SECTION A. Description of project activity

A.1. Purpose and general description of project activity

Introduction:
The project activity is grid-connected wind power generation in District- Jaisalmer, State-Rajasthan in India. M/s. D. J. Malpani is the owner and developer of the project activity. The total capacity of the project activity is 7.5 MW (5 WTGs × 1.50 MW). The project activity having capacity 7.5 MW & is within the SSC limit of 15 MW comes under Type I project activity as Renewable energy project activities which have an output capacity up to 15 megawatts (or an appropriate equivalent), in accordance with the CDM rules and requirements are Type I, Small scale project activity. The project activity employs Wind Turbine Generators (WTGs) of Class S-82 manufactured by M/s. Suzlon Energy Limited.

The project activity will supply the generated electricity to Indian Grid of India. The purpose of the project activity is generation of clean electricity by utilizing kinetic energy of wind. The project activity is estimated to generate 14,374 MWh of electricity annually; thus reducing GHGs to the tune of 13,619 tCO2e / annum for the entire crediting period of 7 years.

Purpose of the project activity:

Since the proposed project activity is a Greenfield project, the methodology AMS I.D. already prescribes the baseline scenario as being “Electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in the Tool to calculate the emission factor for an electricity system”. The electricity exported by the proposed project activity would displace an equivalent amount of electricity generated by the power plants already operational and proposed to be added in the Indian Grid which relies predominantly on power plants running on fossil fuels (particularly coal).

Thus, it contributes towards reduction in the demand-supply gap during periods of electricity shortage and increase in the share of renewable energy in the grid mix.

The Indian grid is mainly dominated by fossil fuel based power projects. The development of the project activity would reduce generation of electricity in the Indian grid by fossil fuel based power projects. This will help to mitigate Green House Gases (GHGs) emission by fossil fuel based power projects and contribute to conservation of fossil fuel resources.

Baseline:
In absence of the project activity, the grid could have procured power generated from fossil fuel based power projects.

The estimation of GHG emission reductions by the project activity is limited to the emission of carbon dioxide (CO2) only, its primary source being the power plants running on fossil fuels in the Indian grid. The proposed project activity would lead to an estimated emission reduction of 13,619 tCO2e annually over the chosen crediting period.

Contribution to the sustainable development
The project activity will contribute to sustainable development in various ways. These will be as follows:

Social well-being:

Social well-being focuses on the reflections of the project activity on the neighbouring community. The project promoter envisages following social benefits:

- Improved standard of living
- Availability of infrastructure like electricity, roads, medical facilities etc.
- Reduce migration from rural to urban area for the sake of employment
- Awareness about the global issues, their solutions & role of India in the same
- Awareness among local people regarding wind power & its effect on rain and ground water level

It will thus be responsible in bringing social well-being in the region.

Environmental well-being:

The project activity is a clean source of power generation. The environmental aspects in consideration are as follows:

- In comparison to other sources of power generation prevailing in the country, wind power is the cleanest technology.
- As compared to other power plants, less amount of land is required for a single wind turbo-generator.
- Wind power is renewable. It can be used continuously, whenever available. There is no danger of depletion of the raw material used for power generation.
- Wind power is a naturally available source of energy. There is no processing required to make it available for power generation.
- It does not result in biodiversity loss which occasionally occurs in some other power plants like hydro.

Thus, wind power technology goes hand-in-hand with the environmental well-being of the region.

Technological well-being:

The power generation technology used in this project activity is provided by M/s. Suzlon Energy Limited. The technological well-being envisaged by the project promoter is as follows:

- It will boost the use of such technology by other project developers.
- Successful implementation and operation of this project will give necessary impetus in implementation of similar technology in the region.
- The project activity will lead to transfer of environmentally safe and sound technologies that are comparable to best practices in order to assist in upgradation of the technological base in the local region.

Economic well-being:

Economic well being refers to additional investment consistent with the needs of the local community. The project in due course of time will draw additional investment to the region. In general, the project activity envisages following economic benefits:

- Employment opportunities

- Market facilities for local products
- Industrial development
- Increase in real income
- Increase in regional gross domestic product
- Capital formation
- Improvement of a rural economy
- Flow of goods and services

Although the realization of the above benefits would take a longer time needlessly, the economic development of the region would be attributed to the project operation. The project will contribute to the sustainable development of the region during its entire operational life.

A.2. Location of project activity

Taluka: Fatehgarh & Jaisalmer
District: Jaisalmer
State: Rajasthan
Country: India (Host Party)

The project activity is located in District- Jaisalmer, State- Rajasthan in India. The details of each WTG project location are given below:

Sr. No.	Location No.	Khasra No.	Village	Taluka	Latitude	Longitude
1.	AK-278	83/P, 76/P	Sangana	Fatehgarh	N 26°47'48.7"	E 71°08'12.6"
2.	AK-283	147/P	Asayach	Jaisalmer	N 26°48'54.9"	E 71°07'04.6"
3.	AK-262	370/P	Chord	Fatehgarh	N 26°45'32.0"	E 71°09'49.3"
4.	AK-321	310/P	Chord	Fatehgarh	N 26°47'36.7"	E 71°10'15.8"
5.	AK-331	94/P	Asayach	Jaisalmer	N 26°49'45.3"	E 71°07'59.6"

Project location on Map