

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

The purpose of the project activity is to generate clean energy by utilizing velocity of the wind for generation of electricity. The technology adopted in the wind power generation is conversion of kinetic energy into mechanical energy and then converted into electrical energy by the generators. In this process there would be no greenhouse gas emissions or burning of any fossil fuels. Thus, electricity would be generated through sustainable means without causing any negative impact on the environment. Therefore, the technology is environmentally safe and sound.

The project activity is a small scale wind power project consists of two Wind Turbine Generators (WTGs) of 1.5MW capacity each totalling to a capacity of 3 MW. The WTG's are located at Barda Barkheda village (Mahuriya), Barod Tehsil, Shajapur District of Madhya Pradesh State. The annual net saleable electricity by this project activity is about 6,000 MWh at a PLF of 22.83% and would reduce GHG emissions approximately 5,651 tCO₂ / annum and 39,557 tCO₂ during 7 years of second crediting period. The power generated from the project activity will be exported to INDIAN grid.

No power generation facility existed at the project site prior to the start of implementation of the project activity.

The scenario existing prior to the start of implementation of the project activity is same as baseline scenario identified for the project activity as described under Sec.B.4.

Contribution to GHG emissions reduction

The electricity generated from the project will displace the grid electricity (a grid mix contributed from different fuel sources) by its equivalent units. Thus, the project activity will be preventing the anthropogenic greenhouse gas (GHG) emissions generated by the fossil fuel (coal, diesel, Furnace oil and gas etc.) based thermal power stations in the grid and will be contributing to sustainable development through conservation of environment.

Contribution of project activity to sustainable development

Ministry of Environment, Forest and Climate Change (MoEFCC), Government of India, has stipulated the following indicators for sustainable development in the interim approval guidelines for CDM projects:

1. Social well being
2. Economic well being
3. Environmental well-being and
4. Technological well being

The project activity contributes to the above indicators in the following manner:

Social well being

The project activity leads to alleviation of poverty by establishing direct and indirect employment benefits during erection of WTGs and for operation and maintenance of the project activity. The infrastructure in and around the project area will also improve due to project activity. This includes development of road network and other activities.

Economic well being

The generation of electricity by the project activity will improve availability of electricity to the State grid.

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The project activity provides business opportunity for local stakeholders such as suppliers, manufacturers, contractors etc.

Environmental well being

The project utilizes wind energy for generating electricity which would otherwise been generated through other alternative fuels (most likely fossil fuels) thus, reducing the carbon intensity of the grid

The Project will help in conserving the conventional fossil fuels used for power generation and will help in GHGs emission mitigation as well as mitigation of emission of local pollutants like SO_x, NO_x, SPM etc., as arises from conventional fossil fuel based power generation.

Technological well being

The technology is environmentally safe and sound as it does not produce greenhouse gases and any toxic or radioactive waste.