

POSITIVE CLIMATE CARE 6.25 MW
BUNDLED WIND POWER PROJECT ACTIVITY
IN THE STATE OF TAMILNADU, INDIA



Monitoring Period:
April 1st, 2006 - June 30th, 2009

Total Available Volume:
31,022 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

E-mail: positiveclimatecare@gmail.com

VER PORTFOLIO DESCRIPTION

Positive Climate Care 6.25 MW Bundled Wind Power Project Activity in the State of Tamilnadu, India

Project Type	Type 1: Renewable Energy Projects
Project Locations	13 wind turbines were installed and operating in and around five different villages of district <i>Coimbatore</i> and district <i>Tirunelveli</i> in the state of <i>Tamilnadu</i> , , <i>India</i> .
Description of Project	This bundled project of 13 wind electricity generators (WEGs) for a total installed capacity of 6.25 MW, which includes 3 MW (750 kW X 4 machines), 2 MW (250 kW X 8 machines) and 1.25 MW (1250 kW X 1 machine) , was promoted by three different investors. The electricity generated is fed to Tamilnadu Electricity Board (TNEB) through a power purchase agreement. The TNEB forms part of the Southern Regional Grid of India and it depends primarily on fossil fuels. Therefore, this project contributes to reduced greenhouse gas emissions caused by reliance on fossil fuels.
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	8413/ Year 2006 9099/ Year 2007 9576/ Year 2008 3934/ Year 2009 Total Available Volume: 31022 / (April 1 st , 2006 – June 30 th , 2009)
Transaction Type / Availability for Delivery	Out of the total issued volume, 24133 VCUs are readily available for sale.
Unit Price	Quotes are welcome.
Legal Title	Positive Climate Care 6.25 MW Bundled Wind Power Project Activity in the state of Tamilnadu, 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. A project team was formed by the project proponents (PPs) for the proper execution

	<p>of the project. The project proponents have signed an “Operation and Maintenance (O&M)” contract with the supplier of the wind turbines for a seamless operation of the wind farm. As per the agreement, the suppliers undertake the responsibility of keeping the WEGs in good and proper functional efficiency and of maintaining optimum generation with least mean down time. The first monitoring report was submitted to VCSA for the period from April 1st, 2006 through June 30th, 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 0.5%; ○ The net electricity generated from a specific WEG is calculated as a difference between the gross electricity generation and the auxiliary consumption of the WEG. The metering system consists of a controller at each WEG and an energy meter recording the export & import of electrical energy to and from the state grid. The meter is installed by the State Electricity Board (SEB), i.e. TNEB, and inspected once in a year ; ○ Daily meter reading is taken by site in-charge or personnel from O&M contractor. Meter readings are noted both electronically and on paper. ○ The meters at the substation are two-way meters and are in custody of TNEB. The TNEB takes the readings (joint meter reading s) from these meters and the same reading are used to determine the net power sold to the grid and determine the extent of mitigation of GHG s over a period of time. ○ The meters are owned and maintained by TNEB and are calibrated as per the approved testing procedures of TNEB once a year.
Status of Verification	Verified on July 30, 2010
Additionality	<p>The referenced project was determined additional and not a baseline scenario in accordance with <i>VCS 2007.1</i> requirements given by <i>Attachment A of Appendix B on simplified modalities and procedures for small scale CDM project s</i>.</p> <p>The project activity and project proponents all face different barriers, including financial, regulatory and high investment. Financial barrier was demonstrated through lower internal rate of returns (IRR) compared to a benchmark IRR (based on prime lending rate), used as criteria for loss or profit. For all three investors, the IRR comparison revealed that the project was financially unattractive. Despite of that, project proponents volunteered to develop wind farms in the state of Tamilnadu, as the state is blessed with a high wind density due to two monsoon seasons. But, the maximum Plant Load Factor by the wind turbines in the state was never more than 25%. Regulatory barrier in Tamilnadu state is not trivial, as this is the only state with a fixed and one of the lowest power purchase tariff in the country. In addition, the state also does not allow the investors to sell the generated electricity to other customers and the power evacuation is not invariable in many areas, even in the peak wind conduction periods. Inadequate capacity of substations and delay in power purchase payments from the Electricity Board are also major problems in Tamilnadu state, which significantly reduces the profitability from the project. Installation of wind power plant involves highest investment when compared to other fossil fuels based power plants, such as coal, diesel, and natural gas. The high capital cost is another major barrier , which may be justified with the consideration of carbon credits sale to generate additional revenue. Carbon revenue helps in augmenting these barriers to a great extent.</p>
Registry	APX VCS Registry System – Project ID 496

<p>Co-Benefits</p>	<p>In addition to the strategic objectives to achieve increased share of renewable energy in the Indian context through a focus on wind energy, increased rural incomes, reduced poverty and empowerment of the vulnerable sections of society, the project in turn contributes to the sustainable development of the region and country through providing following co-benefits:</p> <ul style="list-style-type: none"> • The project has caused a tremendous increase in the employment opportunities around the project areas. Both skilled and unskilled manpower were able to attain employment not only in the construction and operation phase of the wind power plant, but also with the increased services and amenities that come up in the wake, i.e. in the long run; • The infrastructure in and around the project area has also improved significantly due to project activity. This includes development of road network and improvement of electricity supply, frequency and its quality; • The generated electricity is fed into the southern regional grid through local grid, thereby improving the grid frequency. Availability of electricity encourages development of industrial and economic activities in the area; • The project activity contributes in bridging of supply shortfall by the use of a non-polluting and renewable resource. The fact that wind power has nearly no climate change implication is of particular importance; • Wind energy contributes to reduction in specific emissions (emissions of pollutant/unit of energy generated) of pollutants for the country as a whole; • Wind energy uses a renewable resource, thus contributes to resource conservation; • Wind power projects address the increasingly insurmountable problem of solid waste disposal, encountered by most of the other sources of power, as they generate nearly no solid waste. Neither have they generated any effluent to be discharged in water bodies, because there is no fuel required for running wind turbines.
---------------------------	---

Stakeholder Meeting Photographs





Wind Mill Photographs



