

WIND POWER PROJECT AT THENI BY POWERICA LIMITED



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1 PROJECT DETAILS

1.1 Summary Description of the Project

Powerica Limited is the largest Genset manufacturer in India. Founded in 1980, it is the project proponent of the wind power project under the Clean Development Mechanism of Kyoto Protocol.

Effective utilization of resources has been a guiding factor for Powerica towards conceptualization of a 9.9 MW wind power project. This project aims at providing electricity to the state electricity grid through effective utilization of renewable resource which, in the case of the project activity, is wind power.

The main purpose of the project activity is to generate electrical energy through sustainable means using wind power resources and to contribute to climate change mitigation efforts. In the absence of the project activity, the electricity thus supplied would have been generated through fossil fuel based thermal power plants. The project activity thus contributes to reduction in specific emissions (emissions of pollutant) including GHG emissions. The project activity is also responsible for sustainable economic growth and conservation of environment through use of wind as a renewable source.

The project activity involves a total installation of 6 Wind Turbine Generators (WTG) of total generating capacity of 9.9 MW (6 units of Vestas make V82 WTG). The WTG units will be installed in Theni district of the state of Tamilnadu.

Details of commissioning date of all WTGs:

Sl. No	WTG	HTSC No.	Capacity of WTG (MW)	Commissioning Date*
1	TGU28	T - 139	1.65	13/09/2010
2	TM721	T - 141	1.65	13/09/2010
3	TSSP158	T - 142	1.65	13/09/2010
4	TSSP174	T - 143	1.65	13/09/2010
5	TSSP1255	T - 144	1.65	13/09/2010
6	TM41	T-145	1.65	17/09/2010

Purpose of the Project Activity:

- To utilize renewable wind energy for generation of the electricity.
- To sell the generated electricity to Tamilnadu State Electricity Distribution Company Limited.
- To contribute in mitigating the climate change.

Pre-project scenario:

In the absence of the project activity, the equivalent amount of electricity would have been generated from the connected / new power plants in the Southern grid (Now Indian Grid), which are / will be predominantly based on fossil fuels. The main emission source in the pre-project scenario is the power plants connected to the Southern grid (Now Indian Grid) and main greenhouse gas involved is CO₂.

Project scenario:

The project activity is a renewable source of power generation and would supply electricity to the Southern grid¹. The total planned capacity of the project activity is 9.9 MW. The project activity will use wind energy in producing electricity and no other input will be used, therefore, it will not produce any greenhouse gas emission during its lifetime.

Baseline scenario:

The baseline scenario is that the electricity delivered to the Southern grid by the project activity would have otherwise been generated by the operation of the grid-connected power plants and by the addition of new generation sources into the Southern grid. Hence, pre-project scenario and baseline scenario are the same.

Reduction of GHGs emissions due to the project activity:

The project activity essentially involves generation of electricity from wind energy. The employed WTGs use wind energy to produce electricity and do not use any other input-fuel for electricity generation. The operation of WTGs is emission free and no GHG emissions are produced during the lifetime of the project activity.

The project activity replaces anthropogenic emissions of greenhouse gases (GHGs) into the atmosphere, which is estimated to be approximately average 22,798 tonnes of CO₂e per year, by displacing the equivalent amount of electricity generation through the operation of existing fuel mix in the grid comprising mainly fossil fuel based power plants and future capacity expansion connected to the grid.

The WTGs installed in the project activity are connected to the Southern grid. Therefore, the emission factor associated with the Southern grid is used to evaluate baseline emissions for the project activity. The project boundary composed of the WTGs, transformer, the metering equipment, substation, and the Southern grid, which is used to transmit the generated electricity.

The project activity does not result in any greenhouse gas emissions and it is a clean source of electricity. The technology is a clean technology as there are no GHG emissions associated with the electricity generation. Technology is indigenous, available within the country, and environmentally safe and sound.

1.2 Sectoral Scope and Project Type

Project type: Renewable energy projects

Sectoral Scope: 1- Energy Industries (renewable/non-renewable sources).

Project category: D. Electricity generation for a system.

This is not a grouped project.

1.3 Project Proponent

Organization name	Powerica Limited
Contact person	Pradeep Gupta

¹ Now a part of unified Indian Electricity Grid i.e Indian Grid

Title	Head of Wind Energy
Address	Sector 11, CBD Belapur, 601 Dakshina Building, Navi Mumbai- 400614, Maharashtra, India.
Telephone	+91-22-66562525
Email	powerica@powericaltd.com

1.4 Other Entities Involved in the Project

Organization name	EKI Energy Services Limited
Role in the project	Project Consultant
Contact person	Mr. Ramkrishna Patil
Title	GM – Operations
Address	Office No. 201, EnKing Embassy, Plot No. 48, Scheme No. 78, Part II, Vijay Nagar INDORE – 452010, India.
Telephone	+91 9096562065
Email	ramkrishna.patil@enkingint.org

1.5 Project Start Date

The start date of the project activity is the earliest date of commissioning of the WTG involved in the project activity i.e. 13-09-2010.

1.6 Project Crediting Period

The crediting period of the project activity is for 10 years (renewable twice).

The crediting period from 13-09-2010 to 12-09-2020.

1.7 Project Scale and Estimated GHG Emission Reductions or Removals

The project falls under Project category since the emission reductions are less than 300,000 tCO₂e per annum

Project Scale	
Project	✓
Large project	

Year	Estimated GHG emission reductions or removals (tCO ₂ e)

Year 1	22,798
Year 2	22,798
Year 3	22,798
Year 4	22,798
Year 5	22,798
Year 6	22,798
Year 7	22,798
Year 8	22,798
Year 9	22,798
Year 10	22,798
Total estimated ERs	227,980
Total number of crediting years	10
Average annual ERs	22,798

1.8 Description of the Project Activity

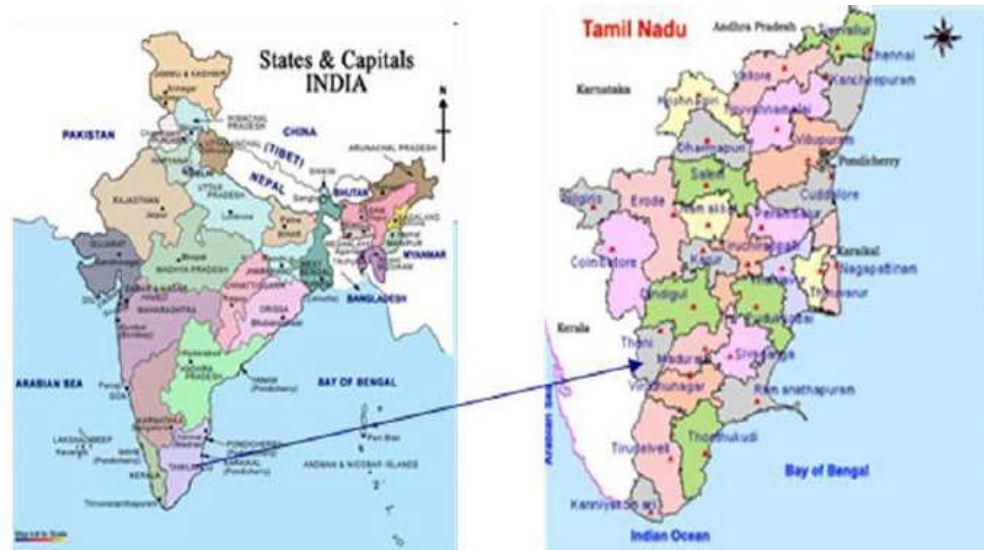
Not Applicable

1.9 Project Location

The project activity is located at Andipatti, Theni district Tamilnadu state. The latitude and longitude of each WTG are as follows:

WTG	HTSC No.	Village	Latitude (^o N)	Longitude (^o E)
TGU28	T - 139	Usilampatti	9°57'03"	77°33'33"
TM721	T - 141	Mottanuthu	9°58'46"	77°34'43"
TSSP158	T - 142	Shanmuga Sundarapuram	9°59'08"	77°34'39"
TSSP174	T - 143	Shanmuga Sundarapuram	9°59'23"	77°34'43"
TSSP1255	T - 144	Shanmuga Sundarapuram	9°59'40"	77°34'10"
TM41	T-145	Mottanuthu	9°58'34"	77°35'24"

The project activity is located in Tamilnadu state of India. The project location is attached in the figure below.



Note: Map not drawn to scale

1.10 Conditions Prior to Project Initiation

This is a Greenfield project. The project activity replaces the carbon intensive grid electricity. The proposed project activity effectively utilises renewable wind energy to generate electricity which will be feed into the coal intensive Southern Grid (Now part of Indian Grid). Thereby the project activity reduces the dependence on fossil fuel based generation units and as there are no associated emissions with this project it contributes to the reduction of greenhouse gases (GHG) emissions.

Please refer section B.4 of the registered PDD. The web link for the same is mentioned below:
<http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view>

1.11 Compliance with Laws, Statutes and Other Regulatory Frameworks

The project activity is not mandatory by any local or national laws. However the project complies with technical, engineering and commissioning regulations. Please refer section B.5 of the PDD of UNFCCC registered CDM project with Ref No: 4572.

1.12 Ownership and Other Programs

1.12.1 Project Ownership

For the ownership details of the project any of the following may be referred to:

1. Power Purchase Agreement between the project promoters and State Utility
2. Commissioning certificates
3. Purchase order of WTGs

1.12.2 Emissions Trading Programs and Other Binding Limits

India is Non-annex1 country and there is no compliance with an emission trading program or to meet binding limits on GHG emissions for this project activity. The project is registered under

CDM and UNFCCC (Registration ID 4572²). The project is also approved by the DNA and a copy of the approval is also submitted to the DOE. Project Proponent has submitted undertaking that they will not claim same GHG emission reductions of the project from CDM and VCS. PP would not use net GHG emission reductions by the projects for compliance with emission trading program to meet binding limits on GHG emissions.

1.12.3 Other Forms of Environmental Credit

Project has been registration with UNFCCC under Clean Development Mechanism program. Registration reference number is 4572³. Project Proponent has submitted undertaking for not availing other forms of environmental credit for the same crediting period under consideration.

1.12.4 Participation under Other GHG Programs

Project has been registration with UNFCCC under Clean Development Mechanism program, Registration reference number is 4572⁴. Project Proponent has submitted undertaking for not availing other forms of environmental credit for the same crediting period under consideration.

1.12.5 Projects Rejected by Other GHG Programs

The Project is not rejected by other GHG programs.

1.13 Additional Information Relevant to the Project

Eligibility Criteria

The project does not fall under AFOLU category, and is not a grouped project. hence not applicable.

Leakage Management

Project does not involve any leakage emissions as this is wind power project, Hence Leakage Management Plan and risk mitigation measures are not required.

Commercially Sensitive Information

There is no commercially sensitive information accounted for the determination of baseline, net GHG removals and for demonstration of additionality for the present project activity.

Sustainable Development

² <http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view>

³ <http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view>

⁴ <http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view>

The National CDM Authority (NCDMA), which is the Designated National Authority (DNA) for the Government of India (GoI) in the Ministry of Environment and Forests (MoEF), has stipulated four indicators for sustainable development in the interim approval guidelines for Clean Development Mechanism (CDM) projects in India⁵. The Project Participant believes that the project activity has contributed to sustainable development in terms of the four indicators as follows:

Social well-being:

There are several activities associated with the erection and commissioning of WTGs and this has resulted in generating employment for both skilled and unskilled manpower. People have been employed in both onsite and offsite activities thus creating direct and indirect employment opportunities that contribute up to some extent in poverty alleviation of the local community. The project activity also contributes in meeting the electricity deficit in India and hence improves quality of life of the people. Thus, the project activity has contributed to social well-being.

Economic well-being:

The project activity requires temporary and permanent, skilled and semi-skilled manpower at the wind power project site. Hence, this will create additional employment opportunities. It will also provide business opportunities for local vendors, contractors and suppliers.

Environmental well-being:

The project activity reduces the emissions of local and global pollutants. It also conserves the non-renewable energy resources as the project activity does not consume any non-renewable resource for generating the electricity. There is no solid waste from the project activity that generally happens in the case of most of the other sources of power. Thus, the project activity contributes to environmental well-being without causing any negative impact on the surrounding environment.

Technical well-being:

The investment in renewable technologies like wind will boost the sector and propel R&D in this field thus helping in evolution of better and more efficient technologies.

Thus, the project activity contributes towards the sustainable development of the region.

Further Information

There are no information or incidents that will have bearing on the eligibility of the project, the net GHG emission reductions or removals, or the quantification of the project's net GHG emission reductions or removals.

⁵ <http://envfor.nic.in/division/clean-development-mechanism-interim-approval-criteria>

2 APPLICATION OF METHODOLOGY

2.1 Title and Reference of Methodology

Not Applicable

2.2 Applicability of Methodology

Please refer to section B.2 of the PDD of UNFCCC registered CDM project with Ref No: 4572. The web link for the same is given below:

<http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view>

2.3 Project Boundary

Please refer to section B.3 of the PDD of UNFCCC registered CDM project with Ref No: 4572. The web link for the same is given below:

<http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view>

2.4 Baseline Scenario

Please refer to section B.4 of the PDD of UNFCCC registered CDM project with Ref No: 4572. The web link for the same is given below:

<http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view>

2.5 Additionality

Please refer to section B.5 of the PDD of UNFCCC registered CDM project with Ref No: 4572. The web link for the same is given below:

<http://cdm.unfccc.int/Projects/DB/LRQA%20Ltd1300097036.88/view>

2.6 Methodology Deviations

Project activity has not sought methodological deviation however, deviation in calibration frequency is sought as below.

As per registered CDM PDD, the calibration frequency is once in every two years. The calibration of meters is not in control of PP and same is done by state electricity board. The state electricity board does not follow any fixed calibration frequency, hence deviation is requested for change in calibration frequency as once in five years. This calibration frequency is as per CEA notification http://www.aegcl.co.in/Metering_Regulations_Of_CEA_17_03_2006.pdf , page 12.

The change in calibration frequency does not have any impact on ER calculations as during monthly reading state electricity board official and PP representative check the meter conditions. Also both parties accept the reading and PP raise the invoice to state electricity board based on

monthly JMR reading. Thus financial obligations are involved which ensures that meters are running accurately.

3 QUANTIFICATION OF GHG EMISSION REDUCTIONS AND REMOVALS

3.1 Baseline Emissions

Not Applicable

3.2 Project Emissions

Not Applicable

3.3 Leakage

Not Applicable

3.4 Net GHG Emission Reductions and Removals

Not Applicable

4 MONITORING

4.1 Data and Parameters Available at Validation

Not Applicable

4.2 Data and Parameters Monitored

Not Applicable

4.3 Monitoring Plan

Not Applicable

5 SAFEGUARDS

5.1 No Net Harm

Not Applicable

5.2 Environmental Impact

Not Applicable

5.3 Local Stakeholder Consultation

Not Applicable

5.4 Public Comments

Not Applicable