

Voluntary Carbon Credits

2.5 MW Wind power project activity by
Ms. Aishwarya Rai
Rajasthan, India

Vintage Period:

April 1st, 2006 through June 30th, 2009

Volume : 12390 VCUs

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TITLE

“Positive Climate Care 2.5 MW Grid Connected Wind Power Project Activity by Ms. Aishwarya Rai in Jaisalmer, Rajasthan, India”

Project Commissioning Date:

September 30th, 2004

Project Monitoring Period:

April 1st, 2006 through June 30th, 2009



PROJECT DESCRIPTION: The universally blazing problem of global warming is an upshot of excessive emissions of greenhouse gases into the atmosphere. Coal or other fossil fuels based conventional sources of electrical power are amongst the responsible substances for such extravagant emissions in the form of CO₂. On the contrary, the NEWNE grid (North, East, West and North-East power grid) in India is primarily fed with coal-based thermal power due to a variety of social, political, technological and limited resource-availability reasons. An emblematic environment caring and voluntarily step has been taken by world famous, pride of India, Ms. Aishwarya Rai, to invest in renewable energy sector for sustainable development of an underdeveloped region of rural Rajasthan in India. Her current initiative confirms that besides being a beauty queen and a legendary film star, she is a social activist too. This project of renewable energy involved installation of two state-of-the-art Wind Electricity Generators (WEGs) by the single investor Ms. Aishwarya Rai, in the state of Rajasthan, India. The project is located at village *Kotari-Soda Mada*, district *Jaisalmer* (N26° 42' 55.6" E70° 52' 14.7" and N26° 43' 05.3", E70° 52' 09.3"). Nearest railway station and airport both are in the city of *Jaisalmer*. The highest national highway from the site is NH 15 (Jaisalmer –Barmer). The purpose of the project activity is to harness the green power through tapping of wind

energy in the severely energy deficit region of Rajasthan, where, in the absence of the project activity, equivalent amount of electricity would have been generated by the operation of fossil fuels dominated power plants. The project proponent signed a power purchase agreement with the state power utility, Jaipur Vidyut Vitran Nigam Limited (JVNL/ Jaipur DISCOM).

METHODOLOGY REFERENCE: The project applied an approved methodology for small scale CDM projects according to Appendix B on the UNFCCC website, which is in line with VCS 2007.1 standard requirements. Also, the project activity is a voluntary initiative by project proponent, and is not mandatory by law. Following is the summary of VCS methodological references used in this project:

- **Type I: Renewable Energy Projects**
- **Category ID: Grid Connected Renewable Electricity Generation**
 - Reference: Version 14
 - Scope: 1, EB48
 - Valid from: July 31st, 2009
- **Methodological Tool: “Tool to calculate the emission factor for an electricity system”**
 - EB 35, Annex 12, version 01.1
 - Valid from: July 29th, 2008

TECHNICAL SPECIFICATION OF WEGs: Two WEGs have their installed capacities of 1.25 MW each (model no. S66). The supplier was Suzlon.



STAKEHOLDER'S COMMENTS: The Project proponent organized a stakeholder consultation meeting on August 21st, 2009. A project portfolio and introduction on CDM were presented in the meeting by representatives of Suzlon (supplier of WEGs). The representative of project proponent and the project consultant, Ms. Meenakshi Jain of *Positive Climate Care Pvt. Ltd.*, discussed numerous benefits of the project activities and their outcome, including environmental protection, generation of employment, availability of electricity, and overall betterment of livelihood in the local and surrounding areas. She also emphasized on wind energy being an absolutely non polluting yet environmental friendly source of power, unlike coal and diesel.



Various important questions were asked by the stakeholders. Some of them are included below:

- “Will this project help in improving the electricity supply to the villages as well as village schools?” In answering this question, it was reemphasized by one of the representatives that the generated electricity would be fed to state electricity grid; thereafter villages of the project site area would be receiving it back in their residences, streets and schools on priority basis.
- “Do projects like these affect rainfall?” One of the project participants’ representatives completely ruled out any possibility to have any effect on rainfall due to the project activity. It was added that clouds bearing rainfall are usually at the height of 300m and the WEGs were not higher than 80m.





In addition, the representative of project proponent, Ms. Jain asked few questions to the stakeholders, including:

❖ “What other benefits of the wind power project, if any, were observed by natives?” In response, villagers commented that besides enhanced employment and enhanced local business, various facilities had been added in their area, such as round the clock medical dispensary with presence of a doctor and a well equipped ambulance, availability of veterinary camps where inoculation of livestock, animal husbandry techniques etc. are dispensed.

SUSTAINABLE DEVELOPMENT: The Ministry of Environment and Forest of Government of India is the Designated National Authority (DNA) in this host country. It stipulates four indicator criteria for sustainable development, viz. social well being, economic well being, environmental well being and technological well being. As global initiatives like “corporate sustainability” and “social responsibility” gain momentum, the contribution of the wind power generation endeavor by Ms. Aishwarya Rai towards “Sustainable Development of India” meets several specific sustainable development objectives, such as:

- ✓ To fortify India’s rural electrification coverage;
- ✓ To bridge the power deficit in Rajasthan;
- ✓ Developing local economy and creating employment, particularly in rural areas, which

are the priority concern of the Government of India;

- ✓ Demonstrate and help in stimulating and commercializing the growth of grid connected renewable energy technologies in India;
- ✓ Promoting industrial growth by catering to the energy needs arising out of the supply -demand gap of electricity;
- ✓ To abate and reduce GHG emissions through displacing fossil fuel based energy generation by clean and Greenfield renewable technology;
- ✓ Reducing the average emission intensity (SO_x , NO_x , PM, etc.), average effluent intensity and average solid waste intensity of power generation in the environment;
- ✓ Conserving natural resources including land, forests, minerals, water and ecosystems;
- ✓ Providing technologically up-to-date wind farms which are proven and safe.
- ✓ Encouraging research and development efforts for developing more efficient and better machinery in future with the increasing interest in renewable energy projects;
- ✓ Wind farms provide site-specific reliability and transmission, distribution benefits, including improved power quality, reactive power control, and mitigation of transmission and distribution congestion.

In addition the two state-of-the-art WEGs have total installed capacity of 2.5 MW, while until the recent past WEG industry in India was using KW class turbines. Hence, the current project used latest technology to match international standards and to provide improved efficiency, i.e. higher electricity generation in the same amount of space taken. Also, there is considerable wind resource in Rajasthan that has not been harnessed significantly. This Project acts as a catalyst towards sustainable wind energy development in the state of Rajasthan. In view of the above points and discussion, it is apparent that the wind power

project initiated by Ms. Aishwarya Rai profoundly contributes to the sustainable development .

MONITORING: For an accurate and seamless execution of the project activity, an onsite project team was formed. The activities are operated and managed by site in-charge personnel of the project proponent, while personnel of Suzlon (the WEG supplier) act as the representatives of O &M contractor. The monitoring methodology is based on “AMS I D - Grid connected renewable electricity generation; version 14” with reference to clause 31 of Appendix B given on the UNFCCC website as simplified modalities and procedures for small-scale CDM project activities, which is valid from July 31st, 2009. The first monitoring report covers a period from April 1st, 2006 through June 30th, 2009. Basically, electricity supplied to the NEWNE grid was monitored during this period along with a watch on safe and efficient operations of WEGs. The monitoring report also presents a calculation of emission reductions achieved during the monitoring period. A record of calibration, electronic metering and maintenance of analytical instruments is also included in this report. The monitoring also reveals that each WEG 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; it is based on supervisory control and data acquisition (SCADA) system. 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 in a printed form. In addition, representatives of the state power utility- JVVNL/DISCOM and those of the developer, jointly read the metering system on the first day of every month at the interconnection point.

VALIDATION AND VERIFICATION: The project was successfully validated and verified by *Perry Johnson Registrars Clean Development Mechanism, Inc. (PJR CDM- CDM DoE)*.

Validation Report: V-3-I-01-S-0028/01

dated: November 14th, 2009

Verification Report: V-3-I-01-S-0028-Ve/01

dated: July 21st, 2010

In APX VCS Registry System, the project is identified with **VCS Project ID- 299**.

EMISSION REDUCTION/ AVAILABILITY OF CARBON CREDITS WITH VINTAGES:

| Period of Measurement | Net Emission Reductions (tCO ₂ e) (vintage) |
|---|--|
| April 1 st , 2006 – December 31 st , 2006 | 2998 (2006) |
| January 1 st , 2007 – December 31 st , 2007 | 3522 (2007) |
| January 1 st , 2008 – December 31 st , 2008 | 3914(2008) |
| January 1 st , 2009 – June 30 th , 2009 | 1956 (2009) |
| Total Volume of VCUs Available → | 12390 (April 1st, 2006 - June 30th, 2009) |

CONTACT DETAIL: Quotes are welcome in US Dollar. Please contact us for any question related to the project and carbon credit purchase. We have all relevant documents readily available and can be provided on request.

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