

Project Participant

This is the second CDM project of Simran Wind Project Private Ltd (Herein referred to as „Simran“). The project proponent already has a project registered under CDM (UNFCCC Ref. No. 4209).

The estimation of GHG reductions by this project is limited to carbon dioxide (CO₂) only. Thus the proposed project activity leads to an emission reduction of 218,267 tCO₂e per year and 1,527,869 tCO₂e over the chosen crediting period of seven years.

There has been no change in the project design post implementation and CDM registration of the project activity.

Contribution to sustainable development

The Ministry of Environment and Forests, Govt. of India has stipulated the social well being, economic well being, environmental well being and technological well being as the four indicators for sustainable development in the interim approval guidelines by host country for Clean Development Mechanism (CDM) projects¹ approval. The following paragraphs details the project adherence to the indicators-

Social well being:

- “The CDM project activity should lead to alleviation of poverty by generating additional employment, removal of social disparities and contribution to provision of basic amenities to people leading to improvement in quality of life of people”
- The candidate CDM project has resulted in investment in rural sector thereby creating employment opportunities for the skilled, semi skilled and unskilled manpower available in and around project facility.

Economic well being:

- “The CDM project activity should bring in additional investment consistent with the needs of the people”
- The project invests in a region which would not have happened without the CDM project.
- Southern grid, being a power deficit grid, needs additional power generating units. It’s highly desirable that deficit be met with renewable energy generating sources so as to reduce the harmful impact on the environment.
- The project will increase availability of power in the grid generated from an emission-free resource; it will positively contribute towards reduction in (demand) use of finite natural resource like Coal.

Technological well being:

- “The CDM project activity should lead to transfer of environmentally safe and sound technologies with a priority to the renewables sector or energy efficiency projects that are comparable to best practices in order to assist in upgradation of technological base”
- The project promotes high capacity MW class Suzlon WEGs at the project site that paves the way for future investments in this sector.
- This will also give rise to increased interest in wind energy in the country. This in turn would push the investment into research into creating better wind turbines

Environmental well being:

¹ http://ncdmaindia.gov.in/approval_process.aspx

CDM-PDD-FORM

- “This should include a discussion of impact of the project activity on resource sustainability and resource degradation, if any, due to proposed activity; bio-diversity friendliness; impact on human health; reduction of levels of pollution in general;”
- The Project brings about environmental well being by-
 - Generating power from wind energy, being a renewable source, contributes to resource conservation. There is no emissions from the project activity CO₂ abatement and reduction of greenhouse gas emissions through development of renewable technology;
 - Having no harmful impact on human health because of zero emissions for the generating source.

In addition to this, the project proponent will contribute up to 2% of the CDM revenue realized from the candidate CDM project in activities such as educational and health facilities and investments related to socio-economic developments.

A.2. Location of project activity

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The WEGs under proposed project activity are located in Trinuleveli, Erode and Tirupur districts of Tamil Nadu State of India. The details are mentioned in Annex-2 of the PDD.

A.3. Technologies/measures

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The project installs Suzlon make WEGs of capacity 1.5 and 2.1 MW. These WEGs are developed and manufactured in India and thus there is no technology transfer.

Wind has considerable kinetic energy by virtue of its motion at high speeds. When wind passes over the blades of the wind turbine, the kinetic energy is converted to the mechanical energy of rotation of the blades. The generator converts this mechanical energy of rotation into electricity. The technology is a clean technology since there are no GHG emissions associated with the electricity generation. The lifetime of the WEGs is 20 years and the expected generation from these is 23.68% (P-90).

The project installs the latest model S-82 and S-88 Suzlon-make WEGs of individual capacity of 1.5 MW and 2.1 MW each. Technical specifications of the WEG are-

Operating Data	S-88	S-82
Rated power	2.1 MW	1.5 MW
Cut-in wind speed	4 m/s	4 m/s
Rated wind speed	14 m/s	20 m/s
Cut-out wind speed	25 m/s	14 m/s
50 years gust wind speed	59.5 m/s	--
Hub height	79 m (Foundation top equal to ground level)	78.5 m (Foundation top equal to ground level)
Wind Class	IEC-IIA	IIla
Rotational Speed	15 to 17.6 rpm	15.6 to 18.4 rpm
ROTOR		
Pitch system	Pitch regulated, electrical	Pitch regulated, electrical
Diameter	88 m	82 m
Swept area	6082 m ²	5281 m ²
Blade material type	Epoxy bounded fibre glass	Epoxy bounded fibre glass
GENERATOR		
Type	Asynchronous slip ring type induction generator	Asynchronous 4 pole
Rated power	2100 kW	1500 kW