**PROJECT DESIGN DOCUMENT FORM
FOR SMALL-SCALE CDM PROJECT ACTIVITIES (F-CDM-SSC-PDD)
Version 04.1**

PROJECT DESIGN DOCUMENT (PDD)

Title of the project activity	Solar PV Power Project by MMPL in Fatepur, Gujarat
Version number of the PDD	Version 02
Completion date of the PDD	23/11/2012
Project participant(s)	MI MySolar24 (P) Ltd.
Host Party(ies)	India
Sectoral scope(s) and selected methodology(ies)	Sectoral Scope: 01 Energy industries (renewable - / non-renewable sources) Methodology: AMS I.D. Grid connected renewable electricity generation / Version 17
Estimated amount of annual average GHG emission reductions	23,699 tCO_2e

SECTION A. Description of project activity

A.1. Purpose and general description of project activity

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MI MySolar24 (P) Ltd. (MMPL) is implementing 15 MW solar photovoltaic technology based power project near Village – Fatepur of Dasada Taluka in Surendranagar District of Gujarat State. The electricity generated from the project activity will be exported to the regional electricity grid and sold to the Gujarat State Electricity Utility (Gujarat Urja Vikas Nigam Limited) under a power purchase agreement.

Since the proposed project activity is a Greenfield project, there was no electricity generation at the project site prior to its implementation. Further, the approved small scale methodology AMS.I.D Version 17 already prescribes the baseline scenario as being "electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid". The electricity exported by the proposed project activity would displace an equivalent amount of electricity generated by the power plants already operational and proposed to be added in the North-East-West-North East (NEWNE) Grid which relies predominantly on fossil fuels. Thus, it contributes towards reduction in the demand-supply gap during periods of electricity shortage and increase in the share of renewable energy in the grid mix.

The estimation of GHG emission reductions by the project activity is limited to carbon dioxide (CO_2) only and its primary source is the fossil fuels consumed in the NEWNE grid. The expected annual net electricity delivered to the grid by the proposed project activity is 24,873 MWh. The estimated annual average and total GHG emission reductions over the chosen crediting period are 23,699 tCO_2e and 165,893 tCO_2e respectively.

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

Ministry of Environment and Forests, Govt. of India has stipulated the following indicators for sustainable development in the guidelines for CDM projects[1]:

Social well being:

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

Economic well-being:

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

Environmental well being:

- The project activity employs solar power for generation of electricity thereby displacing fossil fuels which are being rapidly consumed to meet the growing demand of electricity in the country thus contributing towards reduction in GHG emissions.

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

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

Technological well being:

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

A.2. Location of project activity

A.2.1. Host Party(ies)

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India

A.2.2. Region/State/Province etc.

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Gujarat

A.2.3. City/Town/Community etc.

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District: Surendranagar
Taluka: Dasada
Village: Fatepur

A.2.4. Physical/ Geographical location

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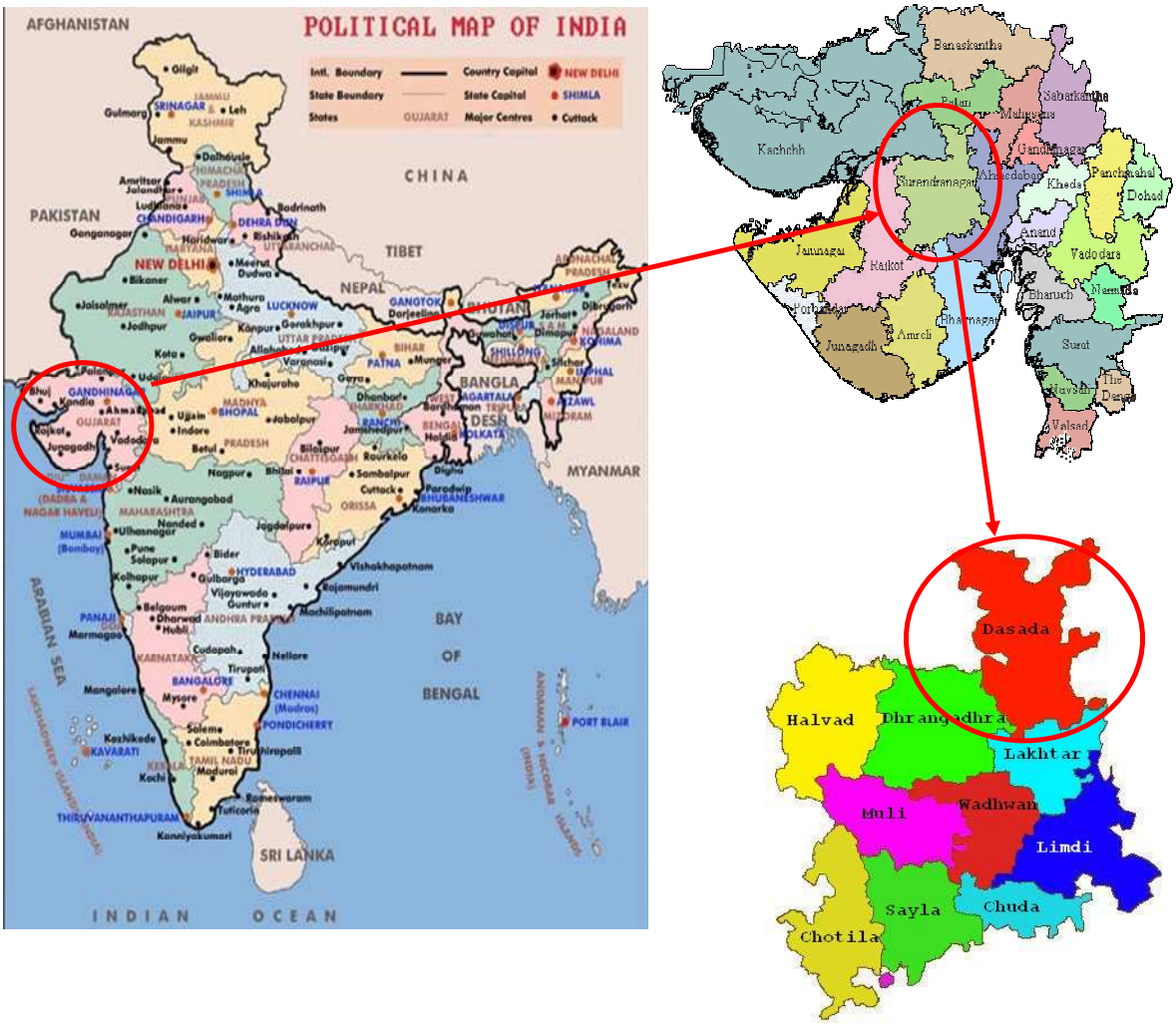
Latitude	:	23° 25' 5.19" N
Longitude	:	71° 37' 19.80" E

The nearest airport is in Ahmedabad. Surendranagar is well connected with many National Highways. Fatepur is connected by village road. Surendranagar is a rail head and is well-connected by rail with rest of India through Ahmedabad.



A.3. Technologies and/or measures

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The proposed PV project will use fixed polycrystalline PV modules. Since the project activity is a Greenfield installation there was no electricity generation at the project site prior to its implementation. The whole installation will have a 25 years design life. MI MySolar24 (P) Ltd. will procure the polycrystalline PV modules and technical specifications of typical modules will be as follows:

Parameter	Value		
Model of solar PV modules	TSM-235	TSM-240	TSM-245
Module Peak Power	235 Wp	240 Wp	245 Wp
Number of solar PV modules	1,008	49,920	11,328
Total number of modules	62,256		
Total capacity of plant	14.993 MW		

The solar PV modules are independently certified by international certification bodies under recognized standards that include IEC61215, IEC61730 and UL1703. Solar grid connected inverters of suitable capacity will be used. The respective digital outputs will be taken to a supervisory controller located in

the control room. An integrated SCADA system will be incorporated to log data of the entire 15 MW plant.

Power evacuation infrastructure will be set up as per the guidelines of Gujarat Electricity Regulatory Commissions (GERC), Central Electricity Regulatory Commission (CERC) and the respective Distribution Company (DISCOM). The proposed project will be connected to the nearby ≥66 kV grid substation. The grid connection unit will continuously synchronize the incoming solar power with the available grid for safe and efficient operation. The metering of net electricity generated will be undertaken at the plant switch-yard using an ABT compliant electronic meter, also referred to as the main meter. Another ABT compliant electronic meter, referred to as the check meter, will also be installed at the grid substation as a backup metering system.

The scenario existing prior to the start of the implementation of the project activity is the same as the baseline scenario identified in section B.4, i.e. *"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."* Therefore, in the baseline scenario, similar quantum of electricity would have been generated through fossil fuel fired power plants that dominate the NEWNE regional grid and emit greenhouse gases. Hence, the project activity displaces the greenhouse gases released due to combustion of fossil fuels in the regional electricity grid.

The project activity will result in displacing the grid power, thus resulting in reduction of CO_2 emissions that would have occurred at fossil fuel fired power plants connected to the NEWNE grid in the baseline scenario. The technology for the project is environmentally safe and sound. Further, there is no technology transfer associated with the project activity.

A.4. Parties and project participants

Party involved (host) indicates a host Party	Private and/or public entity(ies) project participants (as applicable)	Indicate if the Party involved wishes to be considered as project participant (Yes/No)
India (host)	MI MySolar24 (P) Ltd. (Private Entity)	No

A.5. Public funding of project activity

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No public funding is availed for the project activity from parties included in Annex I.

A.6. Debundling for project activity

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According to Appendix C of simplified modalities and procedures for small scale CDM project activities, "debundling" is defined as the fragmentation of the large scale project activity into smaller parts. The proposed small scale project activity will not be a "debundled" component of large scale project activity if, there is no registered small scale CDM project activity or a request for registration by another small-scale project activity:

- By the same project participants;
- In the same project category and technology/measure;
- Registered within the previous two years; and
- Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity at the closest point.

MI MySolar24 (P) Ltd. has no registered CDM project activity and has not requested registration for any other project activity in the same project category and technology within 1 km of the proposed small-scale project activity. Hence, the project activity is not a de-bundled component of a larger activity and qualifies as a small scale project activity.

SECTION B. Application of selected approved baseline and monitoring methodology
B.1. Reference of methodology
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As per the Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories, Type I.D Version 17 has been used.

Title: "Grid connected renewable electricity generation".
Reference: AMS I D, Version 17, EB 61

It has been referred from the list of approved methodologies for CDM project activities in the UNFCCC/CDM (http://cdm.unfccc.int/methodologies/SSCmethodologies/approved.html) website.

The approved methodology uses the "Tool to calculate the emission factor for an electricity system" Version 03.0.0 for determination of the baseline scenario, "Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion" Version 02 for determining project emissions and also draws upon Appendix B of the simplified modalities and procedures for small-scale CDM project activities "Indicative simplified baseline and monitoring methodologies for selected small-scale CDM project activity categories" for demonstration of additionality.

B.2. Project activity eligibility
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The project activity falls under Type-I i.e. Renewable Energy Projects. The methodology AMS.I.D Version 17 is being applied for the project activity. The reasons for the choice of project type and category for the project activity are as follows:

Criteria	Applicability to the project
1. This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass a) supplying electricity to a national or a regional grid; or b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	The project is renewable energy generation through installation of photovoltaic modules. The project will supply electricity to the NEWNE grid. The same can be verified from the Power Purchase Agreement (PPA). **Thus, the project activity complies with this criterion.**
2. Illustration of respective situations under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A2) applies is included in Table 2.	As per Table 2 of the AMS.I.D Version 17 (also provided at Appendix-3 of the PDD), project activities that supply electricity to the national/regional grid are applicable under AMS.I.D Version 17. Since the proposed project activity under consideration will also supply electricity to the regional grid. Hence the project activity is applicable under AMS.I.D Version 17. The same can be verified from the PPA. **Thus the project activity complies with this criterion.**
3. This methodology is applicable to project activities that: (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an)	The project activity is Greenfield installation of new power plant at a site where there was no renewable energy power plant operating prior to implementation of project. The same can be verified from the land documents and PPA for the project activity. **Thus the project activity complies with**

existing plant(s); or (d) involve a replacement of (an) existing plant(s).	**this criterion.**
4. Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: The project activity is implemented in an existing reservoir with no change in the volume of reservoir; The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m2; The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m2.	The project activity is not a hydro power plant. The same can be verified from the PPA. **Thus, this criterion is not applicable to the project activity.**
5. If new unit has both renewable and non renewable components (e.g.. a wind/diesel unit), the eligibility limit of 15MW for a small-scale CDM project activity applies only to the renewable component. If new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15MW.	The project does not involve any use of fossil fuel. The same can be verified from the Detailed Project Report. **Thus, this criterion is not applicable to the project activity.**
6. Combined heat and power (co-generation) systems are not eligible under this category.	The project activity generates only power and hence is not a cogeneration system. The same can be verified from the PPA. **Thus, this criterion is not applicable to the project activity.**
7. In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	The project activity is Greenfield and there is no existing power generation facility at the site. The same can be verified from the land documents and PPA for the project activity. Further, as per the Power Purchase Agreement signed with GUVNL, the project capacity is 15 MW and hence the capacity of the plant will not exceed the small scale limit of 15 MW over the entire crediting period of the project activity. **Thus, this criterion is not applicable to the project activity.**
8. In the case of retrofit or replacement, to qualify as a small scale project, the total output of the modified or retrofitted or replacement unit shall not exceed the limit of 15 MW.	Project activity is neither retrofit nor modification of existing facility. The same can be verified from the Detailed Project Report. As per the Power Purchase Agreement signed with GUVNL, the project capacity is 15 MW and hence the capacity of the plant will not exceed the small scale limit of 15 MW over the entire crediting period of the project activity. **Thus, the project activity complies with this criterion.**

As already been mentioned in the above table, as per the Power Purchase Agreement signed with GUVNL, the project capacity is 15 MW and hence the capacity of the plant will not exceed the small scale limit of 15 MW over the entire crediting period of the project activity. From the above it is observed that, the project activity is applicable under AMS.I.D.

B.3. Project boundary

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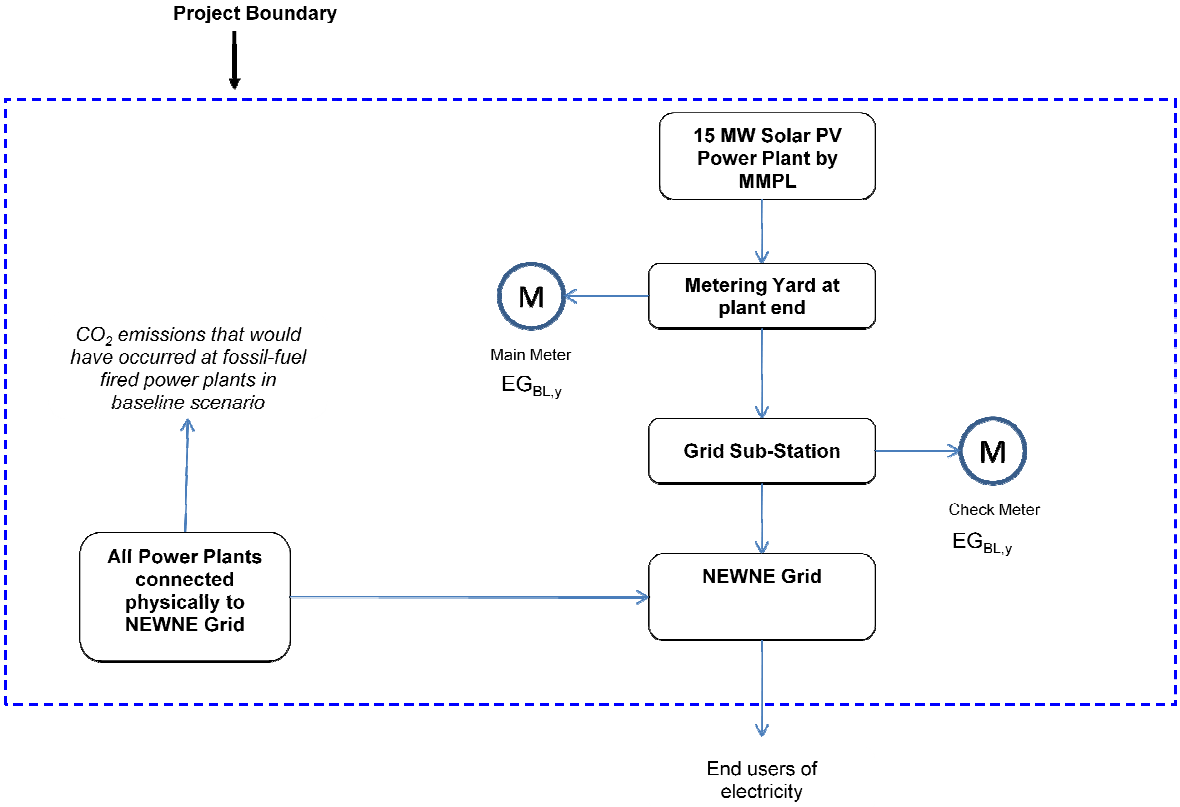
The project boundary as described in AMS.I.D includes the project power plant and all power plants connected physically to the electricity system. Accordingly the project boundary includes solar PV power generation system and all power plants connected physically to the local grid to which the renewable electricity is being supplied to avoid GHG emissions. The proposed project is located in the state of Gujarat and hence falls under the NEWNE grid (Integrated Northern, Eastern, Western and North Eastern Grid) of the Indian electricity system. The following diagram explains the project boundary for the proposed project activity.



B.4. Establishment and description of baseline scenario

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According to the paragraph 10 of the applicable small scale methodology AMS.I.D (Version 17),
"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."

Further as per paragraph 11 of AMS.I.D (Version 17), *"the baseline emissions are the product of electrical energy baseline $EG_{BL,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor."*

Therefore, the emission factor is calculated as per the paragraph 12 (a) of the methodology as combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system' Version 03.0.0 (EB 70).

Key data/ parameters used for baseline calculation:

S. No.	Data Variable	Data Unit	Description	Data Source
1.	$EG_{BL.y}$	MWh	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year *y* (MWh).	Monthly electricity generation report uploaded on State Local Dispatch Centre website
2.	$EF_{CO2,grid,y}$	tCO_2/MWh	CO_2 emission factor of the grid in year y.	CO_2 Baseline Database for the Indian Power Sector prepared by Central Electricity Authority, Version 7.0.

B.5. Demonstration of additionality

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Existing National and/or Sectoral Policies

Annexure 3 of the EB 22 states that national and/or sectoral policies and circumstances have to be accounted for while evaluating the baseline scenario. Para 7(a) states that, only those national and/or sectoral policies or regulations under paragraph 6(a) i.e. type E+ policy that increase GHG emissions, that have been implemented before adoption of the Kyoto Protocol by the COP (decision 1/CP.3, 11 December 1997), shall be taken into account when developing a baseline scenario. The Electricity Act of 2003 promoted cogeneration and generation of electricity from renewable sources of energy by providing suitable measures for connectivity with the grid and sale of electricity (Refer Section 86(1) of Electricity Act 2003). Therefore, it could be seen that the provincial and sectoral policies are E- i.e., policies that decrease GHG emissions and are after November 2001. Hence the baseline scenario is the electricity generation by grid connected fossil fuel dominated power plants confirming to Annex 3 of EB 22.

Further, the baseline scenario mentioned earlier is in compliance with all the applicable regulatory policies and laws. The project proponent is under no compulsion to opt for any particular technology or mode of power generation.

Description on Prior CDM consideration

"Guidance on the demonstration and assessment of prior consideration of the CDM" (EB62, Annex 13), states that for project activities with a starting date on or after 02 August 2008, the project participant must inform a Host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status within six months of the project activity start date. In line with the above guidance, the project proponent intimated the UNFCCC and the host country Designated National Authority (DNA) of its intention to seek CDM for the proposed project activity vide a notification sent by email on 20th March 2012 and the project was uploaded on the prior consideration section of UNFCCC website on 20th March 2012. Hence in accordance with the guidance, CDM was seriously considered in the decision to proceed with the proposed project activity.

Additionality

The project activity being small scale, meets the eligibility criteria to use simplified modalities and procedure for small-scale CDM project activities as set out in paragraph 6 (C) of decision 17/CP.7. As per the decision 17/CP.7 Para 43, a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the

registered CDM project activity. Further as per the "Guidelines on the demonstration of additionality of small-scale project activities" Version 09, a proposed small scale CDM project activity will be considered as additional if the project activity would not have occurred any way due to at least one of following barriers[2]:

a) Investment barrier: a financially more viable alternative to the project activity would have led to higher emissions;
b) Technological barrier: a less technologically advanced alternative to the project activity involves lower risks due to the performance uncertainty or low market share of the new technology adopted for the project activity and so would have led to higher emissions;
c) Barrier due to prevailing practice: prevailing practice or existing regulatory or policy requirements would have led to implementation of a technology with higher emissions;
d) Other barriers: without the project activity, for another specific reason identified by the project participant, such as institutional barriers or limited information, managerial resources, organizational capacity, financial resources, or capacity to absorb new technologies, emissions would have been higher.

It goes on to provide a positive list of technologies and project activity types that are defined as automatically additional for project sizes up to and including the small-scale CDM thresholds. The positive list comprises of the following grid-connected and off-grid renewable electricity generation technologies:

(i) Solar technologies (photovoltaic and solar thermal electricity generation);
(ii) Off-shore wind technologies;
(iii) Marine technologies (wave, tidal);
(iv) Building-integrated wind turbines or household rooftop wind turbines of a size up to 100 kW

Since the proposed project activity is a 15MW capacity grid connected solar photovoltaic technology based electricity generation project, as per Para 2 (a) (i) of EB 68, Annex 27, it is deemed to be additional.

B.6. Emission reductions

B.6.1. Explanation of methodological choices

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The AMS.I.D methodology is applied in the context of the project in the following steps:

- Calculate the baseline GHG emissions
- Calculate the project GHG emissions
- Calculate the leakage emissions
- Calculate the emission reductions

Baseline Emissions

As per para 11 and Equation No. 1 of the applicable small scale methodology (AMS.I.D, Version 17), the baseline emissions are the product of electrical energy baseline $EG_{BL,y}$ expressed in MWh of electricity produced by the renewable generating unit multiplied by the grid emission factor. The baseline emissions are to be calculated as follows:

$$BE_y = EG_{BL,y} \times EF_{CO2,grid,y}$$

Where**:**

BE_y = Baseline emissions in year *y* (tCO_2)

[2] https://cdm.unfccc.int/Reference/Guidclarif/ssc/methSSC_guid05.pdf

$EG_{BL,y}$ = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year *y* (MWh)

$EG_{CO2,grid,y}$ = CO_2 emission factor of the grid in year y (t CO_2/MWh)

Calculation of $EF_{CO2,grid,y}$

The emission factor is calculated ex-ante as per the paragraph 12 (a) of the methodology as combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the 'Tool to calculate the emission factor for an electricity system' Version 03.0.0 (EB 70). The stepwise approach for calculation is as follows:

Step 1: Identify the relevant electric power system

For the purpose of determining the electricity emission factors, a **project electricity system** and **connected electricity systems** are to be defined. The Indian power system is divided into two independent regional grids, namely NEWNE and Southern grid. Each grid covers several states. Power generation and supply within the regional grid is managed by Regional Load Dispatch Centre (RLDC). The Regional Power Committees (RPCs) provide a common platform for discussion and solution to the regional problems relating to the grid.

Each state in a regional grid meets their demand with their own generation facilities and also with allocation from power plants owned by the central sector such as NTPC and NHPC etc. Specific quotas are allocated to each state from the central sector power plants. Depending on the demand and generation, there are electricity exports and imports between states in the regional grid. There are also electricity transfers between regional grids, and small exchanges in the form of cross-border imports and exports (e.g. from Bhutan). Recently, the Indian regional grids have started to work in synchronous mode, i.e. at same frequency.

Table 1: States connected to different regional grids

Regional grid	**NEWNE Grid**				**Southern grid**
	Northern	**Eastern**	**Western**	**North Eastern**	**Southern**
States	Haryana, Himachal Pradesh, Jammu & Kashmir, Punjab, Rajasthan, Uttar Pradesh and Uttarakhand	Bihar, Orissa, West Bengal, Jharkhand and Sikkim	Gujarat, Madhya Pradesh, Maharashtra, Goa and Chattisgarh	Arunachal Pradesh, Assam, Manipur, Meghalaya, Mizoram, Nagaland and Tripura	Andhra Pradesh, Karnataka, Kerala and Tamil Nadu
Union Territories	Delhi and Chandigarh	Andaman-Nicobar	Daman & Diu, Dadar & Nagar Haveli	-	Pondicherry, Lakshadweep

The NEWNE grid constitutes several states including Gujarat. These states under the regional grid have their own power generating stations as well as centrally shared power-generating stations. While the power generated by own generating stations is fully owned and consumed through the respective state's grid systems, the power generated by central generating stations is shared by more than one state depending on their allocated share. Presently the share from central generating stations is a small portion of their own generation.

Since the CDM project would be supplying electricity to the NEWNE grid, it is preferable to take this grid as the project boundary rather than the state boundary. It also minimizes the effect of interstate power transactions, which are dynamic and vary widely. Considering free flow of electricity among the member

states and the union territory, the entire NEWNE grid is considered as a single entity for estimation of baseline.

Step 2: Choose whether to include off-grid power plants in the project electricity system (optional)

Project participants may choose between the following two options to calculate the operating margin and build margin emission factor:

Option I: Only grid power plants are included in the calculation.

Option II: Both grid power plants and off-grid power plants are included in the calculation.

The project participants have chosen Option I for the calculation of the operating and build margin emission factor i.e. off-grid power plants are not being included in the calculation.

Step 3: Select an operating margin (OM) method

The calculation of the operating margin emission factor ($EF_{grid,OM,y}$) is based on one of the following methods:

(a) Simple OM, or

(b) Simple adjusted OM, or

(c) Dispatch data analysis OM, or

(d) Average OM.

As per the tool, any of the four methods can be used. For the proposed project activity, simple OM method has been chosen to calculate the operating margin emission factor ($EF_{grid, OM, y}$). However, the simple OM method (option a) can only be used if low-cost/must-run resources constitute less than 50% of total grid generation (excluding electricity generated by off-grid power plants) in: 1) average of the five most recent years, or 2) based on long-term averages for hydroelectricity production. The low-cost/must-run resources are defined as power plants with low marginal generation costs or power plants that are dispatched independently of the daily or seasonal load of the grid. They typically include hydro, geothermal, wind, low-cost biomass, nuclear and solar generation.

Table: Share of Low Cost / Must-Run (% of Net Generation)

	2006-07	**2007-08**	**2008-09**	**2009-10**	**2010-11**
NEWNE	18.5%	19.0%	17.4%	15.9%	17.6%
South	28.3%	27.1%	22.8%	20.6%	21.0%
India	20.9%	21.0%	18.7%	17.1%	18.4%

Ref: CO_2 Baseline Database for the Indian Power Sector – CEA, Version 05, 06 and 07.[3]

Percentage of total grid generation by low cost/must run plants (on the basis of average of five most recent years) = 17.7 %

The calculation above shows that the generation from low-cost/must-run resources constitutes less than 50% of total grid generation, hence usage of the **Simple OM method** in the project case is justified.

The Simple OM emission factor can be calculated using either of the two following data vintages for years(s) *y*:

- Ex ante option: A 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation, without requirement to monitor and recalculate the emissions factor during the crediting period,

or

[3] http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

- Ex post option: The year in which the project activity displaces grid electricity, requiring the emissions factor to be updated annually during monitoring. If the data required to calculate the emission factor for year y is usually only available later than six months after the end of year y, alternatively the emission factor of the previous year (y-1) may be used. If the data is usually only available 18 months after the end of year y, the emission factor of the year proceeding the previous year (y-2) may be used. The same data vintage (y, y-1 or y-2) should be used throughout all crediting periods.

The project proponents choose the *Ex ante* option for estimating the simple OM emission factor wherein as described above a 3-year generation-weighted average, based on the most recent data available at the time of submission of the CDM-PDD to the DOE for validation, without requirement to monitor and recalculate the emissions factor during the crediting period will be undertaken.

Step 4: Calculate the operating margin emission factor according to the selected method

The simple OM method has been selected as justified above. The simple OM emission factor is calculated as the generation-weighted average CO_2 emissions per unit net electricity generation (tCO_2/MWh) of all generating power plants serving the system, not including low-cost / must-run power plants / units using the following formula:

$$EF_{grid,OM,simple,y} = \frac{\sum_{i,m} FC_{i,m,y} \cdot NCV_{i,y} \cdot EF_{CO2,i,y}}{\sum_{m} EG_{m,y}}$$

Where:

$EF_{grid,OMsimple,,y}$	=	Simple operating margin CO_2 emission factor of in year y (tCO_2/MWh)
$FC_{i,m,y}$	=	Amount of fuel type i consumed by power unit m in year y(Mass or volume unit)
$NCV_{i,y}$	=	Net calorific value (energy content) of fuel type i in year y (GJ / mass or volume unit)
$EF_{CO2,i,y}$	=	CO_2 emission factor of fuel type i in year y (tCO_2/GJ)
$EG_{m,y}$	=	Net electricity generated and delivered to the grid by power unit m in year y (MWh)
m	=	All power units serving the grid in year y except low-cost / must-run power units
i	=	All fuel types combusted in power plant / unit m in year y
y	=	Either the three most recent years for which data is available at the time of submission of the CDM-PDD to the DOE for validation (ex ante option) or the applicable year during monitoring (ex post option), following the guidance on data vintage in step 2

In India, the Central Electricity Authority (CEA) has estimated the baseline emission factor for the power sector. This data has also been endorsed by the DNA and is the most authentic information available in the public domain. The details of same can be found on CEA website at http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm.

Step 5: Calculate the build margin (BM) emission factor

In terms of vintage of data, project participants can choose between one of the following two options:

Option 1: For the first crediting period, calculate the build margin emission factor ex-ante based on the most recent information available on units already built for sample group m at the time of CDM-PDD submission to the DOE for validation. For the second crediting period, the build margin emission factor

should be updated based on the most recent information available on units already built at the time of submission of the request for renewal of the crediting period to the DOE. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used. This option does not require monitoring the emission factor during the crediting period.

Option 2: For the first crediting period, the build margin emission factor shall be updated annually, ex-post, including those units built up to the year of registration of the project activity or, if information up to the year of registration is not yet available, including those units built up to the latest year for which information is available. For the second crediting period, the build margin emissions factor shall be calculated ex-ante, as described in option 1 above. For the third crediting period, the build margin emission factor calculated for the second crediting period should be used.

The project proponents wish to choose option 1.

Capacity additions from retrofits of power plants should not be included in the calculation of the build margin emission factor.

The sample group of power unit's *m* used to calculate the build margin should be determined as per the following procedure, consistent with the data vintage selected above:

(a) Identify the set of five power units, excluding power units registered as CDM project activities, that started to supply electricity to the grid most recently ($SET_{5\text{-units}}$) and determine their annual electricity generation ($AEG_{SET\text{-}5\text{-}units}$, in MWh);

(b) Determine the annual electricity generation of the project electricity system, excluding power units registered as CDM project activities (AEG_{total}, in MWh). Identify the set of power units, excluding power units registered as CDM project activities, that started to supply electricity to the grid most recently and that comprise 20% of AEG_{total} (if 20% falls on part of the generation of a unit, the generation of that unit is fully included in the calculation) ($SET_{\geq 20\%}$) and determine their annual electricity generation ($AEG_{SET\text{-}\geq 20\%}$, in MWh);

(c) From $SET_{5\text{-units}}$ and $SET_{\geq 20\%}$ select the set of power units that comprises the larger annual electricity generation (SET_{sample});

Identify the date when the power units in SET_{sample} started to supply electricity to the grid. If none of the power units in SET_{sample} started to supply electricity to the grid more than 10 years ago, then use SET_{sample} to calculate the build margin.

In India, the installed capacity and corresponding annual generation from power plants is quite high. The Central Electricity Authority (CEA) has estimated the annual electricity generation from $SET_{\geq 20\%}$ to be larger than the generation from $SET_{5\text{-units}}$. The details of same can be found on CEA website at http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm. Further, none of the power units in $SET_{\geq 20\%}$ started to supply electricity to the grid more than 10 years ago.

Therefore, SET_{sample} is selected as $SET_{\geq 20\%}$ for the estimation of build margin.

The build margin emissions factor is the generation-weighted average emission factor (tCO_2/MWh) of all power units m during the most recent year y for which power generation data is available, calculated as follows:

$$EF_{grid,BM,y} = \frac{\sum_m EG_{m,y} \cdot EF_{EL,m,y}}{\sum_m EG_{m,y}}$$

Where:

$EF_{grid,BM,y}$ = Build margin CO_2 emission factor in year y (tCO_2 / MWh)

$EG_{m,y}$ = Net quantity of electricity generated and delivered to the grid by power unit *m* in year y (MWh)

$EF_{EL, m, y}$ = CO_2 emission factor of power unit *m* in year y (tCO_2 / MWh)
M = Power units included in the build margin
Y = Most recent historical year for which electricity generation data is available

Calculations for the Build Margin emission factor $EF_{grid, BM, y}$ is based on the most recent information available on the plants already built for sample group *m* at the time of PDD submission. The sample group *m* consists of the power plant capacity additions in the electricity system that comprise 20 % of the system generation and that have been built most recently ($SET_{\geq 20\%}$).

Step 6. Calculate the combined margin emissions factor

The calculation of the combined margin (CM) emission factor ($EF_{grid,CM,y}$) is based on one of the following methods:

(a) Weighted average CM; or

(b) Simplified CM.

The weighted average CM method (option A) should be used as the preferred option.

The combined margin emissions factor is calculated as follows:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

Where:

$EF_{grid,BM,y}$ = Build margin CO_2 emission factor in year y (tCO_2/MWh)
$EF_{grid,OM,y}$ = Operating margin CO_2 emission factor in year y (tCO_2/MWh)
w_{OM} = Weighting of operating margin emissions factor (%)
w_{BM} = Weighting of build margin emissions factor (%)

The following default values should be used for w_{OM} and w_{BM}:

- Wind and solar power generation project activities: w_{OM} = 0.75 and w_{BM} = 0.25 (owing to their intermittent and non-dispatchable nature) for the first crediting period and for subsequent crediting periods.
- All other projects: w_{OM} = 0.5 and w_{BM} = 0.5 for the first crediting period, and w_{OM} = 0.25 and w_{BM} = 0.75 for the second and third crediting period, unless otherwise specified in the approved methodology which refers to this tool.

As mentioned before, the baseline emission factors have been calculated as per CEA sourced data for various regional grids in India according to the formulas specified above. As this is the most authentic information available in the public domain, the baseline emission factor used in the calculation of baseline emissions for the proposed project activity is being referred from the same for transparency and conservativeness[4].

Project Emissions

As per para 20 of AMS.I.D, Version 17, since the proposed project activity is electricity generation based on solar photovoltaic technology, there will be no fossil fuel combustion during the project activity and hence there will be no project emissions.
Therefore, the project emissions, $PE_y = 0$

Leakage

According to AMS.I.D Version 17, if the energy generating equipment is transferred from another activity, leakage is to be considered. Since this is not the case in the proposed project activity, no leakage emissions are to be considered.

[4] http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

$LE_y = 0$

Emission Reductions

Emission reductions are calculated as follows (as per para 23 and Equation 10 of AMS.I.D Version 17):

$$ER_y = BE_y - PE_y - LE_y \quad \textbf{(10)}$$

Where:

ER_y = Emission reductions in year *y* (t CO_2/y)

BE_y = Baseline emissions in year *y* (t CO_2/y)

PE_y = Project emissions in year *y* (t CO_2/y)

LE_y = Leakage emissions in year y (t CO_2/y)

B.6.2. Data and parameters fixed ex ante

Data / Parameter	$EF_{grid,OM,y}$
Unit	tCO_2/MWh
Description	Operating Margin emission factor for NEWNE grid
Source of data	Referred from CO_2 Baseline Database for the Indian Power Sector prepared by Central Electricity Authority, Version 7.0. (http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm)
Value(s) applied	0.9842
Choice of data or Measurement methods and procedures	The data for the years (2008-09, 2009-10 and 2010-11) has been sourced from CO_2 Baseline Database for the Indian Power Sector prepared by Central Electricity Authority, Version 7.0.
Purpose of data	Calculation of baseline emissions.
Additional comment	This value is determined and fixed ex-ante.

Operating Margin Estimation for NEWNE Grid (tCO_2 / MWh)

Year	**Operating Margin (tCO_2e/MWh)**	**Net Generation (GWh)**
2008-09	1.0066	421,803
2009-10	0.9777	462,327
2010-11	0.9707	476,987
Generation Weighted Average OM	**0.9842 tCO_2e / MWh**	

Data / Parameter	$EF_{grid,BM,y}$
Unit	tCO_2/MWh
Description	Build Margin emission factor for NEWNE grid
Source of data	Referred from CO_2 Baseline Database for the Indian Power Sector prepared by Central Electricity Authority, Version 7.0. (http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm)
Value(s) applied	0.8588
Choice of data or Measurement methods and procedures	The data (for the year 2010-11) has been sourced from CO2 Baseline Database for the Indian Power Sector prepared by Central Electricity Authority, Version 7.0.
Purpose of data	Calculation of baseline emissions.
Additional comment	This value is determined and fixed ex-ante.

Data / Parameter	$EF_{grid,CM,y}$ or $EF_{CO2,grid,y}$
Unit	tCO_2/MWh
Description	Combined Margin CO_2 emission factor for NEWNE grid
Source of data	Estimated figure based on 75% of OM and 25% of BM values
Value(s) applied	0.9528 tCO_2/MWh
Choice of data or Measurement methods and procedures	The data has been sourced from CO_2 Baseline Database for the Indian Power Sector prepared by Central Electricity Authority, Version 7.0. Since the proposed project activity is a solar power project, the combined margin emission factor is calculated as 75% of OM and 25% of BM emission factors.
Purpose of data	Calculation of baseline emissions.
Additional comment	This value is determined and fixed ex-ante.

Combined Margin Estimation for NEWNE Grid (tCO_2e / MWh)	
Generation Weighted Average OM ($EF_{grid,OM,y}$)	**0.9842**
BM ($EF_{grid,BM,y}$ **)**	**0.8588**
Combined Margin ($EF_{grid,CM,y}$)	**0.9528**

B.6.3. Ex-ante calculation of emission reductions

>>

Parameter	Value	Units	Source
Installed Capacity	15	MW	As per Power Purchase Agreement
No. of Days of operation	365	Days	Assumed
No of Hours	24	Hours	Assumed
Plant Load Factor	18.929	%	Independent third party energy generation assessment study

			conducted by Arbutus Consultants Pvt. Ltd[5]
Net Generation	24,873	MWh	Calculated

Particulars	**Unit**	**2008-09**	**2009-10**	**2010-11**
Simple Operating Margin (incl. Imports)	tCO_2e/MWh	1.0066	0.9777	0.9707
Net Electricity Generation in Operating Margin (including imports)	GWh	4,21,803	4,62,327	4,76,987
Generation Weighted Average Operating Margin	tCO_2e/MWh	0.9842		

Particulars	**Unit**	**Value**	**Weight**
Generation Weighted Average Operating Margin	tCO_2e/MWh	0.9842	0.75
Build Margin (not adjusted for imports)	tCO_2e/MWh	0.8588	0.25
Combined Margin (incl. Imports) (Wt. Avg of OM & BM) Emission Factor	tCO_2e/MWh	0.9528	

Baseline Emissions BE_y (As per Equation (1) of AMS.I.D, Version 17),

$$BE_y = EG_{BL,y} \times EF_{CO2,grid,y}$$

Where,

$EG_{BL,y}$ = 24,873 MWh

$EF_{CO2,grid,y}$ = $EF_{grid,CM,y}$ = 0.9528 tCO_2e/MWh

Hence,

BE_y = 24,873 MWh * 0.9528 tCO_2e/MWh

= 23,699 tCO_2e

Project Emissions, PE_y = 0 (As explained in section B6.1)

Leakage Emissions, LE_y = 0 (As explained in section B6.1)

Therefore the emission reductions, ER_y (As per Equation (10) of AMS.I.D, Version 17)

$$ER_y = BE_y - PE_y - LE_y$$

= 23,699 – 0 – 0

= 23,699 tCO_2e

[5] MMPL had initially envisaged installation of REC make solar PV modules and with these modules, the PLF had been estimated by independent third party, Arbutus Consultants Pvt. Ltd., (as per para 3 (b) of the Guidelines for the reporting and validation of plant load factors Version 01) to be 18.929%. The design of the project activity was subsequently changed to Trina make solar PV modules due to availability and supply constraints for REC modules. In the new design, Arbutus Consultants Pvt. Ltd., estimated the PLF for the project activity to be 20.484%. However, on a conservative basis, the lower PLF value is being continued to be used for estimation of emission reductions.

B.6.4. Summary of ex-ante estimates of emission reductions

Year	Baseline emissions (tCO_2 e)	Project emissions (tCO_2 e)	Leakage (tCO_2 e)	Emission reductions (tCO_2 e)
2013	23,699	0	0	23, 699
2014	23,699	0	0	23, 699
2015	23, 699	0	0	23, 699
2016	23, 699	0	0	23, 699
2017	23, 699	0	0	23, 699
2018	23, 699	0	0	23, 699
2019	23, 699	0	0	23, 699
Total	**165,893**	**0**	**0**	**165,893**
Total number of crediting years	**7**[6]			
Annual average over the crediting period	**23,699**	**0**	**0**	**23,699**

[6] Renewable crediting period of total 21 years renewable twice.

B.7. Monitoring plan

B.7.1. Data and parameters to be monitored

Data / Parameter	$EG_{BL,y}$
Unit	MWh/yr
Description	Quantity of net electricity generation supplied by the project plant/unit to the grid in year *y*
Source of data	Monthly electricity generation report uploaded on State Local Dispatch Centre website
Value(s) applied	24,873
Measurement methods and procedures	Main meter will be installed at the plant end and Check meter will be installed at the sub-station end to continuously measure the grid electricity export and import. Both meters would be dedicated for the project activity (no pooling with other projects involved) and would remain in control of GETCO. The meter reading from Main meter will be taken by GETCO representative every week and the data will be sent to SLDC, which will upload the electricity generation data in a consolidated report every month on its website. The net electricity exported/supplied to the grid will be calculated as the difference between the measured quantities of the grid electricity export and the import. In the event that the main meter is not in service as a result of maintenance, repairs or testing, then the check meter will be used. Site engineers at the project site will be responsible for measurement of data. Site engineers will record the daily generation and send the data to the shift in-charge, who will then send the daily generation data to the O&M Head. The meters will be ABT complaint and have an accuracy class of 0.2s.
Monitoring frequency	Monitored continuously and recorded monthly
QA/QC procedures	Calibration of all the meters shall be done once in a period of three years in accordance with the Power Purchase Agreement and the Indicative simplified baseline and monitoring methodologies for selected small scale CDM project activity categories[7]. Calibration will be done by an authorized agency or reputed laboratory. The meters will be bi-directional with an accuracy class of 0.2 s. The main meter reading will be cross checked with records for sold electricity (invoices).
Purpose of data	Calculation of baseline emissions
Additional comment	The data will be archived electronically as well as in log books at the power plant and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

B.7.2. Sampling plan

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[7] http://cdm.unfccc.int/EB/023/eb23_repan33.pdf

No sampling approach has been used.

B.7.3. Other elements of monitoring plan

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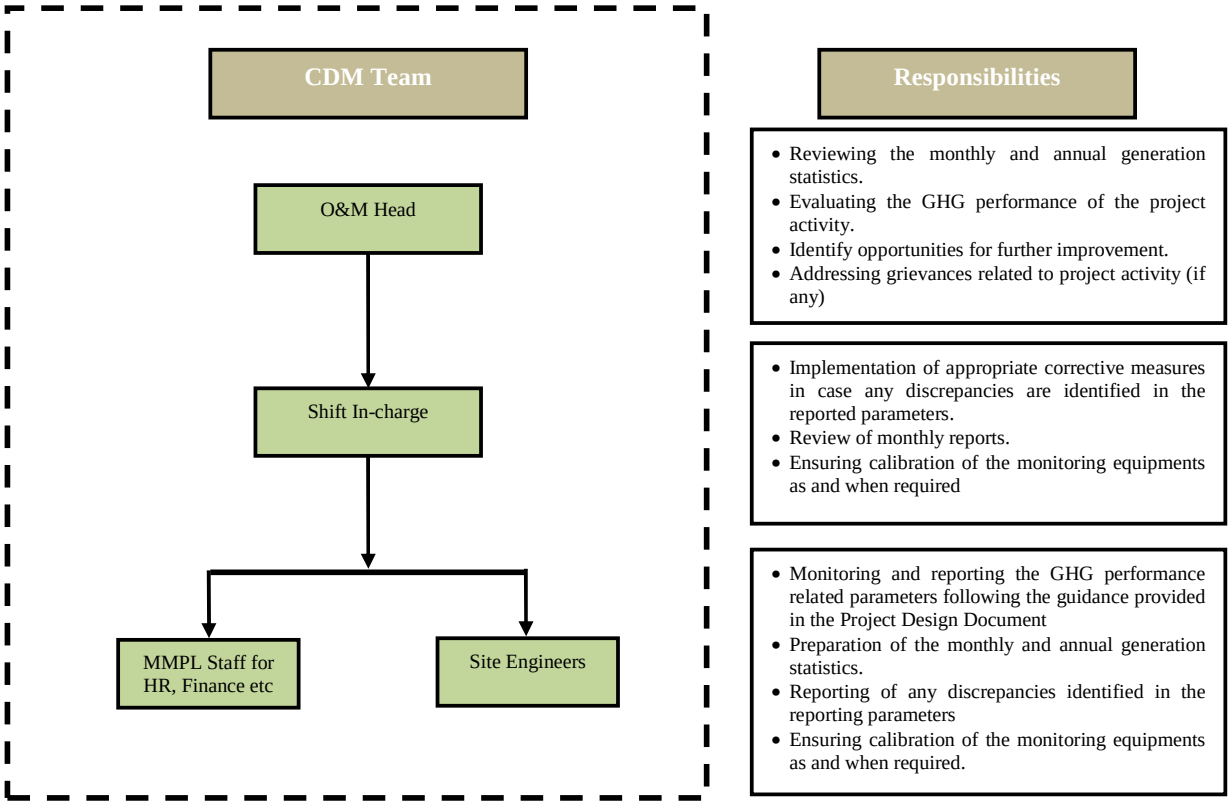
The organizational structure for the proposed power plant envisages site engineers responsible for O&M of the plant. The site engineers will report to the shift in-charge, who will then report to the O&M Head.

The day-to-day operation like planning the routine maintenance, safety and environmental control will be placed under the care of the site engineers. All administrative functions like personnel, industrial relations, labour welfare and financial functions will be looked after by MMPL. The organizational structure and responsibilities on project operation, monitoring and data recording has been mentioned below:



Operation & Management Structure

Reading and Correction of Meters:

For the purpose of energy accounting, MMPL will provide ABT compliant meters at the interface points. Interface metering will confirm to the Central Electricity Authority (Installation and Operation Meters) Regulation, 2006. Meter reading from Main meter will be taken by GETCO representative every week and the data will be sent to SLDC, which will upload the electricity generation data every month on its website. In the event that the main meter is not in service as a result of maintenance, repairs or testing, then the check meter will be used during the period the main meter is not in service.

Calibration of Meters:

Calibration of all the meters will be undertaken once in three years and faulty meters will be duly replaced immediately. Calibration will be done by an authorized agency or reputed laboratory.

Emergency Preparedness and Uncertainty Procedure:

In case Main meter or check meter is found to be outside the acceptable limits of accuracy or faulty or not functioning properly, it will be repaired, recalibrated or replaced as soon as possible. In the event that the Main meter is not in service as a result of maintenance, repairs or testing, the check meter will be used.

In case both the main and check meter are found to be outside the acceptable limits of accuracy or faulty or not functioning properly, both the meters shall be calibrated immediately and the error percentage found in the main mater during its calibration shall be applied to its metered energy data for the entire period since its last calibration to obtain the corrected value of net electricity exported to the grid.

Data Recording and Archiving:

MMPL will keep complete and accurate records of operating log at the Power Plant. The data will be archived electronically as well as in log books at the power plant and will be kept for two years after the end of the crediting period or the last issuance of CERs for this project activity, whichever occurs later.

In case the dates of a particular monitoring period do not match with the dates of the billing cycle, the net electricity exported to the grid would be calculated from:

- Data collected by MMPL from the ABT compliant main meter installed at the plant end and recorded in the daily log books
- Apportioning the net electricity exported to grid, as recorded in the consolidated SLDC report, based on the number of days in the monitoring period and the number of days for which SLDC report was prepared.

The conservative value among the two would be used for calculation of emission reductions during that period.

SECTION C. Duration and crediting period

C.1. Duration of project activity

C.1.1. Start date of project activity

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24/02/2012

The start date of the project activity has been considered as the date when the first work order for the implementation of the project activity was released. This was the work order for supply of oil filled transformers for the project activity.

C.1.2. Expected operational lifetime of project activity

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25 Years and 0 Months

C.2. Crediting period of project activity

C.2.1. Type of crediting period

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Renewable crediting period has been used. This is the first renewable period.

C.2.2. Start date of crediting period

>>

24/12/2012 or date when DOE submits the complete request for registration, whichever is later.

C.2.3. Length of crediting period

>>

7 Years and 0 months

SECTION D. Environmental impacts

D.1. Analysis of environmental impacts

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The project activity has no significant impact on the environment. Solar PV power projects are not included in this schedule –I of the EIA notification S.O.1533 (E) dated 14th September 2006 and thus an EIA is not required. Ministry of Environment & forests vide their OM J-11013/41/2006 –IA II(I) dated 13th May 2011 has reaffirmed this and exempted the Solar PV power plants from EIA and EC requirement.

SECTION E. Local stakeholder consultation

E.1. Solicitation of comments from local stakeholders

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MI MySolar 24 (P) Ltd. invited stakeholders to a meeting to explain the UNFCCC CDM process and proposed 15 MW Solar PV Power Project. Stakeholders were invited for the meeting through personal invitation letters dated 12th April, 2012. Stakeholders' meeting for the CDM project on the proposed 15 MW Solar PV power project took place on 26th April, 2012 in village Fatepur, Taluka Dasada in District Surendranagar in Gujarat. Approximately 23 villagers from the village Fatepur attended this meeting.

A record of the people attending the meeting was maintained and all comments from the stakeholders received during the meeting were recorded and compiled in the minutes of meeting.

The meeting was convened by Mr. Chandrakant Soyla, who introduced the panel members and explained to the stakeholders the purpose of this local stakeholder consultation meeting. He emphasized the importance of solar power and steps taken by the Gujarat State Government towards promotion of solar power projects in the State of Gujarat. He also explained the benefits of clean energy generation as compared to conventional power generation based on fossil fuels, which results in harmful impacts on the environment.

Mr. Soyla then invited Mr. Gulab Singh (Project Director) to address the gathering. Mr. Singh thanked all the stakeholders for attending the meeting and requested their support for such initiative towards clean energy generation. He explained that the proposed project will be beneficial for the development of the region and hoped that successful implementation of this project will set an example for other companies to implement more solar power projects in the region.

Mr. Soyla then requested the Sarpanch of Village Fatepur to say a few words to the stakeholders present in the meeting. Sarpanchji emphasized that he along with other villagers welcome this initiative of MMPL for setting up clean energy power plant in their village. He told the stakeholders that the project will help to provide employment to the local villagers and will lead to overall development of the village. Sarpanchji then requested the Headmaster of the Primary School of Fatepur to give his insights on the project. The Headmaster started with emphasizing the importance of education and how educated people from the local villages can get employment in such modern power generation plants. He also welcomed setting up of solar power plant in the village and explained how this will be a great live example of advanced technology for children and youth of the village.

CDM consultant present at the meeting briefed the stakeholders on the possible threat of climate change caused due to increased concentration of Greenhouse gases in the atmosphere. He further briefed the gathering about Kyoto Protocol, Clean Development Mechanism and its associated benefits. He described the project activity in relation to CDM and discussed the benefits of implementing the project. He described that the project, if implemented, would result in reduction of Greenhouse gases in the atmosphere by feeding power to the fossil fuel fired grid system. Thus, he explained that the project activity would be beneficial to the environment and the society as a whole.

Mr. Soyla thanked the panel members for addressing the meeting and then invited the stakeholders to share their queries, suggestions and concerns with respect to the proposed CDM project activity and replied to the same.

E.2. Summary of comments received

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Following questions were raised by the stakeholders:

Sl. No.	Question	Stakeholder	Answer
1.	We request the company that local villagers should benefit from the project activity?	Ishwar Bhai (Village: Fatepur)	The company assured that local villagers will be given preference for employment during construction and operation phase.
2.	Will solar project have any harmful effects on the land adjoining the plant?	Haribhai Bhagwanbhai Makwana (Village: Fatepur)	The project activity will use solar energy to generate electricity using solar PV modules. The plant will in no way have any harmful effects in terms of temperature rise or any effect on the adjoining lands or flora and fauna of the region.

The participants expressed their positive feedback on the initiative taken up by the project promoter. They also expressed their goodwill for the environment friendly initiative.

Finally, Mr. Chandrakant thanked all the participants for attending this meeting on invitation from MI MySolar24 (P) Limited. He also expressed that MMPL is committed to its social and environmental obligations and invites various participants to keep on giving their feedback on a continuous basis so that if any improvements are called for, those could be implemented in various operations of the project.

E.3. Report on consideration of comments received

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All the stakeholders were appreciative that the CDM project activity in their locality is contributing to a global cause and they commended the MMPL management for their initiatives in the area of solar power development. The participants had raised various questions mostly related to the benefits of the project for the nearby villagers and any harmful effects from commissioning of the plant. All the questions were satisfactorily explained to the participants by the project promoter. The project promoter explained about the technical details, feasibility of the project activity and its impacts on environment. The stakeholders appreciated the project promoter for the environmental friendly measures. Considering the comments made by the stakeholders, no significant negative impacts due to the project activity had been identified.

SECTION F. Approval and authorization

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An application for the host country to the National CDM Authority has been submitted.

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Appendix 1: Contact information of project participants

Organization	MI MySolar24 (P) Ltd.
Street/P.O. Box	15 Barakhamba Road, Connaught Place
Building	8-E, Hansalya
City	New Delhi
State/Region	Delhi
Postcode	110001
Country	India
Telephone	+91-11 66034674
Fax	(91-11) 66273090/91
E-mail	mms24.gujarat@gmail.com
Website	
Contact person	
Title	
Salutation	Mr.
Last name	Shukla
Middle name	Shankar
First name	Jay
Department	
Mobile	+91-9165461066
Direct fax	+91-11-66273090
Direct tel.	+91-11-66034674
Personal e-mail	

Appendix 2: Affirmation regarding public funding

Not applicable as no public funding has been availed for the project activity from parties included in Annex I.

Appendix 3: Applicability of selected methodology

Illustration of respective situations under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A) applies (as per Table-2 of AMS-I.D Version 17):

Table-2: Applicability of AMS-I.D, AMS-I.F and AMS-I.A based on project types

S.No.	Project type	AMS-I.A	AMS-I.D	AMS-I.F
1	Project supplies electricity to a national/regional grid		×	
2	Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)			×
3	Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)		×	
4	Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel			×
5	Project supplies electricity to household users (included in the project boundary) located in off grid areas	×		

Since the project activity supplies electricity to the NEWNE grid which is a regional grid, AMS.I.D is applicable to the project. The documents used as basis for justification of compliance with the applicability criteria of the methodology are as follows:

- Power Purchase Agreement with Gujarat Urja Vikas Nigam Limited (GUVNL) dated 25/10/2010
- Detailed Project Report prepared by Arbutus Consultants Pvt. Ltd. Dated February 2012
- Land details of MMPL submitted to National CDM Authority (NCDMA) and certified by Public Notary, dated 31/05/2012

Appendix 4: Further background information on ex ante calculation of emission reductions

Information already provided in section B.6 of the PDD.

Appendix 5: Further background information on monitoring plan

Information already provided in section B.7 of the PDD.

Appendix 6: Summary of post registration changes

Not applicable at this stage.

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