period	Tamil Nadu	Maharashtra	Overall	March 2010-Dec 2010	9290.121	4501	13791.12	Jan 2011-Dec 2011	9527.927	6777.77	16305.6				30096.72
Vintage period	Tamil Nadu	Maharashtra	Overall																	
March 2010-Dec 2010	9290.121	4501	13791.12																	
Jan 2011-Dec 2011	9527.927	6777.77	16305.6																	
			30096.72																	
Project Emissions	0																			
Leakage	0																			
Net GHG emission reductions or removals	30096																			

The total emission reductions during the monitoring period are:

**Table of Contents**

<b>SI. No.</b>	<b>CONTENTS</b>	<b>PAGE NO.</b>
<b>1</b>	<b>INTRODUCTION</b>	<b>5</b>
<b>2</b>	<b>VALIDATION FINDINGS AND CONCLUSION</b>	<b>7</b>
<b>3</b>	<b>VERIFICATION PROCESS</b>	<b>8</b>
<b>4</b>	<b>VERIFICATION FINDINGS</b>	<b>8</b>
<b>5</b>	<b>VERIFICATION CONCLUSION</b>	<b>19</b>
<b>Annexure 1</b>	<b>Abbreviations</b>	<b>21</b>
<b>Annexure 2</b>	<b>Project location and commissioning details</b>	<b>22</b>
<b>Annexure 3</b>	<b>Reference section</b>	<b>23</b>

## 1 INTRODUCTION

Savita Oil Technologies Limited (SOTL) has commissioned the TÜV NORD JI/CDM Certification Program to carry out the first periodic verification of the project “Bundled Wind Power generation project by Savita Oil Technologies Ltd., India” with regard to the relevant requirements of the Verified Carbon Standard version 3.

The project has been successfully registered under CDM on 14<sup>th</sup> December 2011, <http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1323423959.3/view/>. The project activity is a bundled project with the total installed capacity of 8.25 MW. The applied monitoring methodology is AMS I.D. version 16 “Grid connected renewable electricity generation”.

### 1.1 Objective

The purpose of this verification, by independent checking of objective evidence is the review and ex-post determination by an independent entity of the GHG emission reductions. It includes the following:

- To verify that the project is implemented as described in the project design (CDM-PD);
- To assess the implementation of the monitoring plan (MP) content in the CDM-PD;
- To assess the project’s compliance with other relevant rules, including the host country (India) legislation;
- To confirm that the monitoring system is implemented and fully functional to generate voluntary emission reductions (VERs / VCUs) without any double counting; and
- To ascertain that the data reported are accurate, complete, consistent, transparent and free of material error or omission by checking the monitoring records and the emissions reduction calculation.

### 1.2 Scope and Criteria

The 1<sup>st</sup> VCS verification of this CDM registered project is based on the validated project design document <sup>/CDM-PDD/</sup>, Monitoring report <sup>/MR/</sup>, Emission reduction calculation sheet <sup>/XLS/</sup>, supporting documents of both the sites like Commissioning certificates <sup>/CC/</sup>, Calibration certificates <sup>/CAL/</sup>, Invoices <sup>/INV/</sup>, Daily generation sheet <sup>/GEN/</sup> etc. made available to the verifier and information collected through performing interviews and during the on-site assessment <sup>/IM01/</sup>. Furthermore publicly available information was considered as far as available and required. The TÜV NORD JI/CDM CP has employed a risk-based approach in the verification, focusing on the identification of significant risks and reliability of project monitoring and generation of emission reductions.

The verification is carried out on the basis of the following requirements, applicable for this project activity:

- Article 12 of the Kyoto Protocol,
- VCS Version 03 requirements

- Guidelines for the implementation of Article 12 of the Kyoto Protocol as presented in the Marrakech Accords under decision 3/CMP.1, and subsequent decisions made by the Executive Board and COP/MOP,
- Other relevant rules, including the host country legislation,
- CDM Validation and Verification Standard EB 65 Annex 04 version 1.2 <sup>/VVS/</sup>,
- Monitoring plan as given in the registered PDD <sup>/CDM-PDD/</sup> and approved CDM Methodology AMS.I.D Ver.16 (Grid connected renewable electricity generation) <sup>/AMS.I.D/</sup>

### 1.3 Level of assurance

The verification report is based on CDM-PDD <sup>/CDM-PDD/</sup>, Monitoring report <sup>/MR/</sup> and Final Validation report <sup>/FVR-CDM/</sup> and supporting documents like Breakdown records <sup>/BR/</sup>, Calibration certificate <sup>/CAL/</sup>, Commissioning certificate <sup>/CL/</sup>, Credit note <sup>/INV/</sup> made available to the verifier and information collected through performing interviews and during the on-site assessment <sup>/IM01/</sup>. The verification opinion is assured provided the credibility of all above.

### 1.4 Summary Description of the Project

The project activity is set up to produce clean power from the wind electric converters. The Project harnesses renewable sources of energy in the region displacing non-renewable natural resources thereby ultimately leading to sustainable economic and environmental development. The operation of WTGs is emission free and hence no project emissions are produced during the lifetime of the project activity. It is a bundled project activity which involves installation of 3 nos. 1.25 MW Wind Turbine Generators (WTGs) of Suzlon make in Sadawaghapur forest site in Satara district of Maharashtra and 3 nos. 1.5 MW Wind Turbine Generators (WTGs) of Regen make at Thadichery & Koduvilarpatti site in Theni district of Tamil Nadu. The total installed capacity is 8.25 MW. Project proponent has signed a power purchase agreement <sup>/PPA/</sup> with “Maharashtra State Electricity Distribution Company Limited” (MSEDCL) for the WTGs in Maharashtra and “The Tamil Nadu Electricity Board” (TNEB) for the WTGs in Tamil Nadu.

## 2 VALIDATION PROCESS, FINDINGS AND CONCLUSION

### 2.1 Validation Process

The project is registered as a CDM project which is an approved GHG Program under VCS and the steps followed are as follows;

- **Method and Criteria:** The validation has been carried out for to cover the sections 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description Template<sup>/VCS PD/</sup>.
- **Document Review:** A document review w.r.t to project implementation and actual operation was carried out. A site visit<sup>/IM01/</sup> was conducted to confirm the actual installations and working of the WTGs. The monitoring procedures are detailed in the below sections of this report.
- **Interviews:** During the site visit interviews with the operational personnel have been conducted, the roles and responsibility have been discussed and found in line with the description in the registered PDD.
- **Resolution of Any Material Discrepancy:** During the validation no CAR has been raised.

### 2.2 Validation Findings

#### 2.2.1 Gap Validation

A Gap validation has been carried out for to cover the sections 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description<sup>/VCS-PD/</sup>. The project description is in accordance with the Registered CDM PDD<sup>/CDM-PDD/</sup>, the additional information w.r.t issues covered under Gap validation are as follows;

#### Ownership:

The project is a bundled project activity and the project activity has M/s Savita Oil Technologies Limited as the sole project participant and acts as a focal point in coordinating all the activities related to the communication with the DOE, in CDM registration and O&M contractors etc. This was confirmed from Power purchase Agreement<sup>/PPA/</sup>, DOE Contract<sup>/DOE-CON/</sup>

#### Start date:

The earliest commissioning date<sup>/CC/</sup> of project is 18<sup>th</sup> March 2010, which represents the start date. The validation for the project was completed on 14 Dec 2011<sup>/CDM-VAL/</sup>, thus the eligibility under VCS was discussed as the validation activity was completed 2 years within the start date. Thus the project is eligible to participate under VCS standard version 03<sup>/VCS/</sup>.

### Participation in other GHG programs:

The project is registered under an approved GHG program, i.e. CDM process on 14/12/2011 and the UNFCCC registration no. is 5485.

### Other Environmental Credits:

The project proponent has provided a written undertaking which states that “The project neither has nor intends to generate any other form of GHG-related environmental credit for GHG emission reductions or removals claimed under the VCS Program for the monitoring period 18/03/2010 to 31/12/2011”<sup>/DC/</sup>. The same has been checked by the VT and found correct.

### Commercially sensitive information:

The project activity does not have any commercially sensitive information; the CDM PDD is publicly available and has been cross-checked to confirm the same<sup>/CDM-PDD/</sup>.

## 2.2.2 Methodology Deviations

There are no deviations applied w.r.t methodology applied to the project activity.

## 2.2.3 New Project Activity Instances

The project is not a grouped project as it includes 6 WTGs and there is no expansion of a project activity subsequent to project validation. The project capacity remains the same as per the registered PDD, i.e. 8.25 MW.

## 2.3 Validation Conclusion

A Gap validation has been carried out for to cover the sections 1.2, 1.3, 1.5, 1.6, 1.7, 1.9, 1.10, 1.12.1, 1.12.2, 1.12.3, 1.12.4 and 1.13 of the VCS Project Description<sup>/VCS-PD/</sup>. The project confirms to the requirements under VCS Version 3 w.r.t to the gap validation.

## 3 VERIFICATION PROCESS

The project is registered under CDM project no. 5485 (<http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1323423959.3/view>) on 14/12/2011 and the start date of the crediting period under CDM is 01/01/2012. This VCS verification is from 18/03/2010 to 31/12/2011 which covers the period 2 years prior to the CDM registration<sup>/VCS/</sup>.

### 3.1 Method and Criteria

The verification of the project was carried out for the monitoring period 18/03/2010 to 31/12/2011

1. On-site verification: 21-04-2012- Maharashtra and 23-04-2012 in Tamil Nadu

2. (Draft) Reporting: 2012-04-25
3. (Final) Reporting: 2012-08-03

The verification consists of the following steps:

- A desk review of the CDM PDD <sup>/PDD/</sup> and supporting documents (refer annex 4) with the use of the relevant sections of a customized protocol according to the VCS version 03; along with the VCS PD <sup>/VCS-PD/</sup>.
- A desk review of the Monitoring Report <sup>/MR/</sup> and additional supporting documents which were submitted by the client. The relevant sections of the above mentioned customized protocol according to the VCS version 03 were used;
- Verification audit planning;
- On-Site assessment;
- Background investigation
- Follow-up interviews with personnel of the project developer and
- Verification reporting (Draft Verification Report and Final Verification Report)

The criteria of this verification include the relevant rules and steps as set out in the VCS version 03.

### 3.2 Document Review

The submitted MR (version 1 and 2) <sup>/MR/</sup>, XLS sheet (ver.1 and 2) <sup>/XLS/</sup> and supporting background documents like invoices <sup>/INV/</sup>, Daily generation report <sup>/GEN/</sup>, JMR sheets <sup>/JMR/</sup> etc. related to the project design and monitoring were reviewed.

Furthermore, the assessment team used additional documentation by third parties like QA/QC procedures taken care by the O&M contractor Suzlon Infrastructure Services Limited (SISL) in Maharashtra and M/s Regen Powertech Pvt. Ltd. (RPPL) in Tamil Nadu. Suzlon Infrastructure Services Limited (SISL) and M/s Regen Powertech Pvt. Ltd. (RPPL) have proper procedures for data handling and storage. The calibration shall be conducted once in a year in Maharashtra and once in three years in Tamil Nadu, the same has been complied with during the monitoring period. Calibration certificates <sup>/CAL/</sup>, Commissioning certificated <sup>/CC/</sup>, Technical specifications <sup>/TS/</sup>, Training records <sup>/TR/</sup>, Breakdown Records <sup>/BR/</sup> have been checked by the assessment team and found correct. Moreover No objection certificate to prove that the project activity has not participated in emission trading program in India (Host country) <sup>/NOC/</sup> and a letter stating avoidance of double counting of GHG emission reductions <sup>/DC/</sup> has also been provided by the project participant and also a letter is checked by the verification team and found correct.

The invoices <sup>/INV/</sup> are cross checked with the JMR sheets <sup>/JMR/</sup> for verifying the net electricity exported to grid. The assessment team has carried out interviews with operational staff and project proponents <sup>/IM01/</sup> in

order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for VCS.

After the commissioning of the WTGs, the substation was changed from Atit substation to the Sadawaghapur substation in Maharashtra. The MSEDCL has given permission to the O&M contractor Suzlon Infrastructure Services Limited to change the substation on 27/04/2010. The permission letter<sup>/PL/</sup> has been checked by the VT and found correct.

### 3.3 Interviews

The assessment team has carried out interviews with operational staff and project proponents<sup>/IMO1/</sup> in order to assess the information included in the project documentation and to gain additional information regarding the compliance of the project with the relevant criteria applicable for VCS.

### 3.4 Site Inspections

During verification the verification team has performed site visit and interviews to confirm selected information and to resolve issues identified in the document review<sup>/IMO1/</sup>. The main topics of the interviews are summarized in Table 1.

Interviewed Persons/Entities	Interview Topics
Project proponent representatives - Mr. Chandrakant L. Kale	<ul style="list-style-type: none"> <li>- Technical details of the project realization, project feasibility, designing, operational life time, monitoring of the project</li> <li>- Monitoring and measurement equipment and system.</li> <li>- Monitoring and applicable QA/Qc standards</li> <li>- Roles &amp; responsibilities of the project participants w.r.t. project management, monitoring and reporting</li> <li>- National Legislation</li> <li>- Editorial Issue related to the Monitoring report</li> </ul>

### 3.5 Resolution of Any Material Discrepancy

#### 1. **Definition: A Corrective Action Request (CAR) will be established where:**

- Mistakes have been made in assumptions, application of the methodology or the project documentation which will have a direct influence the project results,
- The requirements deemed relevant for validation of the project with certain characteristics have not been met or,
- There is a risk that the project would not be registered by the UNFCCC or that emission reductions would not be able to be verified and certified.

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

A **Forward Action Request (FAR)** will be issued when certain issues related to project implementation should be reviewed during the first verification.

#### 2. **Draft Verification Report**

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

#### 3. **Final Verification Report**

The final verification starts after issuance of the proposed corrective action (CA) of the CARs CLs and FARs by the project proponent. The project proponent has to reply on those and the requests are “closed out” by the assessment team in case the response is assessed as sufficient. In case of raised FARs the project proponent has to respond on this, identifying the necessary actions to ensure that the topics raised in this finding are likely to be resolved at the latest during the subsequent verification. The assessment team has to assess whether the proposed action is adequate or not.

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

The CAR(s) / CL(s) / FAR(s) are documented in chapter 4 below.

#### 4. **Technical review**

Before submission of the final verification report a technical review of the whole verification procedure is carried out. The technical reviewer is a competent GHG auditor being appointed for the scope this project

falls under. The technical reviewer is not considered to be part of the validation team and thus not involved in the decision making process up to the technical review.

As a result of the technical review process the verification opinion and the topic specific assessments as prepared by the verification team leader may be confirmed or revised. Furthermore reporting improvements might be achieved.

### **5. Final approval**

After successful technical review of the final report an overall (esp. procedural) assessment of the complete validation will be carried out by a senior assessor located in the accredited premises of TÜV NORD. Only after this step the request for issuance can be started (in case of a positive validation opinion).

## **4 VERIFICATION FINDINGS**

### **4.1 Project Implementation Status**

The project activity is a bundled project with the total installed capacity of 8.25 MW. It involves installation of 3 nos. 1.25 MW Wind Turbine Generators (WTGs) of Suzlon make in Sadawaghapur forest site in Satara district of Maharashtra and 3 nos. 1.5 MW Wind Turbine Generators (WTGs) of Regen make at Thadichery & Koduvilarpatti site in Theni district of Tamil Nadu. The Project considered harnessed renewable resources in the region, thereby displacing non-renewable natural resources thereby ultimately leading to sustainable economic and environmental development.

During the desk review, the assessment team raised CAR 4.1, 4.2, 4.2.1 and CAR 4.3 which was closed successfully during the verification process.

In the on- site visit it was found that the project activity connected to Atit substation is changed to Sadawaghapur substation in the state of Maharashtra, hence CAR 4.1 was raised as correction was sought in the relevant sections of the MR wherever applicable. The revised MR Version 2 was corrected regarding the same issue also the permission letter<sup>PL</sup> for the same has been checked and found acceptable. Hence the CAR is closed.

The methodology followed for present verification is approved small scale methodology AMS.I.D version 16. No deviation is sought w.r.t the applicability of the methodology after the registration of the project activity. During the monitoring period (18/03/2010 to 31/12/2011 inclusive both the days), the net electricity exported to the grid by the project activity in the state of Maharashtra is 12227.57 MWh and for Tamil Nadu is, 19923.82 thus the total baseline emission for this monitoring period is computed to be **30096 tCO<sub>2e</sub>**.

It was verified during the on-site visit and the subsequent review of the Commissioning Certificates<sup>/CC/</sup> in the course of this verification that the actual project activity was implemented in accordance with the registered CDM PDD<sup>/CDM-PDD/</sup>, the details of the project location and commissioning dates are described under annexure 2 of this report.

Following CARs were raised during the verification process and thus closed successfully

Project Implementation status	CAR 4.1		
<b>Classification</b>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	During the verification on-site visit, it was observed that project activity connected to Atit substation (part of NEWNE grid) is changed to Sadawaghapur substation (220/33KV-part of NEWNE grid) in the state of Maharashtra within one month of project implementation. Appropriate correction is sought in section 2.1 of the MR and the other relevant section wherever applicable.		
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The MR has been revised to mention the change of substation from Atit to Sadawaghapur		
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	Assessment team has checked the permission letter provided by MSEDCL O&M Circle, Satara dated 27/04/2010 for the change of sub-station from Atit to Sadawaghapur within one month of project implementation. The required information and details are now mentioned in the MR which is checked by the verification team. Based on the revision in the MR CAR 4.1 is closed.		
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input checked="" type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements		

#### 4.2 Accuracy of GHG Emission Reduction or Removal Calculation

The baseline emissions reductions are based on the net electricity exported to the grid by the WTGs. The project emissions are zero for the project activity. Also, as per the methodology the leakage emission need not be calculated for this project activity. The emission reduction ER<sub>y</sub> due to project activity during a given year y is estimated as the difference between baseline emissions (BE<sub>y</sub>), and project emissions (PE<sub>y</sub>) & emissions due to leakage (L<sub>y</sub>), as per the formula given below:

$$ER_y = BE_y - PE_y - L_y$$

Where,

$BE_y$  = Baseline emissions in the year y in tCO<sub>2</sub>

$PE_y$  = Project emissions in the year y in tCO<sub>2</sub>

$L_y$  = Emissions due to leakage in the year y in tCO<sub>2</sub>

In case of the project activity,

$PE_y = 0$  for the project activity as per the methodology.

$L_y = 0$  for the project activity.

Therefore the baseline emission equals the Emission Reductions.

$ER_y = BE_y$

$BE_y = EG_y * EF_{grid, y}$

### **Calculation of net electricity generation and emission reduction in Tamil Nadu:**

Tamil Nadu Electricity Board (TNEB) have installed TNEB owned electronic tri-vector meters (Main meters) at each WTG transformer yard where the export and import of electrical energy is metered and the readings are taken by TNEB officials. The net energy generated from the specific WTG is calculated as a difference between electricity export and import values of the recording meter. These export/import values are obtained by multiplying the export/import readings of the recording meter with the multiplying factor of the recording meter. Monthly TNEB statement of net generation is provided to SOTL on the basis of which invoices are raised.

The baseline emissions are evaluated with the formula:

Baseline emissions ( $BE_y$ ) =  $EG_y * EF_{grid, y}$

### **Calculation of net electricity generation and emission reduction in Maharashtra:**

The net electricity exported to the grids is generated by MSEDCL on credit notes and sent to SOTL through the O&M service provider on a monthly basis for all its WTGs. On the basis of the information given in the credit notes, SOTL generates invoices on sale of electricity and sends to MSEDCL. Thereafter MSEDCL makes payments against the invoices.

Additionally, MSEDCL receives daily export & import figures for each WTG from the O&M service provider with the help of which it calculates the electricity export by each WTG at the WTG controller. The export value of each WTG can be arrived by apportioning the reading of the main/check meter in the same ratio at which each of the WTG had exported electricity. The apportioning method is as follows:

= (% generation of individual WTG connected to feeder) x (Net Electricity Export @ MSEDCL meter for the feeder),

where, % generation of individual WTG connected to feeder = (Controller reading @ Individual WTG)/(Sum of Controller reading of all WTGs connected on feeder)

Now, the values of Net electricity exported as compared between the credit notes and the apportioned values has been provided in the revised emission reduction sheet. As a conservative approach, the lower of the two values have been applied to calculate the emission reduction value. This is how the Net electricity exported to the NEWNE grid is obtained.

However, a CAR 4.2 was sought as the apportioning procedure mentioned in the registered PDD<sup>/CDM-PDD/</sup> and the MR was not detailed out in the emission reduction sheet for the state of Maharashtra. In the revised sheet the apportioning of Net Electricity Exported by WTG to MSEDCL has been provided. The revised emission reduction sheet<sup>/XLS/</sup> has been checked and found that the sheet has been appropriately amended and is as per the registered PDD. Thus, the CAR is closed.

The 1<sup>st</sup> VCS verification is from 18-03-2010 to 31-12-2011(inclusive both the days). The actual emission reductions observed during the monitoring period is 30096 tCO<sub>2e</sub>, which is higher than the estimates in the registered CDM PDD. As per the CDM registered PDD, the ER value for the complete monitoring period is 27356 tCO<sub>2e</sub>. Addressing this, CAR 4.2.1 is raised and DOE has checked significance impact on the project activity. It has been observed that the Electricity Generation through 4.5 MW at Tamil Nadu and 3.75 MW at Maharashtra is on higher side due to the fact that Wind is not under the control of the project participant.

Further Verification Team also checked the implication of the higher generation on the project Vis-a-Vis the additionality. The actual PLF achieved in Tamil Nadu site is 28.2% as against 26% which is the estimated PLF in registered PDD. As the increase in actual PLF (28.2%) is already demonstrated in the sensitivity analysis (i.e. 28.6% at +10% of PLF on 26%) in registered PDD, it has been assessed that there is no impact (i.e. IRR is 9.31% which is within the benchmark of 11%) on the additionality determination.

Additionally, the actual PLF achieved in Maharashtra site is 21.3% which is 6.5% more than 20% which is the estimated PLF in registered PDD. The increase in actual PLF (21.3%) is checked with the sensitivity analysis in registered PDD, it is evident that IRR is 11.02% as against the benchmark of 11% on the additionality determination. This is due to the good seasonal wind during the monitoring period. As the project additionality is demonstrated based on 20 years and it is not appropriate to conclude the project viability based on one year and 289 days data for this Maharashtra site. Hence, the slight increase of 0.02% is acceptable to the assessment team.

Based on this justification CAR 4.2.1 was closed.

The following CARs were raised during the verification process which was closed successfully

GHG Emission reduction calculation	CAR 4.2		
<b>Classification</b>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The emission reduction calculation approach for the project in the state of Maharashtra is not in line with the registered PDD. The apportioning procedure is not detailed out in the emission reduction sheet. Appropriate correction is sought in this context.		
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The apportioning procedure for Maharashtra site is hereby provided in the revised sheet.		
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	For the Maharashtra site, the values of Net electricity exported as compared between the credit notes and the apportioned values has been provided in the revised emission reduction sheet. As a conservative approach, the lower of the two values have been applied to calculate the emission reduction value. The revised emission reduction sheet has been checked and found that the sheet has been appropriately amended and is as per the registered PDD. Thus the CAR 4.2 is closed.		
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input checked="" type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input type="checkbox"/> The project complies with the requirements		

GHG Emission reduction calculation	CAR 4.2.1		
<b>Classification</b>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	The reason for difference in actual and estimated VERs need to be detailed out in section 4.4 of the MR. Appropriate correction is sought in this context.		
<b>Corrective Action #1</b> <i>This section shall be filled by the PP. It shall address the corrective action taken in details.</i>	The reason for the difference is now forms the part of MR. The revised MR is submitted to DOE for verification.		
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The actual emission reductions observed during the monitoring period is 30096 tCO <sub>2e</sub> . which is higher than the estimates in the registered PDD. As per the CDM registered PDD, the ER value for the complete monitoring period is 27356 tCO <sub>2e</sub> . Addressing this, CAR 4.2.1 is raised and DOE has checked significance impact on the project activity. It has been observed that the Electricity Generation through 4.5 MW at Tamil Nadu and 3.75 MW at Maharashtra is on higher side due to the fact that Wind is not under		

GHG Emission reduction calculation	CAR 4.2.1
	<p>the control of the project participant.</p> <p>Further Verification Team also checked the implication of the higher generation on the project Vis-a-Vis the additionality. The actual PLF achieved in Tamil Nadu site is 28.2% as against 26% which is the estimated PLF in registered PDD. As the increase in actual PLF (28.2%) is already demonstrated in the sensitivity analysis (i.e.28.6% at +10% of PLF on 26%) in registered PDD, it has been assessed that there is no impact (i.e. IRR is 9.31% which is within the benchmark of 11%) on the additionality determination.</p> <p>Additionally, the actual PLF achieved in Maharashtra site is 21.3% which is 6.5% more than 20% which is the estimated PLF in registered PDD. The increase in actual PLF (21.3%) is checked with the sensitivity analysis in registered PDD, it is evident that IRR is 11.02% as against the benchmark of 11% on the additionality determination. This is due to the good seasonal wind during the monitoring period. As the project additionality is demonstrated based on 20 years and it is not appropriate to conclude the project viability based on one year and 289 days data for this Maharashtra site. Hence, the slight increase of 0.02% is acceptable to the assessment team.</p> <p>Based on this justification CAR 4.2.1 was closed.</p>
<p><b>Conclusion</b> Tick the appropriate checkbox</p>	<p><input type="checkbox"/> To be checked during the first periodic verification</p> <p><input checked="" type="checkbox"/> Appropriate action was taken</p> <p><input type="checkbox"/> Project documentation was corrected correspondingly</p> <p><input type="checkbox"/> Additional action should be taken</p> <p><input checked="" type="checkbox"/> The project complies with the requirements</p>

### 4.3 Quality of Evidence to Determine GHG Emission Reductions or Removals

Proper data management including data acquisition and aggregation, data management system is being followed for the project activity at both the sites<sup>/IM01/</sup>. All records needed for monitoring are archived in line with the requirements of the registered monitoring plan<sup>/CDM-PDD/</sup>. The calibration at Maharashtra site has been done as per the frequency i.e. annually<sup>/CAL/</sup> and calibration at Tamil Nadu site was done once every three years<sup>/CAL/</sup>. No abnormality was found in the metering system.

The net electricity generated is calculated the net electricity supplied to the regional grid through the sub-station of NEWNE and Southern grids respectively. No significant, lack of evidence and missing data were detected during on-site verification<sup>/IM01/</sup>. It is evident from the monitoring data that the monitoring system ensures for continuous (except some routine breakdowns or outage) operation<sup>/BR/</sup>.

During the on- site visit<sup>/IM01/</sup>, it was confirmed that tri-vector energy meters of mentioned class accuracies in the registered CDM PDD have been installed by the respective Utilities at the metering point for measuring and monitoring the electricity exported and imported on a continuous basis. The meter readings are recorded every month by state electricity board officials. The Joint meter readings have been crosschecked with the invoices and found correct<sup>/JMR/INV/</sup>.

Check meter readings shall be considered when Main Meters are found to be defective or stopped. Further, failure of both the meters is highly impossible.<sup>/IM01/PPA/CDM-PDD/</sup>

The monitoring personnel at site are well trained and follow reproducible routines. The training records<sup>/TR/</sup> of the plant personals have been cross checked and found OK.

Atit substation was changed to Sadawaghapur substation on 27/04/2010 therefore the meter (both the main and check meters) connected to Atit substation are different then the meters (main and check meters) now connected to Sadawaghapur substation. The calibration reports and dates of both the meter connected to Atit substation and Sadawaghapur substation respectively was not detailed out in the MR as well the details of calibration for the meter connected to the southern grid needs to be detailed out too. Thus CAR 4.3 was raised.

Subsequently, the calibration certificates of all the meters connected to both the grids have been provided to the validation team and the MR is also revised mentioning the calibration dates of all the meters of the project activity. The certificates<sup>/CAL/</sup> and the MR ver.2<sup>/MR/</sup> have been checked by the team and found correct which leads to the closure of the CAR 4.3.

Quality of evidence to determine GHG emission reduction	CAR 4.3		
<b>Classification</b>	<input checked="" type="checkbox"/> CAR	<input type="checkbox"/> CL	<input type="checkbox"/> FAR
<b>Description of finding</b> <i>Describe the finding in unambiguous style; address the context (e.g. section)</i>	During the verification site visit in the state of Maharashtra it was observed that Atit substation was changed to Sadawaghapur substation on 27/04/2010. The meter (both the main and check meters) connected to Atit substation are different then the meters (main and check meters) now connected to Sadawaghapur substation. The calibration reports and dates of both the meter connected to Atit substation and Sadawaghapur substation respectively needs to be detailed out in the MR. Moreover, the details of calibration for the meter connected to the southern grid needs to be detailed out as well.  Appropriate correction is sought in this context.		
<b>Corrective Action #1</b> <i>This section shall be filled by</i>	The calibration details of all the meters have been provided in the revised		

Quality of evidence to determine GHG emission reduction	<b>CAR 4.3</b>
<i>the PP. It shall address the corrective action taken in details.</i>	MR.
<b>DOE Assessment #1</b> <i>The assessment shall encompass all open issues in annex A-1. In case of non-closure, additional corrective action and DOE assessments (#2, #3, etc.) shall be added.</i>	The MR is revised mentioning the calibration dates of all the meters of the project activity. Moreover, the calibration certificates of all the meters connected to both the grids have been provided to the validation team. The calibration certificates <sup>/CAL/</sup> and the MR version 2 have been checked by the team and found correct which leads to the closure of the CAR 4.3.
<b>Conclusion</b> <i>Tick the appropriate checkbox</i>	<input type="checkbox"/> To be checked during the first periodic verification <input type="checkbox"/> Appropriate action was taken <input type="checkbox"/> Project documentation was corrected correspondingly <input type="checkbox"/> Additional action should be taken <input checked="" type="checkbox"/> The project complies with the requirements

#### 4.4 Management and Operational System

The Project participant has undertaken maintenance and services agreement with Suzlon Infrastructure Services Limited (SISL) for Maharashtra site and M/s Regen Powertech Pvt. Ltd. (RPPL) for Tamil Nadu site<sup>/O&M/</sup>. The performance of the WTGs, safety in operation and scheduled/breakdown maintenances are organized and monitored by the contractors. The breakdown records<sup>/BR/</sup> have been checked by the assessment team and found correct. So the authority and responsibility of project management of both the sites lies with the respective contractors<sup>/IM01//O&M/</sup>.

The site-in-charges shall be responsible for the regular recording of data of both the sites. Overall project management responsibility lies with the President and Manager of Renewable Energies-Savita Oil Technologies Limited (SOTL). The records are regularly audited and checked by the senior officials from project proponent on an annual basis. The officials will monitor the actual emission reduction. The site in-charge will be responsible for taking readings at site. The internal audit reports have been checked during the site visit<sup>/IAR//IM01/</sup>. The O&M service provider would be responsible for maintenance of the necessary spare parts and consumables for the maintenance of the WTGs and the supply of necessary main components of the WTG. He would also ensure that occupational health and safety procedures are adhered to during the operation & maintenance activities.

Tamil Nadu Electricity Board (TNEB) have installed TNEB owned electronic tri-vector meters (Main meters) at each WTG transformer yard where the export and import of electrical energy is metered and the readings are taken by TNEB officials in presence of site-in-charge once in a month. Monthly TNEB statement of net generation is provided to SOTL on the basis of which invoices are raised. Similarly, the electricity export reports are generated by MSEDCL on credit notes and sent to SOTL through the O&M service provider on a monthly basis. Thus, SOTL receives credit notes from MSEDCL for all its WTGs

from the O&M service provider every month. Upon receipt of these reports, SOTL generates invoices on sale of electricity and sends to MSEDCL. Thereafter MSEDCL makes payments against the invoices.

The data will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

### 5 VERIFICATION CONCLUSION

The scope of this verification covers the determination of voluntary greenhouse gas emission reductions generated by the above mentioned project. The verification is based on the registered CDM PDD<sup>/CDM-PDD/</sup>, VCS PD<sup>/VCS-PD/</sup>, Final validation report of CDM<sup>/FVR-CDM/</sup>, Monitoring report version 1 and version 2<sup>/MR/</sup>, supporting emission reduction calculation sheet version 1 and version 2<sup>/XLS/</sup> and other supporting documents made available to the verifiers by the project proponent such as commissioning certificates<sup>/CC/</sup>, calibration certificates<sup>/CAL/</sup>, breakdown records<sup>/BR/</sup> etc.

As a result of the verification, the verifier confirms that:

- All operations of the project are implemented and installed as planned and described in the project document<sup>/CAL/, /CC/</sup>. The installed equipment essential for generating emission reductions runs reliable.
- The monitoring plan is in accordance with the applied approved CDM methodology AMS.I.D version 16.
- The installed equipment essential for measuring parameters required for calculating emission reductions are calibrated.
- The monitoring system is in place and functional. The project has generated GHG emission reduction and the emission reduction from the project activity is real, credible and long term for the whole crediting period<sup>/GEN//INV/</sup>
- GHG emission reductions are calculated without any material misstatements in a conservative and appropriate manner.

Reporting period: From 18-03-2010 to 31-12-2011(including both the days)

Verified GHG emission reductions or removals in the above reporting period: The

GHG emission reductions or removals	tCO <sub>2</sub>																
GHG emission reductions or removals	tCO <sub>2e</sub>																
Baseline emissions	<table border="1"> <tr> <th>Vintage period</th> <th>Tamil Nadu</th> <th>Maharashtra</th> <th>Overall</th> </tr> <tr> <td>March 2010-Dec 2010</td> <td>9290.121</td> <td>4501</td> <td>13791.12</td> </tr> <tr> <td>Jan 2011-Dec 2011</td> <td>9527.927</td> <td>6777.77</td> <td>16305.60</td> </tr> <tr> <td></td> <td></td> <td></td> <td>30096.72</td> </tr> </table>	Vintage period	Tamil Nadu	Maharashtra	Overall	March 2010-Dec 2010	9290.121	4501	13791.12	Jan 2011-Dec 2011	9527.927	6777.77	16305.60				30096.72
	Vintage period	Tamil Nadu	Maharashtra	Overall													
	March 2010-Dec 2010	9290.121	4501	13791.12													
	Jan 2011-Dec 2011	9527.927	6777.77	16305.60													
			30096.72														
Project Emissions	0																
Leakage	0																
Net GHG emission reductions or removals	30096 (Rounded down)																

emission reduction in Tamilnadu is as follows:

Year	Net Electricity generation in MWh	Emission Reductions (tCO <sub>2</sub> )
18/03/2010 to 31/12/2011	19923.82	18818

The emission reduction in Maharashtra is as follows:

Year	Net Electricity generation in MWh	Emission Reductions (tCO <sub>2</sub> )
18/03/2010 to 31/12/2011	12227.57	11278

All the documents checked during on-site visit and verification process will be kept confidential and will not be disclosed at any time other than the project proponent consent or as required by the VCSA. The project complies with VCS version 03 requirements.



Mr. Prasad Jakkaraju  
TÜV NORD JI/CDM Certification Program  
Verification Team Leader  
Mumbai, 2012-08-14



Mr. Stefan Winter  
TÜV NORD JI/CDM  
Final Approval  
Essen, 2012-08-14

**Annexure 1 – Abbreviations**

<b>CAR</b>	Corrective Action Request
<b>CEA</b>	Central Electricity Authority
<b>CER</b>	Certified Emission Reduction
<b>CL</b>	Clarification Request
<b>CMS</b>	Central Monitoring System
<b>CO<sub>2</sub></b>	Carbon dioxide
<b>CO<sub>2e</sub></b>	Carbon dioxide equivalent
<b>DNA</b>	Designated National Authority
<b>EB</b>	CDM Executive Board
<b>FAR</b>	Forward Action Request
<b>GHG</b>	Greenhouse gas(es)
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>KV</b>	Kilo Volt
<b>kW</b>	Kilo Watt
<b>MSEDCL</b>	Maharashtra State Electricity Distribution Company Limited
<b>NEWNE</b>	Northern, Eastern, Western, and North-Eastern
<b>PDD</b>	Project Design Document
<b>PLF</b>	Plant Load Factor
<b>PPA</b>	Power Purchase Agreement
<b>QC/QA</b>	Quality control/Quality assurance
<b>RPPL</b>	Regen Powertech Pvt. Ltd.
<b>SISL</b>	Suzlon Infrastructure Services Limited
<b>SOTL</b>	Savita Oils Technologies Limited
<b>TNEB</b>	Tamil Nadu Electricity Board
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VCS</b>	Voluntary Carbon Standard
<b>VCU</b>	Voluntary Carbon Units
<b>VER</b>	Voluntary Emission Reduction
<b>WTG</b>	Wind Turbine Generator

**Annexure 2- Project location and commissioning detail**

Machine No.	Village	Latitude	Longitude	Date of Commissioning
S – 40	Sadawaghapur, Satara, Maharashtra	17°24'00" N	73°56'18" E	30/03/2010
S – 63	Sadawaghapur, Satara, Maharashtra	17°25'16.8" N	73°55'33.6" E	30/03/2010
S – 64	Sadawaghapur, Satara, Maharashtra	17°25'22.8" N	73°55'40.2" E	30/03/2010
T45	Thadichery & Koduvilarpatti, Theni, Tamil Nadu	9°56'38.06" N	77°27'54.78" E	18/03/2010
T46	Thadichery & Koduvilarpatti, Theni, Tamil Nadu	9°56'44.20" N	77°27'37.70" E	18/03/2010
T75	Thadichery & Koduvilarpatti, Theni, Tamil Nadu	9°56'42.78" N	77°29'39" E	29/03/2010

**Annexure 3- Reference section**

Reference	Documents									
/BR/	Breakdown / Annual maintenance records monitoring period of 18-03-2010 to 31-12-2011 (including both the days)									
/CAL/	<p>Calibration certificates of meter located at Atit substation:</p> <table border="1"> <tr> <td><b>Meter No.</b></td> <td>04961759</td> </tr> <tr> <td><b>Date of calibration</b></td> <td>30/12/2009</td> </tr> </table> <p>Calibration certificates of meter located at Sadawaghapur substation:</p> <table border="1"> <tr> <td><b>Meter No.</b></td> <td><b>Date of calibration</b></td> </tr> <tr> <td rowspan="2">04961755</td> <td>30/03/2010</td> </tr> <tr> <td>08/09/2010</td> </tr> </table>	<b>Meter No.</b>	04961759	<b>Date of calibration</b>	30/12/2009	<b>Meter No.</b>	<b>Date of calibration</b>	04961755	30/03/2010	08/09/2010
<b>Meter No.</b>	04961759									
<b>Date of calibration</b>	30/12/2009									
<b>Meter No.</b>	<b>Date of calibration</b>									
04961755	30/03/2010									
	08/09/2010									

	<table border="1"> <tr> <td></td> <td>19/05/2011</td> </tr> <tr> <td rowspan="3">04961761</td> <td>15/03/2010</td> </tr> <tr> <td>08/09/2010</td> </tr> <tr> <td>19/05/2011</td> </tr> </table>		19/05/2011	04961761	15/03/2010	08/09/2010	19/05/2011		
	19/05/2011								
04961761	15/03/2010								
	08/09/2010								
	19/05/2011								
	<p>Calibration certificates of meter located at Theni</p> <table border="1"> <tr> <td><b>Meter No.</b></td> <td>TNB 04537</td> <td>TNB 04534</td> <td>TNB 04517</td> </tr> <tr> <td><b>Date of calibration</b></td> <td colspan="3">27/03/2011</td> </tr> </table>	<b>Meter No.</b>	TNB 04537	TNB 04534	TNB 04517	<b>Date of calibration</b>	27/03/2011		
<b>Meter No.</b>	TNB 04537	TNB 04534	TNB 04517						
<b>Date of calibration</b>	27/03/2011								
<b>/CC/</b>	Commissioning certificate of all the individual WTGs dated 30/03/2010 (for Maharashtra WTGs) and dated 18/03/2010 and 29/03/2010 (for Tamil Nadu WTGs)								
<b>/DC/</b>	Letter stating avoidance of double counting of the GHG emission reductions dated 19/04/2012								
<b>/GEN/</b>	Generation at the online meter for individual WTG for the current monitoring period from 18-03-2010 to 31-12-2011 (including both the days)								
<b>/INV/</b>	Credit notes covering the monitoring period from 18-03-2010 to 31-12-2011 (including both the days)								
<b>/JMR/</b>	Joint Meter Reading sheet covering the Monitoring period i.e.18-03-2010 to 31-12-2011 (including both the days)								
<b>/MR/</b>	<ul style="list-style-type: none"> <li>MR version 1 dated 03-04-2012, based on which the Verification assessment has been carried out.</li> <li>MR version 2 dated 25-07-2012, based on which the Verification opinion has been provided.</li> </ul>								
<b>/NOC/</b>	NOC to prove that the project activity has not participated in an emissions trading program in Host Country (India) dated 19/04/2012								
<b>/O&amp;M/</b>	<ul style="list-style-type: none"> <li>Operation &amp; Maintenance Contract between Savita Oil Technologies Limited and Suzlon Infrastructure Services Ltd dated 01/04/2010 and</li> <li>Operation &amp; Maintenance Contract between Savita Oil Technologies Limited and M/s ReGen Powertech Pvt. Ltd dated 05/02/2010</li> </ul>								
<b>/PL/</b>	Permission letter for shift of WTGs from Atit S/s to Sadawaghapur S/s dated 27/04/2010.								

<b>/PPA/</b>	<ul style="list-style-type: none"> <li>● Power Purchase Agreement between MSEDCL and the SOTL dated 07/05/2010</li> <li>● Power Purchase Agreement between TNEB and the SOTL dated 18/03/2010</li> </ul>
<b>/TR/</b>	<ul style="list-style-type: none"> <li>● Training records for the personal working on Theni, Tamil Nadu site by O&amp;M Contractor dated 19/02/2010, 26/03/2011 and 21/09/2011</li> <li>● Training records for the personal working on Sadawaghapur, Maharashtra site by O&amp;M Contractor upto 31/03/2012</li> </ul>
<b>/TS/</b>	Technical specifications of the WTGs (S-40,S-63,S-64) and (T45,T46,T75) on site dated 24/11/2006
<b>/XLS/</b>	<ul style="list-style-type: none"> <li>● Emission reduction calculation sheet-1 dated 03-04-2012</li> <li>● Emission reduction calculation sheet-2 dated 10-05-2012</li> </ul>

**Table 7-2: Background investigation and assessment documents**

Reference	Document
<b>/AMS.I.D./</b>	Grid connected renewable electricity generation – Version 16
<b>/CDM-PDD/</b>	Project Design Document for CDM project: “ Bundled Wind Power generation project by Savita Oil Technologies Ltd., India” dated 04/11/2011
<b>/FVR-CDM/</b>	Final Validation Report for CDM project “Bundled Wind Power generation project by Savita Oil Technologies Ltd., India” dated 08/12/2011
<b>/VCS-PD/</b>	VCS PD version 1 dated 02/04/2012
<b>/VVS/</b>	UNFCCC Validation and Verification Standard (Version 2, EB 65 Annex 4)

**Table 7-3: Websites used**

Reference	Link	Organisation
<b>/cea/</b>	<a href="http://www.cea.nic.in">www.cea.nic.in</a>	Central Electricity Authority version 05
<b>/unfccc/</b>	<a href="http://cdm.unfccc.int">http://cdm.unfccc.int</a>	UNFCCC
<b>/vcs/</b>	<a href="http://www.v-c-s.org">www.v-c-s.org</a>	Verified Carbon standard version 3.

Reference	Link	Organisation
/msedcl/	<a href="http://www.mahadiscom.in">http://www.mahadiscom.in</a>	Maharashtra State Electricity Distribution Co. Ltd
/tneb/	<a href="http://www.tneb.in">www.tneb.in</a>	Tamil Nadu Electricity Board

**Table 7-4:** List of interviewed persons

Reference	Name	Organisation / Function
/IM01/	Mr. Kishor B Jadhav	OMS/Assistant Manager
/IM01/	Mr. Samarkant Panda	Savita Oil Technologies Limited /Sr. Manager (Operations)
/IM01/	Mr. Chandrakant L. Kale	Savita Oil Technologies Limited/ President – Renewable Energy