

SECTION A. General description of small-scale project activity
A.1 Title of the small-scale project activity:

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Grid connected solar PV power plant in Jodhpur, Rajasthan

Version: 02

Date: 24/07/2012

A.2. Description of the small-scale project activity:

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Northwest Energy Private Limited (NWEPL) is envisaging implementation of 5 MW Solar photovoltaic technology based power plant in Village-Rawra, Tehsil-Phalodi of Jodhpur district in the state of Rajasthan, under Jawaharlal Nehru National Solar Mission (JNNSM) Phase-1. The electricity generated from the project activity will be exported to the state grid of Rajasthan which is a part of the integrated Northern, Eastern, Western, and North-Eastern (NEWNE) regional grid of India, and sold to NTPC Vidyut Vyapar Nigam Limited (NVVN) under a power purchase agreement.

Northwest Energy Private Limited has decided to use CIGS (CIS) thin film technology for its 5 MW project. The Solar power system will be designed with number of sub main plants and solar PV arrays. Solar grid connected inverters of suitable capacity will be used.

Since the proposed project activity is a Greenfield project, the approved small scale 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 into the grid”. 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 NEWNE Grid which relies predominantly 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 estimation of GHG emission reductions by the project activity is limited to carbon dioxide (CO₂) only and its primary source is the fossil fuels consumed in the NEWNE grid. The expected annual net electricity delivered to the grid by the proposed project activity is 8,966 MWh and the estimated annual emission reductions are 8,542 tCO₂e annually over the chosen crediting period.

View of the project participants on the contribution of the project activity to Sustainable Development:

Ministry of Environment and Forests, Govt. of India has stipulated the following indicators for sustainable development in the guidelines for CDM projects¹:

Social well being:

- The proposed project would lead to generation of business opportunities and employment in the region thereby contributing towards social upliftment through direct and indirect benefits.
- The project activity in its execution will lead to development of infrastructure in the region and at the same time promote business in the region through the improvement in electricity generation capacity of the grid.

¹ http://www.cdmindia.gov.in/approval_process.php

CDM – Executive Board

Economic well-being:

- The project activity leads to an investment in the region accompanied with business and employment benefits along with improvement of grid supply which otherwise would not have happened in the absence of project activity.
- The clean electricity generated through solar power by the project activity would be fed into the local grid thereby improving the availability of electricity in the region. This would provide a better scenario for local industries and businesses to improve their production capacities thereby contributing towards the overall economic development of the region.

Environmental well being:

- The project activity employs solar power for generation of electricity thereby displacing fossil fuels which are being rapidly consumed to meet the growing demand of electricity in the country thus contributing towards reduction in GHG emissions.
- Solar power projects generate no end products in the form of solid waste (ash etc.) compared to alternative modes of power generation (e.g. coal based on which the Indian grid is primarily dependent). Hence the project activity is a cleaner source of power generation and is encouraging greener practice of power generation.
- The solar power project indirectly is contributing towards conservation of non-renewable resources which are under the constant threat of depletion due to excessive and rapid growth of energy demand. The growing threat of global warming which is a key concern is also addressed due to renewable energy use thereby mitigating climate change.

Technological well being:

- The project activity uses thin film solar photovoltaic technology for power generation thereby demonstrating the viability of solar based renewable energy generation in the region, which is fed into the nearest sub-station (part of the NEWNE Regional Grid), thus increasing energy availability under the service area of the substation. Hence the project leads to technological well being.

A.3. Project participants:

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Name of Party involved (*) ((host) indicates a host party)	Private and/or public entity (ies) Project participants (*) (as applicable)	Kindly indicate if the party involved wishes to be considered as project participant (Yes/No)
India (Host Country)	Northwest Energy Private Limited (Private entity)	No

A.4. Technical description of the small-scale project activity:**A.4.1. Location of the small-scale project activity:**

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A.4.1.1. Host Party(ies):

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India

A.4.1.2. Region/State/Province etc.: