

**Positive Climate Care  
9.75 MW Bundled Wind Power Project Activity  
in the State of Maharashtra, India**

**Monitoring Period:**  
February 13<sup>th</sup>, 2007 - July 31<sup>st</sup>, 2009

**Total Available Volume:**  
**27,525 VCUs**

**Positive Climate Care Private Limited**

108, Ashirwad Complex, Central Spine  
Vidyadhar Nagar, Jaipur-302023  
Rajasthan (India)

Tele-Fax : +91-141-2338078

Website: [www.positiveclimatecare.com](http://www.positiveclimatecare.com)

E-mail: [positiveclimatecare@gmail.com](mailto:positiveclimatecare@gmail.com)



## VER PORTFOLIO DESCRIPTION

### Positive Climate Care 9.75 MW Bundled Wind Power Project Activity in the State of Maharashtra, India

<b>Project Type</b>	Type 1: Renewable Energy Projects
<b>Project Locations</b>	Nine wind turbines were installed and operating in four different villages of district Ahmednagar, district Sangli and district Nashik of Maharashtra, India
<b>Description of Project</b>	The project activity consists of a bundle of 9 Wind Electric Generators (WEGs), for a total installed capacity of 9.75 MW that includes 4.95 MW (1650 kW X 3 machines) and 4.80 MW (800 kW X 6 machines), operational at the above listed sites. The generated electricity is being sold and supplied to the State Electricity Utility- Maharashtra State Electricity Distribution Company Limited (MSEDCL) through MSEDCL grid, which depends mostly on fossil fuels. The current project activity therefore reduces the anthropogenic emissions of greenhouse gases (GHGs) in to the atmosphere associated with the equivalent amount of electricity generation from the fossil fuels dominated grid connected power plants.
<b>Methodology</b>	AMS I D - Grid Connected Renewable Electricity Generation  Methodological Tool: "Tool to calculate the emission factor for an electricity system"; EB 35, Annex 12, version 01.1; Valid from: July 29 <sup>th</sup> , 2008
<b>Volume / Vintage</b>	7159/ Year 2007  11592/ Year 2008  8774/ Year 2009  Total Available Volume: <b>27525</b> / (February 13 <sup>th</sup> , 2007 through July 31 <sup>st</sup> , 2009)
<b>Transaction Type / Availability for Delivery</b>	The above shown total volume ( <b>27525</b> ) is readily available for sale.
<b>Unit Price</b>	Quotes are welcome.
<b>Costs &amp; Taxes</b>	Seller has borne all costs associated with the production, validation and verification of the project activities.
<b>Verification Standard</b>	Voluntary Carbon Standard (VCS) 2007.1
<b>Monitoring Standard / Methodology</b>	Title: "Grid connected renewable electricity generation" AMS I D, version 14; valid from 31 <sup>st</sup> July 2009  Reference: Clause 31 of Appendix B - the simplified modalities and procedures for small-scale CDM project activities.  The first monitoring report was submitted to VCSA for the period from February 13 <sup>th</sup> , 2007 through July 31 <sup>st</sup> , 2009. Salient features from this report are included here: <ul style="list-style-type: none"> <li>○ In accordance with the AMS I D, version 14 guidelines, the monitoring</li> </ul>

	<p>consisted of metering the generated electricity. The metering is carried out using electronic tri-vector meters of accuracy 0.2%.</p> <ul style="list-style-type: none"> <li>○ The joint measurement is carried out once a month in presence of both parties (the investor's representative and officials from MSEDCL).</li> <li>○ The monitoring at WEG end is equipped with an integrated electronic controller meter. These meters are connected to the Central Monitoring Station (CMS) of the entire wind farm through a wireless Radio Frequency (RF) network. The generation data of individual machine can be monitored as a real-time entity at CMS. The snapshot of generation on the last day of every calendar month is kept as a record both in electronic as well as printed forms.</li> <li>○ All the meters are tested for accuracy every calendar year with reference to a portable standard meter. As the instruments is calibrated and marked at regular intervals, the accuracy of measurement can be assured at all times. Necessary records of calibration is maintained by both MSEDCL and project proponents.</li> <li>○ The WEGs are equipped with installed panel meters and no calibration is required for these meters. There is quality procedure incorporated in software, which react to deviations higher than range of 10 units .</li> </ul>
<b>Status of Verification</b>	Verified on June 10, 2010
<b>Additionality</b>	<p>The project activity is a voluntary initiative by project proponents, and it is not mandatory by law. In line with VCS 2007.1 requirements, and with reference to Attachment A of Appendix B for simplified modalities and procedures for small scale CDM project activities, the project proponents demonstrated that the project activity was additional and not a baseline scenario.</p> <p>Internal rate of returns (IRR) for each year was determined and found quite below from the benchmark IRR for the project. The low IRR is mainly attributed to Plant Load Factor, which is the key variable encompassing variation in wind profile, variation in off-take (including grid availability) and machine downtime. The low IRR indicated that the project was not financially attractive. However, incentive through sale of the emission reductions should improve the returns from the project activity. It can be justified that Carbon revenue, which the project activity should obtain through the sale of the emission reductions, is very crucial to sustain the operations of the project activity.</p>
<b>Registry</b>	APX VCS Registry System – Project ID 303
<b>Co-Benefits</b>	<p>Indian economy is highly dependent on coal as fuel to generate energy. Changing coal consumption patterns would require a multi-pronged strategy focusing on demand, reducing wastage of energy, and the optimum use of renewable energy sources. This particular project activity is a step in the same direction. The project activity meets several sustainable development objectives, such as:</p> <ul style="list-style-type: none"> <li>• Upliftment of skilled and unskilled manpower in the region by providing employment not only during the construction phase, but also during its operational life time;</li> <li>• Significant improvement in employment rate and livelihood of local populace in the vicinity of the project;</li> <li>• Contribution towards the policy objectives of Government of India and Government of Maharashtra of incremental capacity from renewable sources;</li> <li>• Contribution towards meeting the electricity deficit in Maharashtra;</li> <li>• CO<sub>2</sub> abatement and reduction of greenhouse gas emissions through development of renewable technology;</li> <li>• Reducing the average emission intensity (SO<sub>x</sub>, NO<sub>x</sub>, PM, etc.), average effluent</li> </ul>

	<p>intensity and average solid waste intensity of power generation in the system;</p> <ul style="list-style-type: none"><li>• Economic well being of the local community through increased price of their land due to its commercialization under the project activity. This land used to be unproductive and barren, bearing a very low price. However, now the same land worth way more, and on the top of that, farmers are allowed by wind park developers to practice agriculture in the same land, thereby making it even more productive.</li></ul>
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**Wind Mill Photographs**









**Photographs Taken During Stakeholder Consultation Survey and Meeting**

**Annexure 4: Photos of Stake holder consultation at site/village**

**1. Panchgani, Sangli, Site ( 3 x 1.65 MW, Vestas Make)**

**1. 1 Response from local wind turbine operators at**





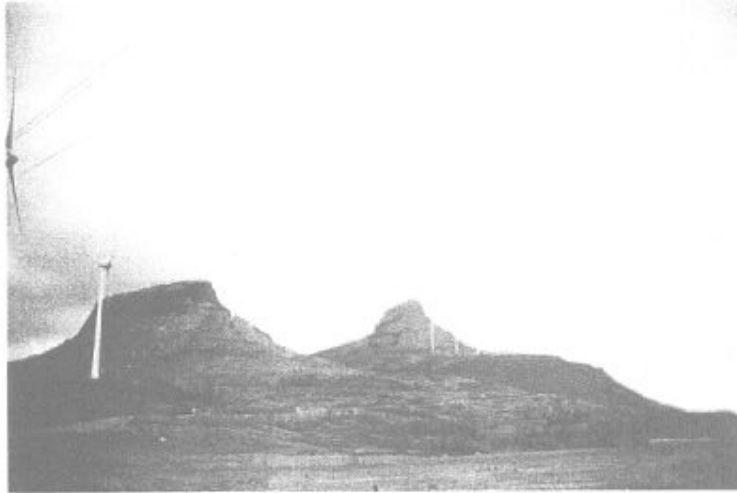
### 3. Aundhewadi, Nashik- Site (2 x 0.8 MW, Enercon Make)

#### 3.1 Aundhewadi Village



#### 3.1 Response from a local farmer





**4. Manhere Site at Nashik (4 x 0.8 MW, Enercon Make)**

**4.1 Manhere Village, Road leading to windfarm**



6. Stake holder meeting at Vestass Site office Dhule

