



**PROGRAMME DESIGN DOCUMENT FORM FOR
SMALL-SCALE CDM PROGRAMMES OF ACTIVITIES (F-CDM-SSC-PoA-DD)
Version 02.0**

PROGRAMME OF ACTIVITIES DESIGN DOCUMENT (PoA-DD)

PART I. Programme of activities (PoA)

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A.1. Title of the PoA

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A.2. Purpose and general description of the PoA

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A.3. CMEs and participants of PoA

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A.4. Party(ies)

Name of 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)
Name A (host)	Private entity A Public entity A	
Name B	Private entity B Public entity B	
...	...	

A.5. Physical/ Geographical boundary of the PoA

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PART II. Generic component project activity (CPA)

SECTION A. General description of a generic CPA

A.1. Purpose and general description of generic CPAs

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The CPA constitutes of a Bundle of (number of individual plants) solar power generation units located in different states of India with following specifications:

Unique Identification number (UIN) of the power generation Unit	State	Name of operator	Capacity in MW

SECTION B. Application of a baseline and monitoring methodology

B.1. Reference of the approved baseline and monitoring methodology(ies) selected

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The project falls in the category of Sectoral Scope 1: Energy Industries (Renewable/Non renewable) AMS-I.D- “Grid connected renewable electricity generation”; Version 16

B.2. Application of methodology(ies)

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The applicability to the methodology has been justified at PoA level as follows:

Sl. no.	Applicability Conditions under AMS-I.D Version 16	Project activity is applicable to use this methodology since
1	This category comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to a national or a regional grid.	<u>Applicable and Fulfilled</u> The project activities comprise of renewable energy generation using Solar photovoltaic or Solar Thermal technology and will supply electricity to Indian grid.
2	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) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	<u>Applicable and Fulfilled</u> The project activities falls under option (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) since each CPA envisages setting up a number of Solar based power generation units across India with a combined capacity of power generation units under each CPA not exceeding 15 MW.
3	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: <ul style="list-style-type: none"> 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 	<u>Not Applicable</u> CPAs would involve setting up of new Solar project and does not involve hydropower plant. Thus this applicability condition is not applicable.



	definitions given in the Project Emissions section, is greater than 4 W/m ² ; 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/m ² .	
4	In the case of biomass power plants, no other biomass types than renewable biomass is to be used in the project plant.	<u>Not Applicable</u> CPAs would involve setting up of new Solar project and does not involve biomass power plants. Thus this applicability condition is not applicable.
5	If the new unit has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component.	<u>Applicable and Fulfilled</u> If the new unit has both renewable and non-renewable components, the eligibility limit of 15 MW for a small-scale CDM project activity will only to the renewable component.
6	Combined heat and power (co-generation) systems are not eligible under this category.	<u>Not Applicable</u> Grid connected Solar projects does not involve Combined heat and power (co-generation) systems. The only output from such system is power that would be exported to the Grid.
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 ⁶ from the existing units.	<u>Not Applicable</u> Project involves setting up of Greenfield Solar power project. Thus this applicability condition is not applicable.
8	In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	<u>Not Applicable</u> No retrofit or replacement to an existing system is involved. Thus this applicability condition is not applicable.

Hence according AMS-I.D, the proposed project is eligible to use this methodology.

B.3. Sources and GHGs

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	Source	Gas	Included?	Justification/Explanation
Baseline	Grid-connected electricity generation	CO ₂	Yes	In the baseline scenario the electricity would have been sourced from Indian grid which in turn would be connected to fossil fuel fired power plants which emit CO ₂ .
		CH ₄	No	As per AMS-I.D Methane Emission is not to be accounted for, this is conservative.
		N ₂ O	No	As per AMS-I.D nitrous oxide Emission is not to be accounted for, this is conservative.



Project Activity	Greenfield Solar energy conversion system	CO ₂	No	No Project emissions are expected.
		CH ₄	No	No methane generation is expected to be emitted.
		N ₂ O	No	No nitrous oxide generation is expected to be emitted.

B.4. Description of baseline scenario

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The Baseline scenario has been defined in AMS I D. The baseline scenario is: Power would be generated in existing power plants in the electricity grid.

B.5. Demonstration of eligibility for a generic CPA

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Sl.no .	Eligibility Criteria for inclusion of a SSC CPA in the PoA	How the eligibility criteria is fulfilled by the CPA
1	Be a grid connected solar based renewable energy generation units.	
2	Be a newly built solar power plant.	
3	Have no energy generation equipment transferred from another activity and no existing equipment is transferred to another activity	
4	Ensure that the geographical boundary of each solar power generation unit under the SSCCPA is uniquely defined with GPS coordinates and is within the boundary of PoA.	
5	Confirm that the power generation units / units under the CPA is not registered or being registered as a stand-alone CDM project outside of the PoA. This would be achieved through undertaking by project implementer.	
6	Confirm that if the new unit has both renewable and non-renewable components (e.g., a solar/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component.	
7	Confirm that the start date of any CPA is not, prior to the commencement of validation of the programme of activities, i.e. the date on which the CDM-PoA-DD is first published for global stakeholder consultation ¹	
8	Confirm and fulfil the additionality criterion set in the PoA as defined in Section E.5.2 of the PoA-DD.	
9	Declaration that there is no ODA funding flowing into the individual CPA.	
10	In the event the power plant operator has an operating solar power plant within 1 km of boundary of the proposed plant then the combined capacity of all such plants put together by the same operator should not exceed 15 MW. At the time of inclusion of CPA, the managing entity would do a check within a radius of 1 km of power plant as part of the CPA to confirm the condition is met.	

¹ http://cdm.unfccc.int/EB/047/eb47_repan29.pdf



Assessment and demonstration of additionality of the small-scale CPA , as per eligibility criteria listed in the Registered PoA:

As per EB 60, Annex 26; full additionality assessment is not required in the context of component project activities (CPA), rather the confirmation of additionality for CPAs should be conducted by means of the eligibility criteria.²

Additionality analysis at POA level has been conducted as per Attachment A to Appendix B of 4/CMP.1 Annex II .While conducting Additionality analysis Non – binding practice examples to demonstrate Additionality for SSC project activity (EB 35 Annex 34) has been followed.Based on analysis as provided in section A.4.3. of the Registered PoA DD, since all projects to be implemented under the PoA are covered under Solar technologies (PV and solar thermal), with a Maximum capacity of up to 15 MW the PoA and the individual projects to be included in under the PoA are additional.

As per the Registered PoA DD each power generation unit has to satisfy the following criteria to be considered additional.

S.no	Criteria	Benchmark	Rationale
1	Scale	The installed capacity of the power generating unit should be less than or equal to 15 MW.	<p>Additionality criterion is in accordance with the analysis done in PoA (as per Section A.4.3 and E.5.2 of PoA-DD) according to which projects upto a capacity of 15 MW are additional.</p> <p>The source of installed capacity to be checked while adding CPA would be based on allotment letter or Power purchase agreement (PPA) by respective state electricity board or any other similar agency</p> <p>All the power plants forming a part of the CPA fulfills the eligibility criteria. The aggregate capacity is less than 15 MW</p>

All the power plants included in the CPA fulfil the criterion since the scale of power plants is as follows:

Unique identification number (UIN) of the Power generation unit	State	Name of Operator	Capacity in MW	Project fulfils the additionality criterion

Thus the CPA is additional as evident from the above analysis.

²http://cdm.unfccc.int/EB/archives/meetings_10.html#60

B.6. Estimation of emission reductions of a generic CPA**B.6.1. Explanation of methodological choices****>> Baseline Emissions**

According to the AMS-I.D, version 16, if the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.

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.

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y} \quad (1)$$

Where

BE_y	=	Baseline emissions in year y (tCO ₂).
$EG_{BL,y}$	=	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{CO_2,grid,y}$	=	CO ₂ emission factor of the grid in year y (tCO ₂ /MWh)

Calculation of Baseline Emission Factor

As per paragraph 12 of AMS-I.D, version 16, the baseline emission factor for a grid system can be calculated as either any one of the following options in a transparent and conservative manner:

a) Combined margin (CM), consisting of the combination of operating margin (OM) and build margin (BM) according to the procedures prescribed in the approved methodology “Tool to calculate the emission factor for an electricity system”, version 02.

OR

b) The weighted average emissions (in t CO₂/MWh) of the current generation mix. The data of the year in which project generation occurs must be used.

Calculations shall be based on data from an official source (where available) and made publicly available.

The project proponent has selected approach ‘a’ i.e. combined margin approach to calculate the emission factor for the grid with *ex-ante* approach.

According to the tool the baseline emission, project proponent shall apply the following seven steps

- Step 1 Identify the relevant electric power system
- Step 2 Choose whether to include off-grid power plants in the project electricity system (optional)
- Step 3 Select a method to determine the operating margin (OM)
- Step 4 Calculating the operating margin emission factor according to the selected method.
- Step 5 Identify the group of power units to be included in the build margin (BM)
- Step 6 Calculate the build margin emission factor.
- Step 7 Calculate the combined margin (CM) emission factor.

Central Electricity Authority (CEA) (which is an official source of Ministry of Power, Government of India) have worked out baseline emission factor for various grids in India and made them publicly available i.e. “CO₂ Baseline Database version 5.0” at

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

The emission factor of the grid for the ex-ante approach is calculated in the following manner:

Step 1 Identify the relevant electric power system

The Indian electricity system is divided into two power grids, viz; North- East- West- North-East (NEWNE) and Southern grid. Since PoA is pan India and individual project can be located anywhere across India, emission factor has been calculated for both the grids. At this CPA level, the baseline Emission factor (including Imports) of NEWNE and Southern Grid published by CEA is considered for calculation of Emission reductions due to displacement of electricity in accordance with the Baseline of “Tool to calculate the emission factor for an electricity system”, version 02.

Geographical scope of the two electricity grids³

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

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.

Option I has been selected for the programme of activity.

Step 3 Select a method to determine the operating margin (OM)

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

- Simple OM, or
- Simple adjusted OM, or
- Dispatch data analysis OM, or
- Average OM.

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

As per tool, any of the four methods can be used, 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 in: 1) average of the five most recent years, or 2) based on long-term averages for hydroelectricity production.

As observed in the CEA database, Version 5, less than 30% of grid energy is provided by the low cost/must-run power sources (hydro/ nuclear power)⁴, hence project proponent has chosen to calculate Simple OM. For the simple OM, the simple adjusted OM and the average OM, the emissions factor can be calculated using either of the two following data vintages:

- Ex ante option: If the *ex-ante* option is chosen, the emission factor is determined once at the validation stage, thus no monitoring and recalculation of the emissions factor during the crediting period is required. For grid power plants, use 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.
- Ex post option: If the *ex-post* option is chosen, the emission factor is determined for 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 preceding 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 proponent has chosen an *ex-ante* approach for the calculation using the full generation-weighted average for the most recent 3 years for which data are available at the time of PDD submission. The OM is calculated using 3 year data calculated by Central Electricity Authority (CEA) in their CO₂ baseline database Version 5.0, November 2009.

Step 4: Calculation of the Operating Margin emission factor ($EF_{OM,y}$)

Simple OM method

The simple OM emission factor is calculated as the generation-weighted average CO₂ emissions per unit net electricity generation (Tco₂/MWh) of all generating power plants serving the system, not including low-cost/must-run power plants/units.

The simple OM may be calculated:

Option A: Based on the net electricity generation and a CO₂ emission factor of each power unit; or

- Option B: Based on the total net electricity generation of all power plants serving the system and the fuel types and total fuel consumption of the project electricity system.

Option B can only be used if:

- a) The necessary data for Option A is not available; and
- b) Only nuclear and renewable power generation are considered as low-cost/must-run power sources and the quantity of electricity supplied to the grid by these sources is known; and
- c) Off-grid power plants are not included in the calculation (i.e., if Option I has been chosen in Step 2).

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

For programme of activity, Option B has been used.

In the Simple OM method, the emission factor is calculated as generation weighted average emissions per electricity unit (Tco₂/MWh) of all generating sources serving the system, not including low-operating cost and must-run power plants. The data vintage option selected is the ex-ante approach, where a 3 year average OM is calculated. The CEA baseline is derived using the following formulae to calculate simple OM.

$$EF_{grid,OMsimple,y} = \frac{\sum_i (FC_{i,y} \times NCV_{i,y} \times EF_{CO_2,i,y})}{EG_y} \quad (2)$$

Where:

EF _{grid,OM simple, y}	Simple operating margin CO ₂ emission factor in year (Tco ₂ /MWh)
FC _{i,y}	Amount of fossil fuel type i consumed by power plant/unit m in year y (mass or unit volume unit)
NCV _{i,y}	Net calorific value (energy content) of fossil fuel type i in year y (GJ/mass or volume unit)
EF _{co2,i,y}	CO ₂ emission factor of fossil fuel type i in the year y (Tco ₂ /GJ)
EG _y	Net electricity generated and delivered to the grid by all power sources serving the system, not including low-cost/must-run power plants/units, in year y (MWh)
i	All fossil fuel types combusted in power plant/ unit m in year y
y	The relevant year as per the data vintage chosen in Step 3

The operating margin emission factor has been calculated using a 3 year data vintage from CEA database⁵:

Simple Operating Margin (Tco ₂ /MWh) (incl. Imports)				Average (Tco ₂ /MWh)
	2006-07	2007-08	2008-09	
NEWNE	1.008	1.000	1.007	1.005
Southern	0.999	0.991	0.973	0.988

Step 5 Identify the group of power units to be included in the build margin (BM)

As per the tool, the sample group of power units *m* used to calculate the build margin consists of either:

- The set of five power units that have been built most recently, or
- The set of power capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently

Project participants should use the set of power units that comprises the larger annual generation. Accordingly, the CEA database calculates the build margin consists of the power plant capacity additions in the electricity system that comprise 20% of the system generation (in MWh) and that have been built most recently as this sample group comprises larger annual generation than the generation of the sample group *m* consisting of the five power plants that have been built most recently.

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

⁵ http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

- 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.

Option 1 is chosen to calculate the build margin emission factor for the programme of activity. BM is calculated ex-ante based on the most recent information available at the time of submission of PDD and is fixed for the entire crediting period.

Step 6: Calculation of the Build Margin Emission Factor $EF_{BM,y}$

The Build margin emission factor has been calculated *ex-ante* based on the most recent information available on 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 (in MWh) and that have been built most recently as this sample group comprises larger annual generation than the generation of the sample group m consisting of the five power plants that have been built most recently.

The value for BM is taken from Central Electricity Authority (CEA) CO₂ baseline database Version 5.0, November 2009⁶

Build Margin (Tco ₂ /MWh)	
	2008-09
NEWNE	0.675
SOUTHERN	0.818

Step 7: Calculation of the combined margin emission factor

The baseline emission factor EF_y is calculated as a combined margin (CM) consisting of combination of Operating Margin emission factor ($EF_{OM,y}$) and the Build Margin emission factor ($EF_{BM,y}$):

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM} \quad (3)$$

Where the weights w_{OM} and w_{BM} are 75% and 25% respectively, and $EF_{OM,y}$ and $EF_{BM,y}$ are calculated and are expressed in Tco₂/MWh.

As per the “Tool to calculate emission factor for an electricity system, version 02”, for wind and solar projects, the default weights are as follows: $w_{OM} = 0.75$ and $w_{BM} = 0.25$ (owing to their intermittent and non-dispatchable nature).

⁶ http://www.cea.nic.in/reports/planning/cdm_co2/cdm_co2.htm

Combined Margin/ Grid Emission Factor

Grid	Simple Operating Margin (Tco ₂ /MWh)	Build Margin (Tco ₂ /MWh)	Combined Margin (Tco ₂ /MWh)
NEWNE	1.005	0.675	0.9225
Southern	0.988	0.818	0.9451

B.6.2. Data and parameters that are to be reported ex-ante*(Copy this table for each data and parameter.)*

Data / Parameter	EF _y
Unit	t CO ₂ /MWh
Description	CO ₂ emission factor for the regional grid system (NEWNE) and Southern Grid (Fixed Ex ante)
Source of data	CEA published grid emission factors
Value(s) applied	
Choice of data or Measurement methods and procedures	Central Electricity Authority (CEA) database, version 5 dated November 2009 values have been used for authenticity of the data, available publicly by Govt of India with a view to obtain uniformity of approach in the country towards a common objective.
Purpose of data	To calculate baseline emissions
Additional comment	

B.6.3. Ex-ante calculations of emission reductions

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Baseline Emissions:

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y}$$

Project emissions:

For SPV based electricity generation unit under this POA, there is not project emission
 $PE_y = 0$.

Leakage

If the energy generating equipment is transferred from another activity, leakage is to be considered. Since the POA would promote establishment of ne SPV based power plant, leakage is 0.

$$LE_y = 0$$

Emission reductions

Emission reductions are calculated as follows:

$$ER_y = BE_y - PE_y - LE_y$$

Where:

ER_y Emission reductions in year y (t CO₂/y)

BE_y Baseline Emissions in year y (t CO₂/y)

PE_y Project emissions in year y (t CO₂/y)

LE_y Leakage emissions in year y (t CO₂/y)

Since $PE_y = 0$ & $LE_y = 0$

$$ER_y = BE_y$$

B.7. Application of the monitoring methodology and description of the monitoring plan

B.7.1. Data and parameters to be monitored by each generic CPA

(Copy this table for each data and parameter)

Data / Parameter	EG _y
Unit	MWh
Description	Net Electricity supplied to the grid by the project
Source of data	
Value(s) applied	To be specified in each CPA
Measurement methods and procedures	
Monitoring frequency	
QA/QC procedures	
Purpose of data	
Additional comments	The data archived will be maintained for crediting period +2 years or last issuance for this project activity whichever is later. The data archiving will be done on both paper and electronically.

B.7.2. Description of the monitoring plan for a generic CPA

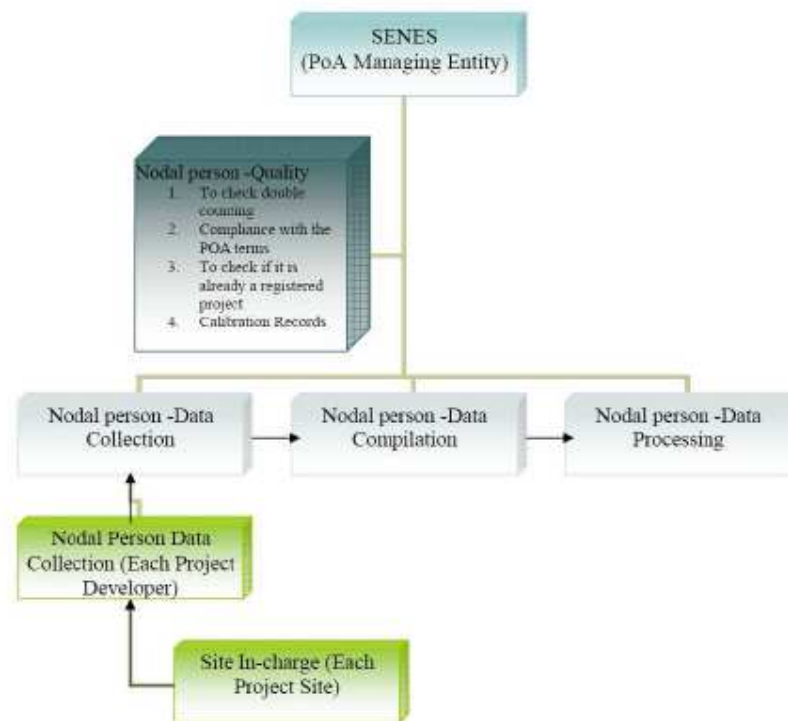
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ABC will be the managing entity and would set the procedures verifying the CERs generated by the solar power projects annually and would coordinate with individual Operators for monitoring and verification of ERs achieved by each solar power plant. The operators will submit all data to ABC, required for the periodic audit and verification process that must be undertaken to confirm the achievement of the corresponding ERs. Monitoring would be carried out in following manner:

1. Monitoring Plan Objective and Organization

The project operator will monitor the electricity delivered to the electricity grid by the respective power production unit. The data will be archived electronically and be stored for 2 years after the end of the crediting period of each CPA.

To ensure that the data is reliable and transparent, the project entity will also establish Quality Assurance and Quality Control (QA&QC) measures to effectively control and manage data reading, recording, auditing as well as archiving data and all relevant documents. The data will be monitored on a monthly basis and will be submitted to SENES on a monthly basis. The record keeping system will be following the hierarchy given below:



2. Responsibility

The main roles and responsibilities of the parties involved is as described below:

SENES- PoA Managing Entity

- Acts as the entire PoA managing entity
- Development of small-scale Programme of Activities Design Document (SSC-PoA-DD)
- Registration of the SSC-PoA with UNFCCC CDM Executive Board
- Inclusion of SSC-CPAs to the SSC-PoA upon satisfaction of the eligibility criteria stipulated in the SSC-PoA-DD
- Managing and archiving the database of all the CPAs.
- Authorized entity for any official communication with the CDM-EB, DOE and Indian DNA
- Allocation of CERs to the SSC-CPA project operators according to their share in electricity generation and export during the monitoring period

Operators

- Periodic monitoring and reporting of data and information as per the monitoring plan
- Maintaining records on-site as per the monitoring plan
- Construction and implementation of projects
- Operation and maintenance of the projects
- Calibration of electricity meters on a regular basis as per State Electricity Board's mandatory requirement

3. Monitoring Data and Reporting

Data to be monitored is the electricity delivered to the electricity grid by the project. The electricity delivered will be monitored using a electricity meter at the point of connection with the grid. The entity responsible for monitoring as detailed in the CPA will provide SENES with meter readings for electricity delivered and calibration certificates of the electricity meter as per grid operator's instructions. SENES will subsequently provide the verifying DOE with the data from all CPAs.

**4. Quality Assurance and Quality Control**

QA&QC procedures for recording, maintaining and archiving data shall be implemented as part of this CDM project activity.

The project entity will implement QA&QC measures to calibrate and ensure the accuracy of metering and safety aspects of the project operation. The metering devices will be calibrated and inspected properly and periodically, according to state electricity board's specifications and requirement, to ensure their accuracy in the readings.

5. Training and maintenance procedures: EPC Contractors for each of the power plants would train the on-site staff of the power plant on operation and maintenance of the power plant. SENES (managing entity) would ensure training to on-site staff with respect to adherence to the Monitoring Plan of the project activity. Records of the training would be kept. Internal audit of all the records of the plants will be carried out twice a year. During these audits all the data and parameters that need to be monitored as per the monitoring plan would be checked and shortcomings if any will be reported and addresses.

6. Data Storage and Archiving

In order to facilitate auditors' reference and for any future requirement, relevant literature relating to the project such as, the project material and monitoring results will be indexed. All the data items monitored under the monitoring plan will be kept for 2 years after the end of crediting period or till the last issuance of CERs for this project activity, whichever occurs later. The data will be archived electronically and in hard copy and kept in storage separately by the managing entity.

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**Appendix 1: Contact information on entity/individual responsible for the PoA**

Organization	
Street/P.O. Box	
Building	
City	
State/Region	
Postcode	
Country	
Telephone	
Fax	
E-mail	
Website	
Contact person	
Title	
Salutation	
Last name	
Middle name	
First name	
Department	
Mobile	
Direct fax	
Direct tel.	
Personal e-mail	

Appendix 2: Affirmation regarding public funding

No public funding is involved

Appendix 3: Application of methodology(ies)**Appendix 4: Further background information on ex ante calculation of emission reductions****Appendix 5: Further background information on the monitoring plan**



History of the document

Version	Date	Nature of revision(s)
02.0	EB 66 13 March 2012	Revision required to ensure consistency with the "Guidelines for completing the programme design document form for small-scale CDM programmes of activities" (EB 66, Annex 13).
01	EB33, Annex43 27 July 2007	Initial adoption.
Decision Class: Regulatory Document Type: Form Business Function: Registration		