



**Positive Climate Care
3.55 MW Bundled Grid Connected
Wind Power Project Activity
in Jaisalmer, Rajasthan,
India**

Total Available Volume: **8457 VCU**s

Monitoring Period:
January 1st, 2008 – July 1st, 2009

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VER PORTFOLIO DESCRIPTION

Positive Climate Care 3.55 MW Bundled Grid Connected Wind Power Project Activity in Jaisalmer, Rajasthan, India

Project Type	Type 1: Renewable Energy Projects
Project Locations	Five wind turbines were installed and operating in four different villages of district <i>Jaisalmer, in the state of Rajasthan, India.</i>
Description of Project	The project activity is a wind energy based power generation of capacity 3.55 MW that consists of five Wind Electricity Generators (WEGs), which include 1.25 MW (1 machine), 0.70 MW (350 kW X 2 machines) and 1.60 MW (800 kW X 2 machines) located at the above mentioned sites. The objective of the wind power project activity is to generate renewable electricity using wind power resources and to sell and wheel the generated electricity to the State Electricity Utility- RVPNL (Rajasthan Vidyut Prasaran Nigam Limited).
Methodology	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 th , 2008
Volume / Vintage	5742/ Year 2008 2715/ Year 2009 Total Available Volume: 8457 / (January 1 st , 2008 – July 1 st , 2009)
Transaction Type / Availability for Delivery	Out of the total issued volume 7851 VCUS are available for sale.
Unit Price	Quotes are welcome.
Legal Title	Positive Climate Care 3.55 MW Bundled Grid Connected Wind Power Project Activity in Jaisalmer, Rajasthan, India
Costs & Taxes	Seller has borne all costs associated with the production, validation and verification of the project activities.
Verification Standard	Voluntary Carbon Standard (VCS) 2007.1
Monitoring Standard / Methodology	Title: "Grid connected renewable electricity generation" AMS I D, version 14; valid from 31 st July 2009 Reference: Clause 31 of Appendix B - the simplified modalities and procedures for small-scale CDM project activities. The project proponents (PPs) formulated a project team to ensure proper and continuous monitoring of the performance of turbines and generation of power. To ensure trouble free operations and efficient generations through all the wind turbines, PPs have entered into a comprehensive Operation and Maintenance (O&M) agreement with the manufactures of the turbines, i.e. Suzlon and Enercon,

	<p>for the entire crediting period of 10 years. Moreover, the project abides by all regulatory and statutory requirements as prescribed under the state and central laws and regulations. The project team is delegated with the responsibility to monitor and document the electricity generated and also safe keeping of the recorded data. The project team is also responsible for calculation of actual creditable emission reduction in the most transparent and relevant manner.</p> <p>The first monitoring report was submitted to VCSA for the period from January 1st, 2008 through July 1st, 2009. Salient features from this report are included here:</p> <ul style="list-style-type: none"> ○ In accordance with the AMS I D, version 14 guidelines, the monitoring consisted of metering the generated electricity. The metering is carried out using electronic tri-vector meters of accuracy 0.2%. ○ 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. A snapshot of generation on the last day of every calendar month is kept as a record both in electronic as well as printed forms. ○ The generated electricity is measured through a two step procedure wherein the first metering is carried out at the controller of the machine. The second metering is carried out at grid interconnection point wherein Joint Meter Reading (JMR) is taken on first day of every month in presence of the representatives of the project proponents and the state electricity utility (RVPNL/DISCOM). ○ The JMR is used for calculation of the amount of electricity pumped into the grid against which the utility makes the payment to the project proponents. The meter located at the grid sub-station are sealed, maintained and calibrated by the state electricity utility. The electronic controllers are self calibrated to ensure and maintain online system diagnostics. ○ All the meters are tested for accuracy every calendar year with reference to a portable standard meter. As the instruments are calibrated and marked at regular intervals, the accuracy of measurements can be assured at all times. Necessary records of calibration is maintained by both RVPNL and project proponents.
Status of Verification	Verified on July 12, 2010
Additionality	<p>The referenced project was determined additional and not a baseline scenario in accordance with VCS 2007.1 requirements given by <i>Attachment A of Appendix B on simplified modalities and procedures for small scale CDM projects</i>.</p> <p>Project proponents faced financial barrier as the internal rate of returns (IRR) was quite low when compared to the benchmark IRR (based on prime lending rate) used as criteria for loss or profit. For all the investors, the IRR comparison revealed that the project was financially unattractive. 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. 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>

Registry	APX VCS Registry System – Project ID 500
Co-Benefits	<p>The referenced project activity is an energy diversification measure where renewable wind energy is harnessed for generation of power in order to aid to the power deficit grid of Rajasthan state. This technology for power generation does not have any associated GHG emissions. In fact, several co-benefits are associated with the ongoing project activity, such as:</p> <ul style="list-style-type: none"> • The project activity has indeed helped to a great extent in the improvement of the electricity facilities in the neighboring villages. More because the power generated is supplied to a distribution grid, it has been possible for the local community to gain maximum benefits of the project activity; • 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; • The demonstration of the project activity at a commercial level is encouraging future investments to capture the wind energy potential of the state and utilize the same to generate power. Addition of carbon benefits makes such projects more attractive; • Contribution towards reduction in demand and use of finite natural resources, e.g. coal, oil, gas and other fossil fuels, thereby minimizing their depletion, rather increasing their availability for other important processes; • Wind power projects produce no end products in the form of solid waste, thereby addressing the problem of solid waste disposal encountered by most other sources of power. Neither such projects use any fuel for electricity generation, hence no effluents discharged into the water bodies.

Stakeholder Meeting Photographs





Wind Mill Photographs





Electronic Controller Meter



Operation and Management Team

