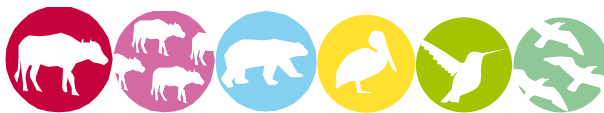


ANNEX R – PASSPORT TEMPLATE

CONTENTS



- A. Project title**
- B. Project description**
- C. Proof of project eligibility**
- D. Unique Project Identification**
- E. Outcome stakeholder consultation process**
- F. Outcome sustainability assessment**
- G. Sustainability monitoring plan**
- H. Additionality and conservativeness deviations**
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SECTION A. Project Title

[See Toolkit 1.6]

Title: GHG abatement through Solar Power Generation at Jaisalmer, Rajasthan, India

Date: 04/09/2017

Version no.: 01

SECTION B. Project description

[See Toolkit 1.6]

Estimated project start date: 07/07/2011 (Date of signing the EPC contract)

M/s Precision Technik Private Limited (PTPL) incorporated on 19th December 1995 under the Companies Act, 1956 is a part of the Sonthalia Group. The Sonthalia Group is a Kolkata based business house with diversified business interests in Polymers, Textiles & Readymade Garments, Jewellery, Steel, Solar Module manufacturing and Infrastructure Development.

PTPL has developed a 5 MW grid connected solar Photo voltaic power project in Nokh Village, Pokhran Tehsil in Jaisalmer District in the State of Rajasthan in Western India. The project activity is expected to supply 8,322 MWh of net electricity annually to the NEWNE¹ grid. The entire power generated from this project is being sold to NTPC Vidyut Vyapar Nigam (NVVN) by connecting it to state grid through a power purchase agreement with NVVN. The project activity was commissioned on 8th February, 2012 and is continuing operation since then. The details of the project and the state of installation are mentioned in the table:-

Project Promoters' Name	Capacity in MW	Connection with Grid	State
Precision Technik Private Limited	5 MW	NEWNE	Rajasthan

Sectoral Scope: 01 : "Grid-connected electricity generation from renewable sources", AMS ID-Version 17.0"

Project Type: (i) : Renewable energy projects

Baseline scenario:

The baseline for the project activity under consideration is generation of equivalent amount of electricity at the NEWNE grid which would have resulted in the emission of 7,889 tCO₂/annum

¹ NEWNE: Northern Eastern Western North Eastern

considering the GHG intensity associated with the fossil fuel dominated power generation at the INDIAN grid of India.

For the project activity under consideration the baseline scenario and the pre-project scenario are similar. In absence of the project activity equivalent amount of electricity would have been generated in the NEWNE grid which is predominantly a fossil fuel dominated grid. Whereas the operation of solar PV power plant is emission free and no emissions occur during the lifetime of the project activity. As per the applicable methodology the baseline scenario for the project activity is the generation of equivalent electricity from NEWNE connected power plants, which is also the pre-project scenario. Hence the project activity will result in the emission reduction to the tune of 7,889 tCO₂/annum.

Project's contribution to sustainable development

Ministry of Environment and Forests (MoEF), Government of India, has stipulated the following indicators for sustainable development in the interim approval guidelines for CDM projects.

Environmental Well-Being:

Indian economy is highly dependent on "Coal" as fuel, to generate energy. Thermal power plants are one of the major consumers of coal in India, and yet there is a consistent power deficit in the national Grid. The project substitutes the use of the coal and other fossil fuel(s) for power generation and thereby reduces carbon dioxide (CO₂) emissions from the generation of power. Also the associated SPM, SO_x, NO_x emissions and emission of transportation and excavation of associated fossil fuel are avoided.

Further generation of power through renewable sources like solar energy, reduces the intensity of Global Warming by reducing the GHG Emissions. Therefore power generation from renewable energy sources creates global as well as local air pollutant benefits.

Social Well-Being:

The proposed project activity is benefiting the local rural community by employment generation and strengthening social infrastructure in the region. Thus, it will improve the quality of life for the community living nearby.

Economic Well-Being:

The project activity has created business opportunities for local stakeholders such as bankers, consultants, equipment suppliers, manufacturers and contractors during the implementation phase. The contribution of the project activity towards the infrastructural development of the region will result in an economic well-being for the local populace throughout the project lifetime.

Technological well-being:

The amount of solar energy produced in India is less than 1%² of the total energy demand. The grid interactive solar power as of December 2010 was merely 10 MW.

Solar power is currently prohibitive due to high initial costs of deployment. The solar power generation technology has not achieved complete maturity till now. The capital cost for implementation of solar projects is also high because of the same reason. The project activity will lead to the promotion of such projects in this region and has got a replicating potential.

² <http://cercind.gov.in/2009/July09/Draft-Explanatory-Memorandum-Solar-Power-Projects.pdf>

SECTION C. Proof of project eligibility

C.1. Scale of the Project

[See Toolkit 1.2.a]

Please tick where applicable:

Project Type	Large	Small
	☐	☒
	☐	☐
	☐	☐
	☐	☐
	☐	☐
		☐

C.2. Host Country

[See Toolkit 1.2.b]

India

C.3. Project Type

[See Toolkit 1.2.c and Annex C]

Please tick where applicable:

Project type	Yes	No
Does your project activity classify as a Renewable Energy project?	☒	☐
Does your project activity classify as an End-use Energy Efficiency Improvement project?	☐	☒
Does your project activity classify as waste handling and disposal project?	☐	☒

Please justify the eligibility of your project activity:

The Renewable Energy Supply category is defined as the generation and delivery of energy services (e.g. electricity) from non-fossil and non-depletable energy sources. The Project involves generation and delivery of electricity generated from solar energy sources, so the Project belongs to the Renewable Energy Supply category.

Pre Announcement	Yes	No
Was your project previously announced?	☒	☐
Explain your statement on pre announcement The project activity has been announced for CDM stakeholder consultation with the consideration of potential carbon credit revenues from CDM mechanisms. The project proponent has considered potential carbon credit benefits from the very conceptualisation stage of the proposed project activity. This is further evident from the following information regarding prior CDM consideration notifications: Start date of the project activity is the date of purchase order as on 07/07/2011. The project participant informed the Host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status. The intimation to Host party DNA and the UNFCCC were sent on 01/09/2011 and this was made within six months of the project activity start date³.		

³ <http://cdm.unfccc.int/Projects/PriorCDM/notifications/index.html>

Different milestones of the project activity are as follows:

Awareness of CDM		
1.	As per 'Guidelines for selection of New grid connected Solar Power Projects' under JNNSM, solar power project has potential for earning carbon revenue. This guideline was made available to PTPL prior to making investment decision for the project.	July 2010
Board / Management Approval		
2.	The Board of PTPL decided to undertake the 5 MW solar PV based power project as a CDM project.	14/12/2010
First Real Action		
3.	Signing of EPC Contract with Vikram Proener Projects Pvt. Ltd	07/07/2011
4.	PTPL appointed CDM consultant for providing advisory services.	29/06/2011
5.	PTPL notified to the UNFCCC for prior consideration of CDM for the solar project.	01/09/2011

Currently the CDM project activity is validated and registered on 04/10/2012 with UNFCCC. please refer below project UNFCCC webpage

<http://cdm.unfccc.int/Projects/DB/RWTUV1348660371.78/view>

C.4. Greenhouse gas

[See Toolkit 1.2.d]

Greenhouse Gas	
Carbon dioxide	☒
Methane	☐

Nitrous oxide	☐
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C.5. Project Registration Type

[See Toolkit 1.2.f]

Project Registration Type	
Regular	☐

Pre-feasibility assessment	Retroactive projects (T.2.5.1)	Preliminary evaluation (eg: Large Hydro or palm oil-related project) (T.2.5.2)	Rejected by UNFCCC (T2.5.3)
	☒	☐	☐

If Retroactive, please indicate Start Date of project activity: The Start date of the project activity is considered 07/07/2011. This date is the date of signing the EPC contract for the project activity and is earliest real action where PP has committed for the expenditure.

Since the project has applied for Retroactive validation under GS, thus the crediting period under the GS mechanism shall be maximum of 2 years prior to the GS registration date.

SECTION D. Unique project identification

D.1. GPS-coordinates of project location

[See Toolkit 1.6]

The project activity is located at

Village : Nokh

Tehsil: Pokhran

District: Jaisalmer

State : Rajasthan

The latitude and longitude are as follows:

	Coordinates
Latitude	26° 54' 56.69" N
Longitude	70° 54' 30.03" E

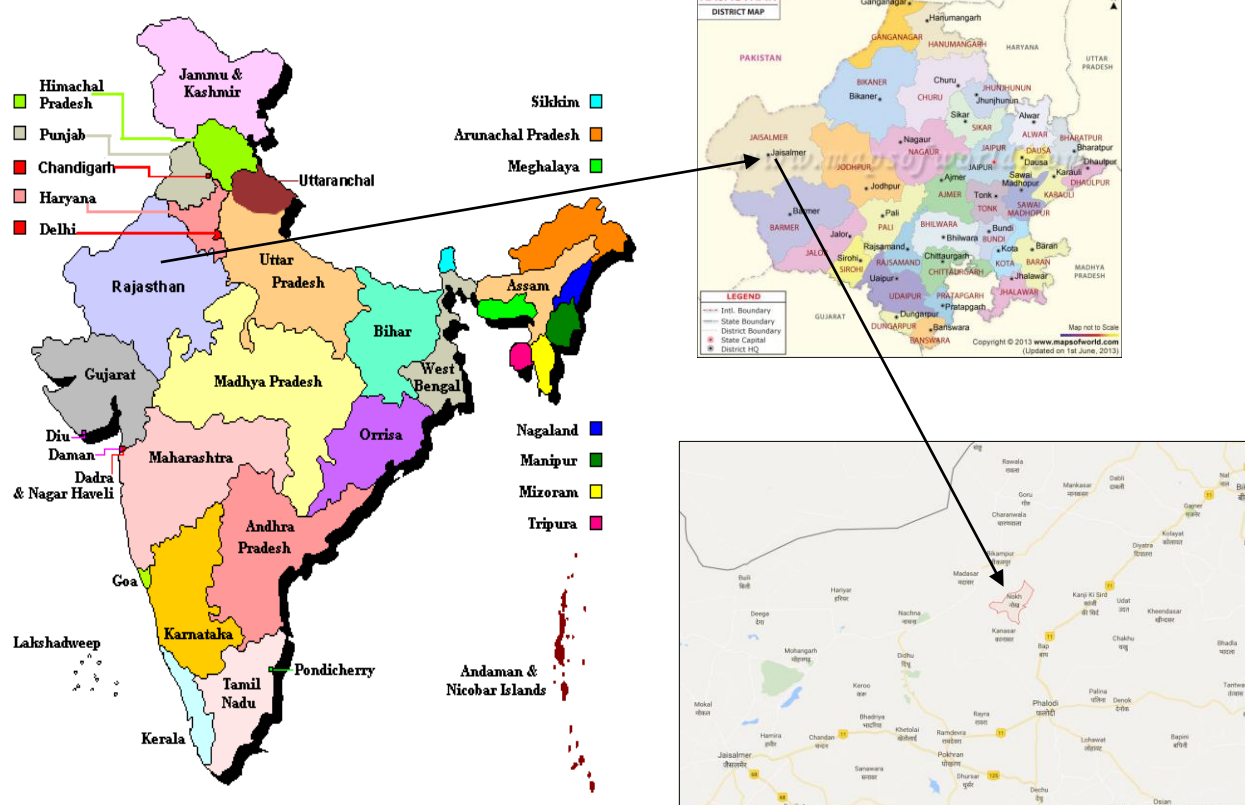


Explain given coordinates

The project activity is located at Rajasthan state, India. The site is located at Village Nokh in Pokhran Tehsil of Jaisalmer District, Rajasthan. The site is well connected with NH 15 running close to proposed location. The site is 110km from Jaisalmer city in Jaisalmer-Jodhpur railway line. Nearest airport Jodhpur is 190 km from the site.

D.2. Map

[See Toolkit 1.6]



SECTION E. Outcome stakeholder consultation process

E.1. Assessment of stakeholder comments

[See Annex J]

It's not necessary for the retroactive project to conduct Local Stakeholder Consultation; the Stakeholder Feedback Round information is available in the below section.

The Local Stakeholder Meetings were organized for local stakeholder consultation and informed local stakeholder regarding the meeting. The followings are the local stakeholders for the project activity:

- 1) Consultant
- 2) NGO
- 3) Village Panchayat
- 4) Employees Union

The identified stakeholders were invited by sending one to one invitation letters. The stakeholder consultation meeting was held on 25/11/2011.

The project has not resulted in any major displacement of any local population. Also, the installation of transmission lines has not created any inconvenience to the local population. In summing up, the project activity has received complete support from the local populace.

The Government of India, through Ministry of New and Renewable Energy (MNRE), has been promoting energy conservation, demand side management and renewable energy projects including wind, small hydro, solar and bio-mass power.

The Ministry of Environment & Forests is the Designated National Authority in India. The Government of India, through Ministry of Environment and Forests (MoEF) is encouraging project participants to take up such environment-friendly initiatives

The project has not received any negative or discouraging feedback from the stakeholders concerned. All the stakeholders have appreciated and encouraged the project proponent for taking up this project activity.

E.2. Stakeholder Feedback Round

Please describe report how the feedback round was organised, what the outcomes were and how you followed up on the feedback.

[See Toolkit 2.11]

The stakeholder Feedback Round (SFR) will be planned after listing the project activity. The email will be sent to relevant stakeholders like NGOs, DNA officials, Gold Standard officials along with project documents.

PDD and initial GS passport made available to stakeholders for 60 days to enable the local stakeholders to make comments.

The process for the SFR will be follows;

- E mail and Invitations send to relevant stakeholders
- The non-technical summary of project activity along with Registered PDD, web link of UNFCCC web page for the same registered project in CDM, draft GS passport submission to relevant stakeholders, GS Public view section web link.
- Grievance Mechanism Feedback/Questions from Stakeholders
- Answers for questions received from stakeholders during online SFR process.

Identification of Stakeholders:

The Stakeholder feedback round will be planned to consider and to receive feedback from the possible stakeholders to the project, i.e. NGOs. Apart from these, the stakeholders as identified by Gold standard Board, i.e. Gold standard partnered NGOs in India and DNA of India (MoEF).

The nearby local villagers were considered for Stakeholder Feedback Round by putting public notice at site.

Invitations to Stakeholders:

The Stakeholder feedback round will be done via online method. Email invitations will be sent to GS partnered NGO's, GS officials, and MoEF. For local stakeholders like villagers, public notice has been put at site and feedback is requested for the project activity.

The Mandatory Continuous Input & Grievance Expression Methods applied are described in section E.3; The monitoring of project shall be carried out periodically and the auditors would be visiting or interviewing the stakeholders and in case any concerns the same can also be discussed with them.

DOE who has appointed as the auditor for the project, interacted with stakeholders and observe their views regarding the SFR process and the project activity.

Question/Comments session:

This section will complete after completion of SFR period.

Conclusion:

This section will complete after completion of SFR period.

E. 3. Discussion on continuous input / grievance mechanism

[See Annex W]

Discuss the Continuous input / grievance mechanism expression method and details, as discussed with local stakeholders.

	Method Chosen (include all known details e.g. location of book, phone, number, identity of mediator)	Justification
Continuous Input / Grievance Expression Process Book	Grievance Register to be maintained at Site office. Project Site Address: Precision Technik Private Limited, 05 MW project at Village: Nokh, Tehsil : Pokhran, District:, Jaisalmer State: Rajasthan, India PP office Address: Precision Technik Private Limited, 9 Vivekananda Road 4th Floor Kolkata WB 700007 India	O&M contractor has a dedicated office for O&M in the project area. Thus it is appropriate publicly accessible location at which local stakeholders can provide their feedback on the project. This location is also conducive to continuous and regular checks for stakeholder comments. Also Grievance Register has been kept at PP office so that any stakeholder can give their comments to PP.
Telephone access	Mr. Manish Dabkara, mobile number +91 9907534900 shall be available for any stakeholder to comment.	For those who are unable to travel to site or are not literate, they may contact the Project Implementer via telephone. Persons dialing this telephone number will have access to a Project representative who speaks both English and the local/national language.
Internet/email access	Manish Dabkara manish@enkingint.org Gold Standard: info@goldstandard.org	An email id of the project activity representative has been provided for continuous input / grievance for the convenience of stakeholders with internet access.

Nominated Independent Mediator (optional)	No Independent mediator is assigned. However, Mr. Manish Dabkara, has been assigned as the point of contact for all the local issues.	The use of a Nominated Independent Mediator is not being employed. As the use of the process book, telephone and internet will sufficiently capture feedback as necessary.
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SECTION F. Outcome Sustainability assessment

F.1. 'Do no harm' Assessment

[See Toolkit 2.4.1 and Annex H]

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure
1. The project respects internationally proclaimed human rights including dignity, cultural property and uniqueness of indigenous people. The project is not complicit in Human Right Abuses	The Project is not in conflict with the economic livelihood of the local community. The Project does not cause any human rights abuse and respects internationally proclaimed human rights issue. The India has ratified the United Nations Human Rights Rules and regulations. The India ratified the same as per web link⁴ given below The project adheres to the host country's commitment to: Universal Declaration of Human Rights (UDHR) International Covenant on Economic, Social and Cultural Rights, India Accession 10/04/79⁵	Low	Not applicable

⁴ http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN

⁵ <http://hrlibrary.umn.edu/research/ratification-india.html> and http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN

	International Covenant on Civil and Political Rights India Accession 10.04.79 ⁶		
2. The project does not involve and is not complicit in involuntary resettlement	The project does not involve any resettlement. India (the Ministry of Rural development have the “The National Rehabilitation and Resettlement Policy, 2007 http://www.dolr.nic.in/nrrp2007.pdf The project activity will not have any major impact on land use patterns. In accordance with Article 1 of the International Covenant on economic, Social and Cultural Rights the program does not complicit in involuntary resettlement No Expropriation has been conducted on land involved in project activity. The land is acquired on mutual consent, thus there are no any issues of dissatisfaction of private land owner	Low	Not applicable
3. The project does not involve and is not complicit in the alteration, damage or removal of any critical cultural heritage	No cultural heritage is observed on the project site, thus no harm observed. Compliance with India's commitment to International Covenant on Economic, Social and Cultural Rights 10.04.79 will ensure no damage to critical cultural heritage.	Low	Not applicable
4. The project respects the employees freedom of association and their right to collective bargaining and is not complicit in	This project involves a lot of contribution from employees all the time. Further, India is a party to ILO and forming employee associations is commonly practiced in India. The project is in compliance with the laws of Government of India and	Low	Not applicable

⁶ <http://hrlibrary.umn.edu/research/ratification-india.html> and http://tbinternet.ohchr.org/_layouts/TreatyBodyExternal/Treaty.aspx?CountryID=79&Lang=EN

restrictions of these freedoms and rights	there is no any restriction for freedoms and right.		
5. The project does not involve and is not complicit in any form of forced or compulsory labor	Forced labour is an illegal activity in the host country and the local labour compliance takes into account of the same. Further, India is a party to ILO and forced labour is illegal in India. The project does not employ any form of forced or compulsory labour. Employees can quit their Services at any time. The project complies with the Factories Act in India that prohibits forced or compulsory labour⁷	Low	Not applicable
6. The project does not employ and is not complicit in any form of child labor	Indulgence in Child labour is an illegal activity in the host country and the local labour compliance takes into account of the same. Further, India is a party to ILO and Child labour is illegal in India. The project neither employs nor intends to employ child labour. As per the laws prevailing in India, the Child Labour (Prohibition & Regulation) Act ⁸ prohibits employment of children in certain specified hazardous occupations.	Low	Not applicable
7. The project does not involve and is not in complicit in any form of discrimination based on gender, race, religion, sexual orientation or any other basis	The project Proponent does not indulge in discrimination on basis of gender, race, religion, sexual orientation. The project will abide by the Factories Act that prohibits any form of discrimination and is in accordance with the Convention on the Elimination of All Forms of	Low	Not applicable

⁷ <http://www.ilo.org/dyn/natlex/docs/WEBTEXT/32063/64873/E87IND01.htm>

⁸ <http://www.childlineindia.org.in/Child-Labour-Prohibition-and-Regulation-Act-1986.htm>

	Discrimination against Women (CEDAW) , India ratified it on 09/07/1993 with certain reservations⁹ And International Convention on the Elimination of All Forms of Racial Discrimination; India ratified the convention on 03/12/1968 with certain reservation¹⁰		
8. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to unsafe or unhealthy work environments	The project proponent has implemented Environment Health Safety and Social guideline which takes into account the same. The project provides safe and healthy work condition to the employees. The programme complies with the Factories Act and provides safe and healthy work environment¹¹	Low	Not applicable
9. The project takes a precautionary approach in regard to environmental challenges and is not complicit in practices contrary to the precautionary principle.	The project has received all statutory clearances. The project does not lead to release of any hazardous substances that pose threat to the environment. Rather it aims at reducing the air pollution that is prevalent due to use of fossil fuel power plants. The project promotes environmental protection through the use of cleaner technology. The project abides by the stipulations of the Indian Environment Protection Act 1986¹²	Low	Not applicable
10. The project does not involve or complicit in	The project proponent has implemented Environment Health	Low	Not applicable

⁹ http://nhrc.nic.in/documents/india_ratification_status.pdf and <http://www.un.org/womenwatch/daw/cedaw/>

¹⁰ http://nhrc.nic.in/documents/india_ratification_status.pdf and <http://www.refworld.org/docid/3ae6b3940.html>

¹¹ <http://www.ilo.org/dyn/natlex/docs/WEBTEXT/32063/64873/E87IND01.htm>

¹² <http://envfor.nic.in/legis/env/env1.html>

significant conversion or degradation of critical natural habitats including those that are (a) legally protected, (b) officially proposed for protection, (c) identified by authoritative sources for their high conservation value or (d) recognised as protected by traditional local communities	Safety and Social guideline which takes into account the same. The project activity does not pose any harm to the natural habitats of the native species		
11. The project does not involve and is not in complicit in corruption	Indulgence in corruption is an illegal activity in the host country and the local labour compliance takes into account of the same. The project abides by the United Nations Convention Against Corruption. India ratification 09.05.11 ¹³	Low	Not applicable
Additional relevant critical issues for my project type	Description of relevance to my project	Assessment of relevance to my project (low/medium/high)	Mitigation measure
Not identified	Not relevant	No risk	Not required

F.2. Sustainable Development matrix

[See Toolkit 2.4.2 and Annex I]

Insert table as in section D3 from your Stakeholder Consultation report (Sustainable Development matrix).

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
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¹³ <http://www.unodc.org/unodc/en/treaties/CAC/signatories.html>

Gold Standard indicators of sustainable development.	If relevant copy mitigation measure from "do no harm" –table, or include mitigation measure used to neutralise a score of ‘–’	Check www.undp.or/mdg and www.mdgmonitor.org Describe how your indicator is related to local MDG goals	Defined by project developer	Negative impact: score ‘–’ in case negative impact is not fully mitigated score 0 in case impact is planned to be fully mitigated No change in impact: score 0 Positive impact: score ‘+’
Air quality	Not Required	Goal 7 – Ensure Environmental sustainability; Target 7.A - Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	Operation Phase: Project activity leads to electricity production by Solar power, which improves the air quality as compared to those by the fossil fuel dominated grid mix. As compared with emission reduction by project activity, the air pollution (which may occur due to transformers, other electrical equipment's etc) is less than 1% of overall emission reductions by the project activity and hence are negligible. Construction Phase: The impact during the construction phase shall be localized and temporary. Emissions will be substantially	0

		greater than emissions from project operation activities, but still limited in volume. Thus impact on local settlements will be negligible owing to the considerable distance from the project site. Also report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013. This report clearly mentioned that Solar farms operations do not result in direct air pollution. The minor dust emissions if any are localized and controlled by spraying water in the area. Thus the Overall impact due to the project shall be positive in line with baseline scenario. However during the project activity operation, there is very negligible impact (being less than 1% of overall	
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			emission reductions by the project activity) at site and solar is renewable energy source. Hence this parameter is considered as neutral. As compared to baseline scenario, which is fossil fuel dominated grid connected electricity, the project activity reduces air pollution of baseline fossil fuel power plants equivalent of electricity generated by project activity. Please refer page 28, table 3.4.3 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013.	
Water quality and quantity	Not Required	MDG 7: Ensure Environmental Sustainability, target C “Halve, by 2015, the proportion of people without sustainable access to safe	Explanation: Thermal power plants produce considerable amount wastewater especially due to cooling. By the project activity, significant amount	0

		drinking water and basic sanitation.	of wastewater discharge will be avoided. During normal construction period, water usage is negligible for domestic use in full capacity of workers. Once the Solar farm is operational, water is only required for the domestic use of project staff at the site which will be around 0.5 KLD. For module cleaning, very less water is required as compared with fossil fuel dominated power plants. Minor volumes of sewage will be generated from toilet facilities at the site office. This will be disposed to septic tank, thus no significant impact is anticipated to surface or groundwater. Please refer page 28, table 3.4.3 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy
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			Projects” prepared by MNRE dated September 2013.	
Soil condition	Not Required	MDG- 7: Ensure Environment Sustainability 7.A Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources 7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	The project would not emit any pollutants to the soil during the construction and operation period, with no negative impact on the soil quality. The top soil excavated during construction, will be stock piled and will be used for compaction. The roads will not be paved and soling will be done with excavated earth & rock material, so land disturbance will be minimized. All the drainage patterns will be maintained as it is and wherever required road culverts will be provided. The cranes used for construction activities will be placed on hard, flat surface area and if required, ground levelling will be done. Mitigation action for top soil erosion measures has been submitted herewith.	0

		During operation of a project, no appreciable adverse changes in the soils are anticipated. There was no excavated wastes. All excavated soils from foundation pits were spread in the plant area itself to provide required gradient in alignment with maximum solar radiation. Water Harvesting Structure is available inside the plant where water during rainy season is stored and allowed to recharge the ground water. The plant land is plain thus there was no any top soil stripping required. Also vegetation at site maintained the soil condition and there is no any impact. Plantation activities at site controls the soil erosion. Please refer page 25, table 11 of report on “Developmental Impacts and Sustainable Governance Aspects of	
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			Renewable Energy Projects” prepared by MNRE dated September 2013.	
Other pollutants	Not Required	MDG- 7: Ensure Environment Sustainability 7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	Explanation: During the operation of the Solar farm there will be some noise due to electrical equipment’s like transformers etc. The maximum decibel level of sound due the project activity equipment’s is less than 60 dB which is within permissible limit. Also as distance increases, sound level will be less and less audible. Thus there will be no negative impact on the settlement areas in this project due to the distance. Also report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013. This report does not mention any noise pollution from solar power plants, thus there	0

		is no any impact of noise pollution due to project activity. This report clearly mentioned that Solar farms operations do not result in noise pollution. Solid waste due to construction and daily activities of staff, during both construction and operation phases, will be handled and disposed of in an approved manner; therefore no soil contamination will result. Waste water holding tanks / septic tank will be located at more than 500 m away from bore wells or any other underground water holding tanks. There are no other pollutants generated from the solar power project (renewable energy project). Access Road was available for transportation of equipment during construction. Vegetation and	
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			landscaping was done at site to give pleasant outlook at site. Thus the Overall impact due to the project shall be neutral. Please refer page 28, table 3.4.3 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013.	
Biodiversity	Not Required	MDG- 7: Ensure Environment Sustainability 7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss	Through engineering measures and greening measures, the condition of ground vegetation will be gradually improved; No rare species has been found in the around area. The project site is not on the migration route of migratory bird. With the implementation of Project, the greening water will be increased significantly; the biodiversity in the vicinity will be improved with the	0

			vegetation improvement. There is no any adverse impact on Bio adversity due to project implementation. Please refer page 29, table 3.4.3 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013	
Quality of employment	Necessary health and safety measures will be taken during construction and operation phase, relevant staff will be trained to be able to work with high voltages.	MDG-1: Eradicate extreme poverty & hunger 1.B. Achieve full and productive employment and decent work for all, including women and young people	Parameter: Health and Safety and other trainings Explanation: Project developer ensures high standard health and safety conditions for the employees and provides Health & Safety Trainings to employees. Some of the staff may get training on different kind of issues like operation and maintenance of power plant. All employees will be trained on Occupational Health and Safety issue.	+

			There is positive impact on quality of employment due to project implementation. Please refer page 29, table 3.4.4 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013.	
Livelihood of the poor	Not Required	MDG-1: Eradication extreme poverty and hunger 1.A.Halve, between 1990 and 2015, the proportion of people whose income is less than \$1 a day	Income generation by local orders with project activity will have indirect impacts to changing living standards of the local people. However, the impact is not significant and direct. There is positive impact on community due to project implementation. Please refer page 29, table 3.4.4 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by	0

			MNRE dated September 2013.	
Access to affordable and clean energy services	Not Required	Goal 7 – Ensure Environmental Sustainability; Target 7.A - Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources	Explanation: The project will help to reduce high share of imported fossil fuel dependency of India. The Overall impact due to the project is positive. In baseline, equivalent quantity of electricity would have been generated from fossil fuel dominated grid connected power plants. Thus project activity helps to increase renewable energy contribution for grid Connected power plants. Since electricity export from project activity is supplied to grid, thus clean energy supplied by project does not have any direct impact in local areas or households. Hence score of indicator is considered as neutral.	0

Human and institutional capacity	Not Required	MDG-1: Eradicate extreme poverty & hunger	The project activity will have an overall positive contribution to the sustainable development of the region. However, it is difficult to measure the positive changes in the project scenario compared to the baseline specifically in terms of education & skills, gender equality and empowerment. In practice, only the employees working on the Project can be considered as the main beneficiaries. Thus, it is considered that the project activity does not have a significant impact on human and institutional capacity.	0
Quantitative employment and income generation	Not Required	Goal 1 – Eradicate extreme hunger and poverty; Target 1.B – Achieve full and productive employment and decent work for all, including	Project activity will lead to generate employment opportunities for both skilled and unskilled labours. Hence the parameter to be monitored for this indicator is the	+

		women and young people	number of staff employed for the project activity. Parameter Monitored: <i>No. of staff employed in the project activity</i>	
Balance of payments and investment	Not Required	MDG-8.D Develop a global partnership for development 8.D. Deal comprehensively with the debt problems of developing countries through national and international measures in order to make debt sustainable in the long term.	There is no foreign investment envisaged for implementation or operation of the project activity at this stage. However, the project being a renewable power project leads to reduction in dependency on fossil fuels, thereby leading to a reduction in purchase of fossil fuel in the country. As the impact is not quantifiable thus, it is considered that the project activity does not have a significant impact on balance of payments and investment.	0
Technology transfer and technological self-reliance		MDG 8 target F: In cooperation with the private sector, make available the benefits of new technologies, especially	In the project activity, technology shall be sourced primarily from inside the country and introduced into the region. At the same time,	0

		information and communications	the project activity shall build usable and sustainable know-how in the region for the technology, where know-how was previously lacking. Hence the project presents ample opportunities of replication in other areas. However, constant monitoring of this parameter involves complexities and hence this parameter is scored neutral as a conservative approach.	
Justification choices, data source and provision of references				
Air quality	According to the projections given in B.4 part of the PDD, in the baseline situation new capacity additions is the fossil fuel fired power plants. Electricity generated from the Solar power plants partially substitute electricity generation from fossil fuel fired power plants that represent a large share of the Indian Power grid generation mix. Thus, besides greenhouse gases, all other air pollutants (e.g. SO_x, NO_x), particle and VOC emissions was avoided by the project activity. Dust emergence connected to the project activity appears only for a short time during the construction phase and caused by digging foundations, land arrangement works and construction. Project developer has taken all precautionary actions to prevent dust emissions. Emissions during this phase was localized and temporary. Thus impact on local settlements was negligible owing to the considerable distance from the project site. Therefore, the project have a positive impact on air quality, however as a conservative estimate the impact in the SDM is considered as neutral and the PP does not wish to include the same. Also report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013. This report			

	clearly mentioned that solar farms operations do not result in direct air pollution. Please refer page 28, table 3.4.3 of report.
Water quality and quantity	In the baseline, thermal power plants discharges significant amount of waste water to the environment after usage for operational purposes like cooling. Having water treatment system in these power plants does not neutralize negative impact of waste water on environment as chemicals used for waste water treatment becomes problematic afterwards. With this project activity, usage and discharge of considerable amount of water was avoided with partially substituting electricity generation from thermal power plants. Therefore, the impact of the project on this indicator is positive. However, as a conservative approach the impacts on water quality and quantity has been considered as neutral. Further, during operation of project activity only small amount of waste water to be discharged environment. Wastewater production is due to daily consumption of workers. Minor volumes of sewage will be generated from toilet facilities at the site office. These are disposed to septic tank, thus no significant impact is anticipated to surface or groundwater. The parameter is considered as neutral. Please refer page 28, table 3.4.3 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013 which mentioned that solar plant operations do not result in water pollution.
Soil condition	In the baseline, thermal power plants emits significant amount of NO_x which have negative impact to the quality of soil. The adverse affect of emissions of NO_x on soil conditions is acid rains. Acid rains can damage soil conditions badly. With proposed project activity significant amount of NO_x emission will be avoided due to substituting partially thermal power plant electricity generation. The project would not emit any pollutants to the soil during the construction and operation period, with no negative impact on the soil quality. The top soil excavated during construction, will be stock piled and was used for compaction. The roads wasn't paved and soling will be done with excavated earth & rock material, so land disturbance was minimal. All the drainage patterns was maintained as it is and wherever required road culverts was provided. The cranes used for construction activities will be placed on hard, flat surface area and if required, ground levelling will be done. However, to be conservative impact of the project on this indicator is scored to be neutral and will not be monitored. Please refer page 25, table 11 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013.
Other pollutants	For this indicator, noise is defined as relevant parameter with the project activity. Since impact of noise can be significant only close area to the project,

	surrounding area of the project activity is selected as impact assessment boundary and for the baseline movement of leaf and daily life in the close villages. Noise is very low compare to background noise levels observed in surrounding of villages. Also, power plant control room is a well isolated area, therefore impact of noise from power plant on both employees and local residents is deemed to be negligible. Also report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013. This report does not mention any noise pollution from solar power plants, thus there is no any impact of noise pollution due to project activity. This report clearly mentioned that solar farms operations do not result in any noise pollution. Therefore, in the SDM the negligible effect of the project on the other pollutants is scored with (0) and will not be monitored.
Biodiversity	Through engineering measures and greening measures, the condition of ground vegetation was gradually improved; No rare species has been found in the around area. The Project site is not on the migration route of migratory bird. With the implementation of Project, the greening water will be increased significant, the biodiversity will be improved with the vegetation improvement. There is no any adverse impact on Bio adversivity due to project implementation. Please refer page 29 and 30, table 3.4.1 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013. Page 29 and 30 of this report mentioned that “As described, air, noise, water and biodiversity impacts of both wind and solar projects are either very low or negligible. It is for these reasons that the clearances required for RE projects are not stringent. As long as the projects are developed on wasteland or agriculture land, they don’t have significant biodiversity effects or long term irreversible impact on the local environment. Therefore, in the SDM the negligible effect of the project on biodiversity is scored with (0) and not monitored.
Quality of employment	Besides providing training to the employees, the Project created permanent jobs for various technical services required to operate the power plant. These jobs were created require qualified and skilled staff. So staff were trained to have higher skills and certification to perform such power generation projects, the employment and training of skilled staff has an impact on job quality. With regard to the health and safety of the staff, facilities will be provided following requirements of company EHSS guideline, example, a first aid kit shall be provided at the working area; regular technical and safety trainings is organized by the project owner periodically, emergency and safety procedures

	is included in the operation manual in ensure safe working condition for the staff; Please refer page 29, table 3.4.4 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013 which mentioned that solar forms create local employment. As the project will provide employment so that the living standard of the employees can be improved, the indicator scores positive, since it is difficult to quantify and monitor the quality of employment except for training of staff, therefore training of staff was the chosen parameter for this indicator.
Livelihood of the poor	The Project has improved the livelihood of those hired through income. In addition, the tax paid by the Project will be used for local infrastructure construction. However, the impact is not significant and direct. Please refer page 29, table 3.4.4 of report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013.
Access to affordable and clean energy services	The Project utilises clean energy to displace fossil fuel. The Project exports electricity to the Indian grid, thus results in a small and positive contribution in meeting national power demand. The Project adds renewable energy based capacity in the country. The Overall impact due to the project is positive. In baseline, equivalent quantity of electricity would have been generated from fossil fuel dominated grid connected power plants. Thus project activity helps to increase renewable energy contribution for grid Connected power plants. Since electricity export from project activity is supplied to grid, thus clean energy supplied by project does not have any direct impact in local areas or households. Hence score of indicator is considered as neutral (0) and not monitored.
Human and institutional capacity	The project activity will have an overall positive contribution to the sustainable development of the region. However, it is difficult to measure the positive changes in the project scenario compared to the baseline specifically in terms of education & skills, gender equality and empowerment. In practice, only the employees working on the Project can be considered as the main beneficiaries. Thus, it is considered that the project activity does not have a significant impact on human and institutional capacity.
Quantitative employment and income generation	Within the construction of the project, the employment opportunities was created for the workers. The Project recruited operation and management personnel responsible for operation and maintenance of the Project during project operation period, and pay salaries and welfares and also helps to increase their income. The proposed project would also create new employments. Therefore, this indicator is scored with (+) and will be monitored.

Balance of payments and investment	There is no foreign investment envisaged for implementation or operation of the project activity at this stage. Thus, it is considered that the project activity does not have a significant impact on balance of payments and investment.
Technology transfer and technological self-reliance	The project developer considers the investment into and the operation of a well-known technology in the country. Further, some of the employees will be trained for Solar power plant related issues. However, since these trainings are rather operation related trainings and not lead an important know-how and technology transfer, this indicator is scored with (0) in the SDM

SECTION G. Sustainability Monitoring Plan

[See Toolkit 2.4.3 and Annex I]

Copy Table for each indicator

No		01
Indicator		Quality of employment
Mitigation measure		N/A as indicator scored positive.
<i>Repeat for each parameter</i>		
Chosen parameter		Training of staff.
Current situation of parameter		Without the Project, local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Estimation of baseline situation of parameter		Without the Project, local people have no such opportunities to be trained on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Future target for parameter		Together with the technology supplier, the Project organise training for the staff on the technology and the monitoring of the plant operation, and the emergency and safety procedures.
Way of monitoring	How	The training records for all the employees
	When	Annually
	By who	Monitored by the project owner

No	2
Indicator	Quantitative employment and income generation
Mitigation measure	Not Required
<i>Repeat for each parameter</i>	

Chosen parameter		No. of staff employed in the project activity
Current situation of parameter		No. of staff employed in the project activity
Estimation of baseline situation of parameter		0
Future target for parameter		As per the requirements for plant operations. More than 5 peoples are expected to be employed during crediting period.
Way of monitoring	How	Employee rolls, pay-slips, attendance registers, etc.
	When	Annually
	By who	Project proponent

Additional remarks monitoring

For details regarding the monitoring of the other parameters pertaining to the calculation of GHG emission reductions for the project activity under consideration, please refer to sections B.6.3., B.7.1 and B.7.3 of the CDM PDD.

SECTION H. Additionality and conservativeness



This section is only applicable if the section on additionality and/or your choice of baseline does not follow Gold Standard guidance

H.1. Additionality

[See Toolkit 2.3]

Please refer to section B.5. of the PDD, Additionality is in line with Tool for the demonstration and assessment of additionality.

H.2. Conservativeness

[See Toolkit 2.2]

The PP hereby wishes to clarify that the most conservative baseline scenario has been used for baseline establishment for the project, especially considering the relevant guidelines of the approved methodology AMS I.D. version 17.

Further, the PDD applies grid emission factor as per the latest available CEA database version 06 and the emission factor applied is 0.948 tCO₂/MWh. The emission factor is calculated as per tool to calculate emission factor for an electricity system and is calculated in conservative manner. Since the emission factor is calculated based on latest available data at the time CDM PDD/GS passport submission to GS Registry is higher (0.9653 tCO₂/MWh) than registered PDD, the emission factor mentioned in registered PDD is conservative and same is considered for GS project activity.

ANNEX 1 ODA declaration**[See Toolkit Annex D]**

The PP hereby declares that no ODA was received for this project. Further, a declaration for the same is submitted to the DOE.