

GOLD STANDARD PASSPORT

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SECTION A. Project Title

[See Toolkit 1.6]

Title: 70 MW Bhadla Solar power plant by Fortum Finnsurya Energy Pvt Ltd (EKIESL-CDM-APRIL-16-01)

Date: 09/01/2018

Version no.: 03

SECTION B. Project description

[See Toolkit 1.6]

Start date of project activity 29/07/2016¹

The main purpose of this project activity is to generate clean form of electricity through renewable solar energy source. Fortum FinnSurya Energy Pvt. Ltd. is the promoter of the proposed project activity. The project activity involves installation of 70 MW (AC) (88.2 MWp) solar power project at Bhadla, Jodhpur, Rajasthan. The annual average of estimated electricity generation and estimated emission reduction over 7 years of crediting period will be 122,108 MWh/year and 119,384 tCO₂e per year. The project will replace anthropogenic emissions of greenhouse gases (GHG's) by displacing equivalent amount of electricity from the generation-mix of power plants connected to the Indian grid, which is mainly dominated by thermal/fossil fuel based power plant.

The details of the project and the state of installation are mentioned in the table:-

Project Promoters' Name	Capacity in MW (AC)	Connection with Grid	State
Fortum FinnSurya Energy Pvt. Ltd.	70 MW	INDIAN	Rajasthan

Sectoral Scope: 01 : "Grid-connected electricity generation from renewable sources", ACM0002-Version 17.0"

Project Type: (i) : Renewable energy projects

Scenario existing prior to the implementation of project activity:

The scenario existing prior to the implementation of the project activity, is electricity delivered to the grid by the project activity that 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".

¹ Purchase order provided for documentary evidence of start date.

Baseline Scenario:

As per the applicable methodology, a Greenfield power plant is defined as “a new renewable energy power plant that is constructed and operated at a site where no renewable energy power plant was operated prior to the implementation of the project activity”.

As the project activity falls under the definition of a Greenfield power plant, the baseline scenario as per applied methodology is the following:

The baseline scenario is that the 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.

Hence, pre-project scenario and baseline scenario are the same.

Sustainable development indicators

The National CDM Authority (NCDMA), which is the Designated National Authority (DNA) for the Government of India (GOI) under the Ministry of Environment and Forests (MoEF), has mentioned four indicators for the sustainable development in the interim approval guidelines for Clean Development Mechanism (CDM) projects from India². Thus the project’s contribution towards sustainable development has been addressed based on the following sustainable development aspects:

Social well-being

The project activity provided / provides job opportunity to local people during erection, commissioning and maintenance of the solar project. Frequency of visiting villages and nearby areas by skilled, technical and industrialist increase due to installation /site visit/operation and maintenance work related to solar plant. This directly and indirectly positively effects the economy of villages and nearby area.

Environmental well-being

Solar power is one of the cleanest renewable energy powers and does not involve any fossil fuel. There are no GHG emissions. The impact on land, water, air and soil is negligible. Thus the project activity contributes to environmental well-being without causing any negative impact on the surrounding environment.

Economic well-being

² http://www.cdmindia.gov.in/approval_process.php

The CDM project activity generates permanent and temporary employment opportunity within the vicinity of the project. The electricity supply in the nearby area improves which directly and indirectly improves the economy and life style of the area.

Technological well-being

The project activity is step forward in harnessing the untapped solar potential and further diffusion of the solar technology in the region. The project activity leads to the promotion and demonstrates the success of solar projects in the region which further motivate more investors to invest in solar power projects. Hence, the project activity leads to technological well-being.

As a part of Sustainability Policy, Fortum wants to excel in sustainability and believes that balanced management of economic, environmental and social responsibility brings us a competitive advantage, is beneficial to our stakeholders and is necessary for the development of future societies. We continuously improve our sustainability performance by assessing our impacts and by addressing sustainability throughout the value chain.

Economic responsibility

For Fortum, economic responsibility means competitiveness, performance excellence and market-driven production that creates long-term value and enables sustainable growth. We promote market-based policies and measures that help to solve global sustainability challenges and targets in the most efficient way. We understand that our operations provide both direct and indirect economic benefits to our stakeholders, and we continuously review our impact and the well-being generated.

Environmental responsibility

Fortum's aim is to provide our customers with environmentally benign energy products and services. We are committed to environmentally sound business practices and to the responsible use of natural resources. We take into account the life-cycle of our energy products and continuously aim to mitigate our environmental impact by utilising best practices and best available technologies. We want to minimize environmental non-compliances and incidents caused by our operations. Mitigation of climate change and the preservation of natural resources are key priorities in our environmental approach. Our competence in CO₂-free hydro and nuclear power production and in energy-efficient combined heat and power production support the development of low-carbon societies.

Social responsibility

For Fortum, excellence in safety is the foundation of our business and safe performance is a sign of professionalism. We believe that all work-related injuries, illnesses and safety incidents can be prevented. Fortum's goal is to provide a safe working place for all, and everyone is expected to take responsibility for safety. We have common targets and strive for continuous improvement. Fortum has indirect responsibility for its supply chain. We conduct business with viable companies that act responsibly and comply with the Fortum Code of Conduct and Supplier Code of Conduct. Social responsibility also includes being a good corporate citizen and taking care of the community around us. We believe that our innovations and the secure supply of low-carbon power and heat will enable social development and increase overall well-being.

Sustainability embedded in business operations

Excellence in sustainability is incorporated in the company strategy and is an integral part of business operations. To implement this sustainability policy, Fortum:

- complies with legal, regulatory and contractual requirements
- continuously improves sustainability target setting and performance
- applies certified environmental, health and safety management systems in all operations
- assesses sustainability performance when selecting suppliers, contractors and business partners
- includes the sustainability assessment as part of an investment evaluation and approval process
- engages stakeholders in active dialogue
- is committed to transparent communication and reports annually on its sustainability performance

RESPONSIBILITIES

Fortum has a line responsibility in sustainability governance. The management of the divisions and the Group functions, and ultimately the President and CEO and the Board of Directors, are accountable for sustainability at Fortum.

Fortum Management Team (FMT) leads the Sustainability Policy and decides on the company-level sustainability target setting that guides annual business planning.

The divisions define their detailed sustainability targets, develop action plans in accordance with corporate-level targets, and ensure inclusion of these in the business goals. The divisions compare their sustainability performance against the targets, monthly and quarterly.

Corporate Sustainability is responsible for coordinating and developing sustainability at the Group level. This includes the Sustainability Policy and related corporate-level instructions and manuals. Corporate Sustainability is also responsible for monitoring the policy implementation and for performance reporting on a monthly, quarterly and annual basis. Corporate Sustainability leads sustainability networks in order to develop common goals, targets, instructions and procedures in the whole company.

All managers and superiors have responsibility for implementing and controlling sustainability management and performance within their respective responsibility areas. This includes the assessment and mitigation of related risks.

All Fortum employees and external persons working for Fortum have the responsibility to comply with the Fortum Sustainability Policy and related laws, regulations and instructions. Fortum's suppliers are expected to follow the principles set out in the Fortum Code of Conduct and Supplier Code of Conduct.






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

	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>

	<input type="checkbox"/>
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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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Does your project activity classify as an End-use Energy Efficiency Improvement project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Does your project activity classify as waste handling and disposal project?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
<p>Explain your statement on pre announcement</p> <p>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:</p> <p>Start date of the project activity is the date of purchase order as on 29/07/2016. This is earliest real action for which PP has committed for expenditure for the project activity.</p> <p>Fortum FinnSurya Energy Pvt. Ltd. intimated the UNFCCC and host party DNA i.e. National CDM Authority (NCDMA) of its intention to seek CDM for the proposed project activity in a defined F-CDM form on 05/04/2016. The UNFCCC has webhosted the prior CDM consideration of the project activity on its website³.</p> <p>Currently the CDM project activity is registered with UNFCCC on 06/11/2017. Please refer the below UN webpage of project activity</p> <p>https://cdm.unfccc.int/Projects/DB/Plus1506003422.59/view</p>		

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

C.4. Greenhouse gas

[See Toolkit 1.2.d]

Greenhouse Gas	
Carbon dioxide	<input checked="" type="checkbox"/>
Methane	<input type="checkbox"/>
Nitrous oxide	<input type="checkbox"/>

C.5. Project Registration Type

[See Toolkit 1.2.f]

Project Registration Type	
Regular	<input type="checkbox"/>

	Retroactive projects	Preliminary evaluation (eg: Large Hydro or palm)	Rejected by UNFCCC
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Pre-feasibility assessment	(T.2.5.1)	oil-related project (T.2.5.2)	(T2.5.3)
	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

If Retroactive, please indicate Start Date of project activity dd/mm/yyyy: The Start date of the project activity is considered based on the Purchase Order issued dated 29/07/2016. This is earliest real action for which PP has committed for expenditure for the project activity.

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. However since project activity is also applying CDM registration, the thus start date of GS crediting period will be same as CDM crediting period.

SECTION D. Unique project identification

D.1. GPS-coordinates of project location

[See Toolkit 1.6]

The project activity is located at

Village : Bhadla

District: Jodhpur

Stat : Rajsthan

The latitude and longitude are as follows:

Project Promoters' Name	Latitude	Longitude	Date of Commissioning
Fortum FinnSurya Energy Pvt. Ltd.	N 27° 21' 15.4152"	E 71° 41' 28.701"	31/03/2017

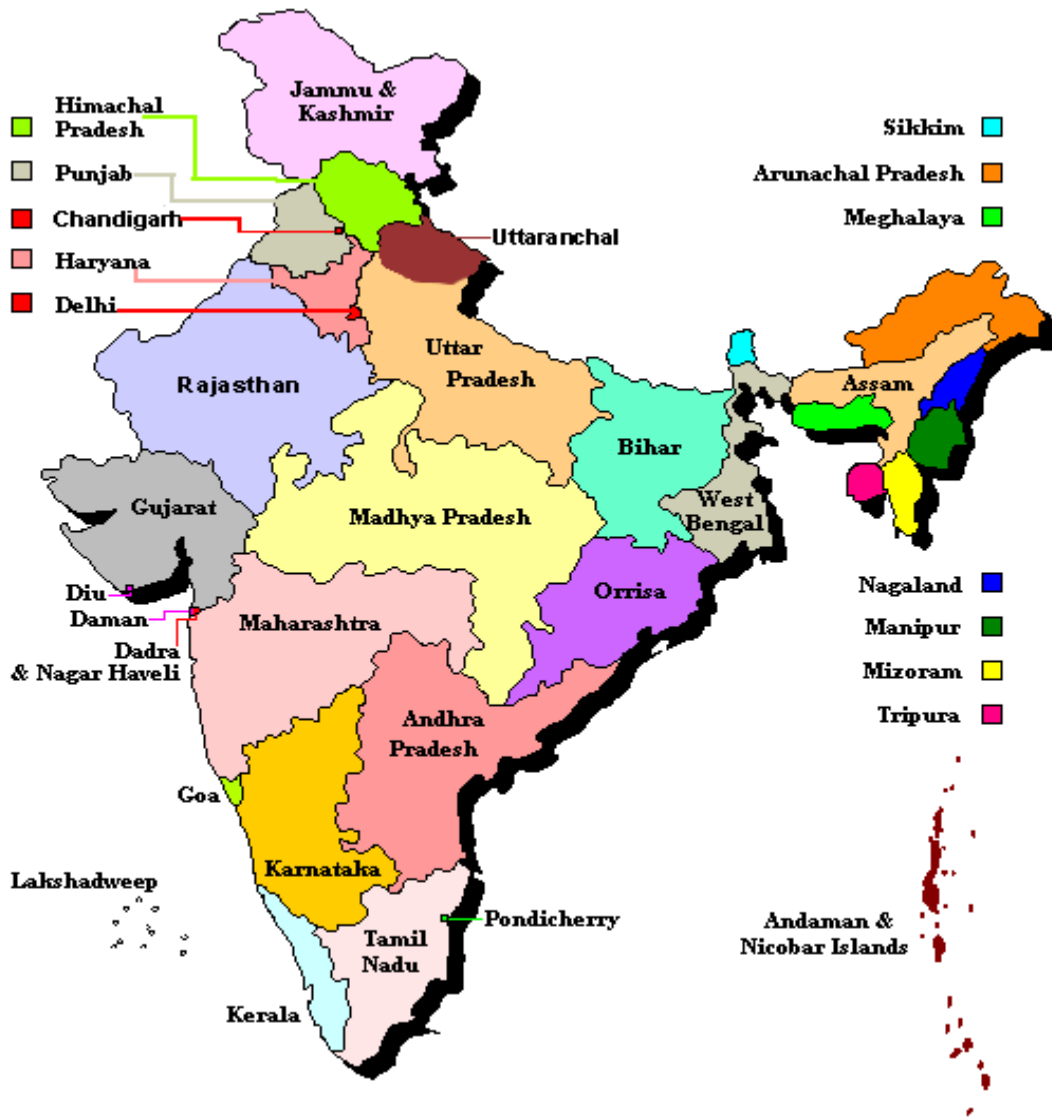


Explain given coordinates

The project activity is located at Rajasthan, India.

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:

- Local community
- Local village administration
- Technology suppliers
- Local vendors

Date of invitation – 14 May 16

Date of Meeting – 25 May 16

Location of Meeting - Solar power project site Bhadla, Jodhpur - Rajasthan

All the stakeholders have been invited through public notice to attend the stakeholders meeting.

The stakeholders gathered at the venue, as per the scheduled time. The meeting was opened by Mr. Chinmay Samantha from Fortum FinnSurya Energy Pvt. Ltd. In the introductory speech, the representatives welcomed the gathering and given a brief about the CDM project activity. Subsequent to the introductory speech, stakeholders were explained about the electricity generation from solar project is an environmental friendly power generation technology contributing to reduction in GHG emissions. They were also explained about the benefits of the solar power projects like, increasing energy availability and improving quality of power and its assistance to the local population by providing employment opportunities to both skilled & unskilled labors.

The Minutes of meeting with commenting sheet from LSH, Public Notice copy shall be submitted to the DOE.

Meeting started with opening speech by representative of project participant. He introduced all guests on dais. The representative of project participant explained Technical aspects of project to stakeholders. He also explained about social, environmental & economical benefits of the project. He also elaborated about CDM & its requirement for the current project. After the presentation, the session was open for questions/feedback from stakeholders.

The villagers raised various queries as summarized below:

Q: Will the operation of the plant result in increased temperature in the surroundings?

A: There will be no impact on ambient temperature due to operation of the plant.

Q: Does the project provides employment opportunities or improve economic development of the area?

A: Yes, the project will provide economic development of the area and will provide employment opportunities to the local people depending upon their skill and qualification.

Q: Will the project help in improving the electricity supply to the villagers or neighbourhood areas?

A: The electricity generated from the project shall be sold to NTPC under 25 year PPA who in turn shall sell it to state discom whose responsibility is to distribute electricity in their respective jurisdiction including surrounding villages. It is envisaged that this would improve the electricity availability situation in the neighbourhood area.

Q: How the project activity benefit the villages around the project site and their residents?

A: The project activity will benefit the nearby villagers by providing employment opportunities to local or nearby people and also provides immense opportunity for economic development of the area like increase in business opportunities in the form of works for module cleaning, hiring of vehicle etc., improvement in transportation; and various social activities shall help to uplift the standard of living.

All the above queries have been suitably and satisfactorily replied / clarified by project participant's representatives.

Also below specific queries were raised by local stakeholders

Name of Stakeholder	Mehbob
Occupation	Villager
<p>1. What are the advantages of Solar Plant?</p> <p>Answer: The main advantage is that it do not cause any pollution.</p> <p>2. Can we install solar plant at our home?</p> <p>Answer: Yes, it can be installed in our home but it is very costly.</p> <p>3. Will it increase temperature in neighbourhood?</p> <p>Answer: No, there will not be increase in temperature in nearby area.</p> <p>4. Will it reduce power cut problem?</p> <p>Answer: Yes, it will help to reduce the problem of power cut in the village.</p>	

Name of Stakeholder	Devisingh
Occupation	Driver
<p>1. Does this project work at night?</p> <p>Answer: No, it won't work at night because it is a solar power project.</p>	

2. How many year this project work?

Answer: Technical lifetime of the project is 25 years.

3. Will it increase temperature in neighbourhood?

Answer: No, there will not be increase in temperature in nearby area.

4. Will it reduce power cut problem?

Answer: Yes, it will help to reduce the problem of power cut in the village.

Name of Stakeholder	Sadhechadji
Occupation	Shopkeeper

1. What benefits will be there due to the project?

Answer: There will be electricity generation, there will be employment opportunities.

2. Can solar project operate in night?

Answer: No, solar plant can't produce electricity at night.

3. What is the disadvantage of solar plant?

Answer: The only disadvantage of solar plant is that there is no generation at night. It only work in day.

4. Will we get employment opportunity?

Answer: Yes, there will be employment opportunities for the locals.

5. Will it promote business activities like hotels?

Answer: Yes, you can open a hotel as due to this project there will be people coming from outside. So business opportunities will increase.

Name of Stakeholder	Ghanshyam
Occupation	Vegetable seller

1. Will the project help in economic development?

Answer: The project will lead to economic development of the region because it will generate employment for local people by which their condition will be uplifted.

2. Will there be any harm on agriculture?

Answer: There will be no impact upon the agricultural crops due to the project activity and hence the question is not valid.

3. Will the project result in any kind of air or water pollution?

Answer: The project does not have any impact on land or air pollution. The investor will ensure no kind of pollution due to project activity take place.

Name of Stakeholder	Mukesh Parik
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Occupation	Farmer
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1. What are the benefits from this project?

Answer: There will be employment opportunities and there will be development of roads, and livelihood of the people will become better.

2. Does it ensure 24 hour power supply?

Answer: There will be increase in the share of the power in the village.

3. How much land do you need for the project?

Answer: Generally, it needs about 1 acre of land for 1 MW plant.

4. Is there any adverse impact within the neighbourhood?

Answer: No, project do not have any adverse impact on the neighbourhood.

Name of Stakeholder	Kishore
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Occupation	Villager
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1. What benefits will be there due to the project?

Answer: The villagers will be benefitted from the project because they will get employment also roads will be built.

2. Does the UV rays are harmful to us?

Answer: UV rays from sun are harmful but there will be no UV rays emitted due to the project.

3. Will the villagers get electricity from the project?

Answer: No direct supply of electricity from the project can be supplied and villagers need to get connection from electricity board.

Name of Stakeholder	Rakesh
Occupation	Shopkeeper

1. This project will cause harm?

Answer: No, this project will not cause any harm to environment or day to day livelihood.

2. What are the other things that can be done from solar?

Answer: As of now we can generate electricity from the solar energy.

3. Summer season will produce more electricity?

Answer: Yes, the electricity generated in summer would be higher as compared to winter season.

Name of Stakeholder	Lile Jha
Occupation	Villager

1. Will the operations of plant result in increased temperature in the surrounding?

Answer: No, it will not result in temperature rise.

2. Does this project provide employment opportunity?

Answer: Yes, it will provide employment opportunities to the locals of the village.

3. How much time does the project needs to get commission?

Answer: It takes around 6-7 month time to get permission from the nodal agency and get commissioned.

4. Does the project release any harmful rays or gases?

Answer: No, the project will not emit any harmful rays or gases.

Name of Stakeholder	Matharya
Occupation	Student
<p>1. Is there any way to generate power at night?</p> <p>Answer: No, there is no alternative.</p> <p>2. What is the lifetime of the battery in the solar project?</p> <p>Answer: Battery has a lifetime of 5-6 years.</p> <p>3. How will it help reduce pollution?</p> <p>Answer: No pollutants are released.</p> <p>4. What is the lifetime of the project?</p> <p>Answer: Project lifetime is 25 years.</p> <p>5. Will there be harmful emission from project?</p> <p>Answer: No there will be no radiations.</p>	
Name of Stakeholder	Ramesh
Occupation	Teacher
<p>1. What is technology of this project?</p> <p>Answer: The technology is solar.</p> <p>2. How many time taken to develop?</p> <p>Answer: Generally it takes about 7-8 months for the solar project.</p> <p>3. How it work?</p> <p>Answer: The solar plant converts sun energy into the electricity.</p> <p>4. How rain water is effected?</p> <p>Answer: It will not impact the rain water.</p>	
Name of Stakeholder	Dabuan

Occupation	Villager
<p>1. Project activity will provide free electricity to the villagers?</p> <p>Answer: Electricity can't be supplied directly from the project activity, DISCOMs are authorised to do so. However, electricity supply due to this activity would increase.</p> <p>2. Scope for employment for the local villagers?</p> <p>Answer: Project erection and commissioning would require people and for that localities would be preferred.</p> <p>3. Will the project cause any harmful emission?</p> <p>Answer: Project activity doesn't cause any form of emission as far as we know yet.</p>	
Name of Stakeholder	Jayant
Occupation	Farmer
<p>1. Does the project provides employment opportunity or improve economic development of the area?</p> <p>Answer: Yes, the project will provide employment to the locals and thereby there will be economic development in the area.</p> <p>2. How many workers will be employed?</p> <p>Answer: For operation less people will be required but for the construction, maintenance and security more people would be required.</p> <p>3. Does this project cause emission of harmful sun radiation?</p> <p>Answer: No the project do not emit any harmful radiation.</p>	
Name of Stakeholder	Khajya
Occupation	Villager
<p>1. What is the reason for setting up project here?</p> <p>Answer: In this region sunshine is available more as compared to other location. Hence, this project site has been chosen.</p> <p>2. Will there be any negative impact on our land or cultivation?</p>	

Answer: No, there will be no harm to the lands or cultivation.

3. Will we get 24 hr electricity from this project?

Answer: Due to this project there will be an increase in the share of the power that is supplied to the village.

4. Will there be employment opportunity for the youth?

Answer: Yes, there will be employment opportunities for the people of the village.

Name of Stakeholder	Padam Singh
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Occupation	Student
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1. Do I get any employment opportunity?

Answer: Yes, employment opportunities will be provided to the deserving candidates in the neighbourhood.

2. How will the project help electricity generation of our village?

Answer: As the project is based on solar energy, it will certainly help the village for getting power supply.

Name of Stakeholder	Lateeb
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Occupation	Farmer
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1. Does this project cause any inconvenience?

Answer: No, the project will not affect any local household in its day to day operations. No inconvenience will be caused to villagers.

2. What are the benefit of this project?

Answer: This project will help in production of green energy with the help of solar power from sun and helps in GHG mitigation and help in providing electricity to nearby villages.

3. Can electricity be generated at night?

Answer: This project is based on generation of electricity by capturing sunlight, thus during night time this mechanism will not be able to generate electricity at night.

Name of Stakeholder	Saeed
Occupation	Shopkeeper
<p>1. Solar plant will increase the temperature in nearby areas?</p> <p>Answer: No, solar energy plant only utilize the solar energy. It doesn't produce any harmful radiations or temperature increase.</p> <p>2. Solar energy generation will produce any harmful radiation?</p> <p>Answer: No harmful radiation will be emitted from the project.</p> <p>3. This project will cause any problem to us?</p> <p>Answer: No, this project doesn't cause any harmful effect on day to day life.</p> <p>4. What are the development which possess from this project?</p> <p>Answer: This activity will provide the employment opportunity, road construction, improve electricity supply, improve health, education in the nearby village.</p> <p>5. Will you help us in getting loans?</p> <p>Answer: Project owner is not authorise to provide loans however it may support business opportunities.</p>	
<p>Local stakeholders welcomed and expressed their support to the project. The meeting was concluded by vote of thanks to all the participants</p> <p>There were no comments raised by the stakeholders and they were totally in support for setting up of these kinds of projects in the region.</p>	

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) has been planned from 24/01/2017. The email has been sent to relevant stakeholders like NGOs, DNA officials, Gold Standard officials along with project documents.

PDD and initial GS passport made available in public domain (GS website) for 60 days to enable the local stakeholders to make comments.

The process for the SFR was as 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 has been 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.

Invitations to Stakeholders:

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

The Mandatory Continuous Input & Grievance Expression Methods applied are described in section E.3;

The below national/international NGO Supporters have been identified for stakeholder feedback round and e mail has been sent for below NGO supporters and other stakeholders. The C and D category stakeholders are invited through online SFR. For category A and B, the public notice has been put at project site.

Organisation	Country	Name	First Name	e-mail
Carbon Watch	India	Mawandia	Deepak	deepak.mawandia@carbonwatch.com
Development Alternatives	India	Khosla	Ashok	tara@devalt.org
EnerGHG India	India	Paruchuri	Narendra	narendra@energhg.in

Fair Climate Network	India	Dr. Padmanabha	Sudha	sudha@fairclimate.com
Non-Conventional Energy and Rural Development Society (NERD SOCIETY Coimbatore)	India	Mrs. Kamaraj	Sathiajothi	info@nerdsocietycoimbatore.org nerdsocietycoimbatore@hotmail.com
Rural Education for Development Society-REDS	India		Mr. M. C. Raj and Mrs. Jyothi Raj	jothiraj12@rediffmail.com, mcraj.reds@gmail.com
SKG Sangha	India	Devabhaktuni	Vidya Sagar	skgsangha@gmail.com
Winrock International India	India	Das	Debajit	debajit@winrockindia.org

The other stakeholders identified are as below

Name	Organisation
Ayushi Jain	Gold Standard
Neha Rao	Gold Standard
Abhishek Bansal	Gold Standard
Abhishek Goyal	Gold Standard
National CDM Authority	Ministry of Environment, Forest and Climate Change

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:

There are no comments received during 2 months period of stakeholder feedback round.

Conclusion:

There are no comments received during 2 months period of stakeholder feedback round. Thus project activity has no adverse impact for sustainable indicator parameter.

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	<p>Grievance Register to be maintained at Site office.</p> <p>Project Site Address:</p> <p>Fortum Finnsurya Energy Private Ltd., 70 MW project at Village : Bhadla, District: Jodhpur, State : Rajasthan, India</p> <p>PP office Address:</p> <p>Fortum Finnsurya Energy Private Limited, 1 A, Vandhna Building 11, Tolstoy Marg, New Delhi-110001, India</p>	<p>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.</p> <p>This location is also conducive to continuous and regular checks for stakeholder comments.</p> <p>Also Grievance Register has been kept at PP office so that any stakeholder can give their comments to PP.</p>
Telephone access	<p>Mr. Manish Dabkara, mobile number +91 9907534900 shall be available for any</p>	<p>For those who are unable to travel to site or are not literate, they may</p>

	stakeholder comment.	to 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 language.
Internet/email access	Email address: Manish Dabkara manish@enkingint.org Gold Standard: info@goldstandard.org	An email id of the project Implementer 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.

There are no any issues (negative feedback) received from stakeholders, hence no any mitigation measures are required.

SECTION F. Outcome Sustainability assessment

F.1. 'Do no harm' Assessment

[See Toolkit 2.4.1 and Annex H]

Fortum has Sustainability Policy at corporate level Fortum Sustainability Policy is built on the Fortum Code of Conduct and Fortum Supplier Code of Conduct. The Fortum Code of Conduct discloses the international charters, agreements and recommendations that Fortum endorses in the area of sustainability. This policy is supported by the Fortum Corporate Relations and Communications Policy and the Fortum Human Resources Policy. Implementation of the Fortum Sustainability Policy is supported by more detailed environmental, health and safety, human resources and purchasing instructions. The web links for this sustainability policy are as below

<http://www.fortum.com/en/sustainability>

<http://www.fortum.com/en/investors/investment/responsibleinvestment/pages/default.aspx>

As regards management systems, all (100%) Fortum’s operations are ISO 14001 certified and 75% OHSAS certified. In India we have two solar plants for which are targeting to get it certified under ISO 14001 and OHSAS 18001 soon.

Supplier Code of Conduct

The purpose of this Supplier Code of Conduct is to define the basic sustainability requirements placed on Fortum’s suppliers. The Supplier Code of Conduct is based on the principles of the United Nations Global Compact and is divided into four sections: business principles, human rights, labour standards and environment. Fortum has signed the United Nations Global Compact initiative and become a registered member as of 30 June 2010.

The Supplier Code of Conduct is applicable to all Fortum’s operations in every part of the world and to any supplier that delivers goods, services, works and other business activities to Fortum. All of Fortum’s suppliers are obligated to implement the principles of the Supplier Code of Conduct across their whole business. Suppliers are also responsible for ensuring and monitoring that their sub-suppliers and sub-contractors comply with this Supplier Code of Conduct. Fortum’s suppliers shall confirm compliance with this Supplier Code of Conduct by continuously documenting compliance, providing information to Fortum, upon request, and allowing audits at site by Fortum or by an accredited auditor company representing Fortum.

The business Principles which covers under code of conduct consists of

Business Principles – which includes Legal Compliance, Anti-Corruption and anti- bribery and Human Rights

Labour Standards – which includes Freedom of Association, Forced labour, Wages and working hours, child labour and young workers, Non-discrimination, health and Safety, Prevention of alcohol and Drug use at work

Environment – which includes comply of environmental laws and regulations and to encourage diffusion of environmentally friendly technologies.

Safeguarding principles	Description of relevance to my project	Assessment of my project risks breaching it (low/medium/high)	Mitigation measure

<p>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</p>	<p>The Project is not in conflict with the economic livelihood of the local community.</p> <p>The Project does not cause any human rights abuse and respects internationally proclaimed human rights issue.</p> <p>The India has ratified the United Nations Human Rights Rules and regulations. The India ratified the same as per web link⁴ given below</p> <p>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</p> <p>International Covenant on Civil and Political Rights India Accession 10.04.79⁶</p>	<p>Low</p>	<p>Not applicable</p>
<p>2. The project does not involve and is not complicit in involuntary resettlement</p>	<p>The project does not involve any resettlement.</p> <p>India (the Ministry of Rural development have the "The National Rehabilitation and Resettlement Policy, 2007</p> <p>http://www.dolr.nic.in/nrrp2007.pdf</p> <p>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</p>	<p>Low</p>	<p>Not applicable</p>

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

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

	No Expropriation has been conducted on land involved in project activity. Land has been allotted on lease basis by Government Agency, thus there are no any conflict or resettlement process is involved		
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 restrictions of these freedoms and rights	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 there is no any restriction for freedoms and right.	Low	Not applicable
5. The project does not involve and is not complicit in any form of forced or compulsory labour	Forced labor is an illegal activity in the host country and the local labor 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 labour ⁷	Low	Not applicable
6. The project does not employ and is	Indulgence in Child labor is an illegal activity in the host country and the	Low	Not applicable

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

<p>not complicit in any form of child labour</p>	<p>local labor compliance takes into account of the same. Further, India is a party to ILO and Child labour is illegal in India.</p> <p>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.</p>		
<p>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</p>	<p>The project Proponent does not indulge in discrimination on basis of gender, race, religion, sexual orientation.</p> <p>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 Discrimination against Women (CEDAW) , India ratified it on 09/07/1993 with certain reservations⁹</p> <p>And International Convention on the Elimination of All Forms of Racial Discrimination; India ratified the convention on 03/12/1968 with certain reservation¹⁰</p>	<p>Low</p>	<p>Not applicable</p>
<p>8. The project provides workers with a safe and healthy work environment and is not complicit in exposing workers to</p>	<p>The project proponent has implemented Environment Health Safety and Social guideline which takes into account the same.</p>	<p>Low</p>	<p>Not applicable</p>

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

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>

unsafe or unhealthy work environments	The project provides safe and healthy work condition to the employees. The programme complies with the Factories Act and provides safe and healthy work environment ¹¹		
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 1986 ¹²	Low	Not applicable
10. The project does not involve or complicit in 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	The project proponent has implemented Environment Health 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	Low	Not applicable

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

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

traditional local communities			
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 labor 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]

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As regards management systems, all (100%) Fortum's operations are ISO 14001 certified and 75% OHSAS certified. In India we have two solar plants for which are targeting to get it certified under ISO 14001 and OHSAS 18001 soon.

The 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

¹³ <http://www.unodc.org/unodc/en/treaties/CAC/signatories.html>

operations do not result in direct air pollution, noise pollution. Please refer below web link for the same.
<http://mnre.gov.in/file-manager/UserFiles/report-on-developmental-impacts-of-RE.pdf>

There are no any significant impacts due to implementation of project activity.

Based on above evidences, the score mentioned below are justified.

Indicator	Mitigation measure	Relevance to achieving MDG	Chosen parameter and explanation	Preliminary score
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	0

			<p>construction phase shall localized and temporary. Emissions will be substantially 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.</p> <p>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.</p> <p>The minor dust emissions if any are localized and controlled by spraying water in the area.</p> <p>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 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.</p>	
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			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 drinking water and basic sanitation.	<p>Explanation: Thermal power plants produce considerable amount wastewater especially due to cooling. By the project activity, significant amount of wastewater discharge will be avoided.</p> <p>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 baseline fossil fuel dominated power plants.</p> <p>The project activity requires very minimum water for solar PV plant. The water required for solar panel cleaning is around 1000 Lit per MW per cleaning and around 4 cleaning per month will be done. Thus around 3360 KL water will be used for cleaning of solar modules. The water after cleaning of solar modules falls on soil and absorbs there in the soil. The water cleans the surface of module and waste water after cleaning mostly involves dust. Thus there is no any soil pollution due to</p>	0

			<p>waste water of solar panel cleaning</p> <p>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 Projects” prepared by MNRE dated September 2013.</p>	
Soil condition	Not Required	<p>MDG- 7: Ensure Environment Sustainability</p> <p>7.A Integrate the principles of sustainable development into country policies and programmes and reverse the loss of environmental resources</p> <p>7. B Reduce biodiversity loss, achieving, by 2010, a significant reduction in the rate of loss</p>	<p>The project would not emit any pollutants to the soil during the construction and operation period, with no negative impact on the soil quality.</p> <p>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.</p> <p>During operation of a project, no appreciable adverse changes in the soils are anticipated.</p>	0

			<p>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.</p> <p>Plantation activities at site controls the soil erosion.</p> <p>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.</p>	
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	<p>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.</p> <p>Also report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy</p>	0

			<p>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 noise pollution.</p> <p>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.</p> <p>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.</p> <p>There are no other pollutants generated from the solar power project (renewable energy project).</p> <p>Access Road was available for transportation of equipment during construction. Vegetation and landscaping was done at site to give pleasant outlook at site.</p> <p>Thus the Overall impact due to the project shall be neutral.</p> <p>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.</p>	
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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 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	0
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 MNRE dated September 2013.	0
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. 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	<p>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.</p> <p>In practice, only the employees working on the Project can be considered as the main beneficiaries.</p> <p>Thus, it is considered that the project activity does not have a significant impact on human and institutional capacity.</p>	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 women and young people	<p>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 number of staff employed for the project activity.</p> <p>Parameter Monitored: <i>No. of staff employed in the project activity</i></p>	+
Access to 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	<p>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, there by leading to a reduction in purchase of fossil fuel in the country.</p>	0

		measures in order to make debt sustainable in the long term.	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.	
Technology transfer and technological self-reliance		MDG 8 target F: In cooperation with the private sector, make available the benefits of new technologies, especially information and communications	In the project activity, technology shall be sourced primarily from inside the country and introduced into the region. At the same time, 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.	0

Justification choices, data source and provision of references

Air quality	<p>According to the projections given in B.4 part of the PDD, in the baseline situation new capacity additions will most probably be fossil fuel fired power plants.</p> <p>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 are avoided by the project activity.</p> <p>Dust emergence connected to the project activity appears only for a short time during the construction phase and will be caused by digging foundations, land arrangement works and construction. Project developer has taken all precautionary actions to prevent dust emissions. Emissions during this phase will be localized and temporary. Thus impact on local settlements will be negligible owing to the considerable distance from the project site.</p> <p>Therefore, the project will 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.</p>
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	<p>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.</p>
<p>Water quality and quantity</p>	<p>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 proposed project activity, usage and discharge of considerable amount of water will be avoided with partially substituting electricity generation from thermal power plants. Therefore, the impact of the project on this indicator is deemed to be positive. However, as a conservative approach the impacts on water quality and quantity has been considered as neutral.</p> <p>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. This will be disposed to septic tank, thus no significant impact is anticipated to surface or groundwater. The parameter is considered as neutral.</p> <p>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.</p>
<p>Soil condition</p>	<p>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.</p> <p>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. However, to be conservative impact of the project on this indicator is scored to be neutral and will not be monitored.</p> <p>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.</p>

<p>Other pollutants</p>	<p>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.</p> <p>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.</p> <p>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.</p> <p>Therefore, in the SDM the negligible effect of the project on the other pollutants is scored with (0) and will not be monitored.</p>
<p>Biodiversity</p>	<p>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 significant, the biodiversity will be improved with the vegetation improvement. There is no any adverse impact on Bio adversity 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.</p> <p>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.</p> <p>Therefore, in the SDM the negligible effect of the project on biodiversity is scored with (0) and not monitored.</p>
<p>Quality of employment</p>	<p>Besides providing training to the employees, the Project will create permanent jobs for various technical services required to operate the power plant. These jobs were created require qualified and skilled staff. So staff will be 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.</p> <p>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 will be</p>

	<p>organized by the project owner periodically, emergency and safety procedures will be included in the operation manual in ensure safe working condition for the staff;</p> <p>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 farms create local employment.</p> <p>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.</p>
Livelihood of the poor	<p>The Project will improve 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.</p> <p>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.</p>
Access to affordable and clean energy services	<p>The Project utilises clean energy to displace fossil fuel. The Project exports electricity to the NEWNE 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.</p> <p>In baseline, equivalent quantity of electricity would have been generated from fossil fuel dominated grid connected power plants.</p> <p>Thus project activity helps to increase renewable energy contribution for grid Connected power plants.</p> <p>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.</p> <p>Hence score of indicator is considered as neutral (0) and not monitored.</p>
Human and institutional capacity	<p>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.</p> <p>In practice, only the employees working on the Project can be considered as the main beneficiaries.</p> <p>Thus, it is considered that the project activity does not have a significant impact on human and institutional capacity.</p>
Quantitative employment and income generation	<p>Within the construction of the project, there will be created employment opportunities for workers. The project activity expected to generate the employment for more than 10 people and they are getting more payment than local level.</p> <p>The Project will recruit 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.</p>

	The proposed project will create new employments. Therefore, this indicator is scored with (+) and will be monitored.
Access to 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 will 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]

No	1	
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. It will be ensured that safe working condition and safety equipment's has been provided for all skilled and unskilled labour. It will be checked during verification through site visit observations and interview with people if noise level is maintained within permissible limit.	
Way of monitoring	How	The training records for all the employees and records of safety equipment's given to workers.
	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. 10 or more people are expected to be employed during crediting period. The employment opportunities generated are local or temporary or permanent.	
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. and B.7.2 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 ACM0002 version 17.

Further, the PDD applies grid emission factor as per the latest applicable and available CEA database version 11 and the emission factor applied is 0.9777 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 PDD /GS passport submission to GS registry, no any comparison has been made.

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.