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# Validation Report

VALIDATION OF THE CDM-PoA:  
RENEWABLE ENERGY PoA IN INDIA

REPORT NO. 600500782

**25-24 September ~~July~~ 2012**

TÜV SÜD Industrie Service GmbH  
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**Subject:** Validation of the CDM PoA "Renewable Energy PoA in India"

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**Project Site(s):** India

**Applied Methodology / Version:** AMS.I.D / Version 17

**Scope(s):** 1  
**Technical Area(s):** 1.2

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Date of issuance: 08-08-2011  
Version No.: 1.0  
Starting Date of GSP 26-08-2011

**Final PoA-DD version:**

Date of issuance: ~~241-079~~-2012  
Version No. ~~98~~

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**Assessment Team Members:**

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**Technical Reviewer:**

Mr. Agarwal, Nikunj

**Responsible Certification Body:**

Mr. Tolcach, Eric



**Summary of the PoA Validation Opinion:**

- ☒ The review of the project design documentation and the subsequent follow-up interviews have provided TÜV SÜD with sufficient evidence for the determination of the PoA's fulfilment of all stated criteria. In our opinion, the PoA meets all relevant UNFCCC requirements for the CDM. Therefore, TÜV SÜD recommends the PoA for registration by the CDM Executive Board if the letters of approval of all Parties involved will be available before the expiring date of the applied methodology(ies) or the applied methodology version respectively.
- ☐ The review of the project design documentation and the subsequent follow-up interviews have not provided TÜV SÜD with sufficient evidence for the determination of the PoA's fulfilment of all stated criteria. Therefore, TÜV SÜD will not recommend the PoA for registration by the CDM Executive Board and will inform the project participants and the CDM Executive Board of this decision.



## ABBREVIATIONS

<b>AMS</b>	Approved Methodology Small scale
<b>CAR</b>	Corrective Action Request
<b>CDM</b>	Clean Development Mechanism
<b>CDM EB</b>	CDM Executive Board
<b>CER</b>	Certified Emission Reduction
<b>CMP</b>	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
<b>CPA</b>	CDM Programme activity
<b>CPA-DD</b>	CDM Programme Activity Design Document
<b>CR / CL</b>	Clarification Request
<b>DEPL</b>	Dante Energy Private Limited
<b>DNA</b>	Designated National Authority
<b>DOE</b>	Designated Operational Entity
<b>EF</b>	Emission Factor
<b>EIA / EA</b>	Environmental Impact Assessment / Environmental Assessment
<b>ER</b>	Emission Reduction
<b>ERSPL</b>	Emission Reduction Services Private Ltd
<b>FAR</b>	Forward Action Request
<b>GHG</b>	GreenHouse Gas(es)
<b>IPCC</b>	Intergovernmental Panel on Climate Change
<b>IRL</b>	Information Reference List
<b>KP</b>	Kyoto Protocol
<b>MP</b>	Monitoring Plan
<b>MoA</b>	Memorandum of Agreement
<b>MoC</b>	Modalities of Communication
<b>PDD</b>	Project Design Document
<b>PoA</b>	Programme of Activities
<b>PoA-DD</b>	Programme of activities design document
<b>PP</b>	Project Participant
<b>PO</b>	Partner Organisation
<b>RE</b>	Renewable Energy
<b>TÜV SÜD</b>	TÜV SÜD Industrie Service GmbH
<b>UNFCCC</b>	United Nations Framework Convention on Climate Change
<b>VVM</b>	Validation and Verification Manual

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## 1 INTRODUCTION

### 1.1 Objective

The objective of the validation process is to provide an independent assessment by a third party, a Designated Operational Entity (DOE), of the proposed Programme of Activities (PoA) and the CDM Programme Activity (CPA) template with generic information applicable to all CPAs under that PoA and the associated real case CPA-DD.

The assessment involves the evaluation of the PoA basis and design identified in the PoA Design Document (PoA-DD), template CPA design document (CPA-DD) and the associated real case CPA-DD using the defined criteria outlined by the registration under the Clean Development Mechanism (CDM). Validation is part of the CDM project cycle and results in a conclusion by the executing DOE on whether or not a PoA is valid to be submitted for registration to the CDM Executive Board (CDM-EB). The ultimate decision on the registration of a proposed PoA rests with the CDM-EB and the Parties involved.

The PoA addressed in this validation report has been submitted under the following title:

**Renewable Energy PoA in India**

### 1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of CDM PoA, the scope is set by:

- Ø The Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM
- Ø Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Ø Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Ø Decisions and specific guidance outlined by the EB which are published under <http://cdm.unfccc.int>
- Ø Guidelines for Completing the PoA Design Document (PoA-PDD), CDM programme of activities template and design document (CPA-DD) and the applied CDM methodology including the sections especially dedicated to PoA
- Ø Management systems and auditing methods
- Ø Environmental issues relevant to the applicable sectoral scope
- Ø Applicable environmental and social impacts and aspects of CDM project activity
- Ø Sector specific technologies and their applications
- Ø Current technical and operational knowledge of the specific sectoral scope and information on best practice

The validation process is not meant to provide any form of consulting for the PoA Managing Entity, CPA Implementer(s) and/or project participant(s) (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the project design.

Once TÜV SÜD receives the PoA-DD and supporting CPA template and completed CPA-DD of the real case, it is made publicly available on the UNFCCC website and on TÜV SÜD's website, which initiates a 30 day global stakeholder consultation process (GSP). In special circumstances, such as

when a PoA design changes, the GSP may need to be repeated. Information on the PoA-DD is presented on page 1 of this report.

The purpose of validation is to demonstrate compliance or non-compliance of the PoA with all stated and valid UNFCCC and host party requirements. Additionally, the purpose of validation is to enable the registration of PoA, which is only a part of the total CDM project cycle. Therefore, TÜV SÜD cannot be held liable by any party for decisions made, or not made, based on the validation opinion that go beyond this purpose.

## 2 VALIDATION METHODOLOGY

The PoA assessment is based on the “Clean Development Mechanism Validation and Verification Manual” and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the CDM PoA are appointed. Once the project made available for the stakeholder consultation process, members of the team carry out the desk review, follow-up actions, resolution of issues identified, and the preparation of the validation report. The prepared validation report and other supporting documents then undergo an internal quality control by the CB “Climate and Energy” before being submitted to the CDM-EB.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. TÜV SÜD has developed a methodology-specific protocol customized for the PoA. The protocol demonstrates, in a transparent manner, the PoA criteria (requirements), discussion on each criterion by the assessment team, and the results from validating the identified criteria.

The validation protocol serves the following purposes:

- To organize the details and provision of clarifications on the requirements of which a CDM-PoA and its CPA-DD are expected to meet
- To elucidate how a particular requirement has been validated as well as to document the results of the validation and any adjustments made to the PoA-DD.

The validation protocol consists of three tables. The different columns in these tables are described in the tables below.

Validation Protocol Table 1: Conformity of CDM Programme of Activities				
Checklist Topic / Question	Reference	Comments	GSP	Final
<i>The checklist is organised in sections following the arrangement of the applied PoA-DD version. Each section is then subdivided. The lowest level constitutes a checklist question / criterion.</i>	<i>The section gives reference to documents in which the answer to the checklist question or item is found in case the comment refers to documents other than the PoA-DD.</i>	<i>The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is used to explain the conclusions reached. In some cases sub-checklists are applied indicating yes/no decisions on the compliance with the stated criterion. Any <b>Request</b> has to be substantiated within this column.</i>	<i>The section is used to present conclusions based on the assessment of the first PoA-DD version. The PoA-DD is either acceptable based on evidence provided (p) or a <b>Corrective Action Request (CAR)</b> is issued due to non-compliance with the checklist question (See below). <b>Clarification Request (CR)</b> is used when the validation team has identified a need for further clarification. <b>Forward Action Request</b> is issued to highlight issues related to project implementation that require review during the first verification.</i>	<i>Conclusions are presented in the same manner based on the assessment of the final PoA-DD version and further documents including assumptions presented in the documentation.</i>



Validation Protocol Table 2: Compilation and Resolutions of CARs, CRs and FARs			
Corrective Action, Clarification or Forward Action Requests.	Ref	Summary of the Programme owner response	Validation team opinion
Issue	<i>Reference to the checklist question number in Table 1</i>		<i>Final conclusions and relevant references.</i>

In case it is found that the project activity does not meet CDM requirements, more detailed information on this decision is presented in Table 3.

Validation Protocol Table 3: Unresolved Corrective Action and Clarification Requests		
Clarifications and corrective action requests	Id. of CAR/CR	Explanation of the Conclusion for Denial
<i>Referenced request if final conclusions from table 2 resulted in a denial.</i>	<i>Identifier of the Request.</i>	<i>Detailed explanation of why the PoA is considered non-compliant with a criterion and a clear reference to the criterion</i>

The completed validation protocol is enclosed in Annex 1.

## 2.1 Appointment of the Assessment Team

According to the technical scopes and experiences in the sectoral or national business environment TÜV SÜD has composed a project team in accordance with the appointment rules of the TÜV SÜD certification body "Climate and Energy".

The composition of an assessment team has to be approved by the Certification Body (CB) to assure that the required skills are covered by the team. The CB TÜV SÜD operates four qualification levels for team members that are assigned by formal appointment rules:

- Ø Assessment Team Leader (ATL)
- Ø Validator (V)
- Ø Validator Trainee (T)
- Ø Technical Experts (TE)

It is required that the sectoral scope(s) and the technical area(s) linked to the methodology and project have to be covered by the assessment team.

Name	Qualification	Coverage of sectoral scope	Coverage of technical area	Coverage of financial aspect	Host country experience
Mr. Maharjan, Bhai Raja	ATL	p	p	p	p
Mr. V, Vijayanand	V	p	p	p	p
Mr. Murty, Eswar	V	p	p	--	p

**Technical Reviewer: Nikunj Agarwal**

## 2.2 Review of Documents

The PoA-DD and completed CPA-DD for the GSP was submitted to the DOE in August 2011. The PoA-DD and additional background documents related to the PoA design and baseline have been reviewed to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done as an initial step of the validation process. A complete list of all documents and evidence material reviewed is attached as Annex 2 to this report.

## 2.3 Follow-up Interviews

On 26<sup>th</sup> September 2011 and during the period 10<sup>th</sup> – 12<sup>th</sup> October 2011, TÜV SÜD performed interviews and physical site inspections with project stakeholders to confirm relevant information, and to resolve issues identified in the document review. The following table provides a list of all key persons interviewed in this process.

Name	Organisation
Thomas Camerata	Emission Reduction Services Private Ltd (ERSPL)
Sandeep Kanda	Emission Reduction Services Private Ltd (ERSPL)
Abhishek Bansal	Emission Reduction Services Private Ltd (ERSPL)
Vivek Agarwal	Consultant to Dante Energy Private Limited (DEPL)
Gowri Shankar	DEPL

## 2.4 Cross-check

During the validation process the team has made reference to available information related to similar projects or technologies as the CDM PoA. Project documentation has also been reviewed against the approved methodology applied to confirm the appropriateness of formulae and correctness of calculations.

## 2.5 Resolution of Clarification and Corrective Action Requests

The objective of this phase of the validation is to resolve the requests for corrective actions, clarifications, and any other outstanding issues which need to be clarified for TÜV SÜD's conclusion on the PoA design. The CARs and CRs raised by TÜV SÜD are resolved during communication between the managing entity and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are documented in more detail in the validation protocol in Annex 1.

The PoA-DD version ~~06-09~~ that was submitted in ~~July~~ September 2012 serves as the basis for the final assessment presented herewith. Additional changes to the project during the validation process are not considered to be significant with respect to the main CDM objectives. The two CDM main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

## 2.6 Internal Quality Control

Internal quality control is the final step of the validation process and is conducted by the CB "Climate and Energy" who checks the final documentation, which includes the validation report and annexes.



The completion of the quality control indicates that each report submitted has been approved either by the head of the CB or the deputy. In projects where either the Head of the CB or the deputy is part of the assessment team, the approval is given by the one not serving on the project team.

After confirmation by the Managing Entity and/ or CPA Implementer(s) and/ or PP, the validation opinion and relevant documents are submitted to the EB through the UNFCCC web-platform.

### 3 SUMMARY

The assessment work and the main results are described below in accordance with the VVM reporting requirements. The reference documents indicated in this section and Annex 1 are stated in Annex 2 of this report.

#### 3.1 Approval

The project participants are Emission Reduction Services Private Limited (ERSPL) of India, which is the host party and South Pole Carbon Asset Management and Swiss Carbon Assets Ltd of Switzerland which is Annex 1 party. The host Party India and Switzerland meet the requirements to participate in the CDM.

The DNA of Switzerland, Federal Department of Environment issued LoAs on 20 December 2011 authorizing South Pole Carbon Asset Management and Swiss Carbon Assets of Switzerland as project participants [16].

The DNA of India has issued a Letter of Approval (LoA) on 19<sup>th</sup> June 2012 authorizing Emission Reduction Services Private Limited as a Coordinating and Managing Entity [22]. TÜV SÜD received this letter from the project participant (CME) directly and considers the provided letter as authentic.

Furthermore, after checking the provided LoA, TÜV SÜD confirms that the letter refers to the precise proposed CDM programme of activity title in line with the title in the PoA-DD “Renewable Energy PoA in India”.

The letter also indicates that participating Party is a Party to the Kyoto Protocol, and that the participation in the “Renewable Energy PoA in India” programme is voluntary. The Indian LoA also confirms that the proposed CDM programme of activity contributes to the sustainable development in India (host country) and authorizes Emission Reduction Services Private Limited to participate in the PoA. Based on the information given in the letter, TÜV SÜD considers the approval as unconditional with respect to these items.

The LoA has been issued by the host Party’s DNA, Ministry of Environment and Forests, Government of India. TÜV SÜD therefore considers that the requirements of VVM (§§45-48) have been met.

The LoAs does not refer to a specific version of the PoA-DD or validation report.

#### 3.2 Participation

The participant of the project activity has been approved by the corresponding Party, which is confirmed by the issued LoA.

The means of validation used are similar to the ones described in Section 3.1, specifically in regard to the approval process of the project activity.

#### 3.3 Programme of Activities Design Documents

The PoA-DD and the CPA-DD template are in compliance with relevant form and guidance as provided by UNFCCC. The most recent version of the forms is used.

TÜV SÜD considers that the guidelines for the completion of the PoA documents in their most recent version have been followed. Relevant information was provided by the Managing entity and/ or

project participants in the applicable PoA sections. The project issues were assessed through the protocol included in Annex 1.

### 3.4 Programme Description

The following description of the programme as per PoA-DD was verified:

The Renewable Energy PoA includes the development of Greenfield small scale, grid-connected renewable energy power plants in India under Hydro, Solar & Wind categories. The PoA supports renewable energy generation delivering energy to a grid within the geographical boundary of the PoA. Each CPA under this PoA will comprise one or more than one power plant with a combined installed capacity up to 15 MW. The CDM programme activities (CPAs) under the PoA will be implemented in India. The main objective of this PoA is to develop a platform that can support the development of sustainable, renewable energy projects in India.

The proposed PoA is a voluntary action by the coordinating and managing entity ERSPL. ERSPL works closely with South Pole Carbon in this PoA and the individual CPA implementers for the inclusion of CPA's into the PoA. The PoA neither receives any funding from government-funded nor is any diversion of ODA involved [9]. The starting date of the PoA is 30<sup>th</sup> March 2011 based on the Board decision by South Pole to invest in the Renewable Energy PoA in India. This could be considered as the earliest date at which the CME has committed to implement with the PoA and subsequently appointed the DOE in August 2011 for Validation activities of the PoA. The length of the PoA is taken as 28 years [12].

The information presented in the PoA documents on the technical design is consistent with the actual planning and implementation of the project activity confirmed in the following ways:

- A review of data and information (see annex 2);
- An on-site visit to the place where the associated real case CPA is being implemented and interview with relevant stakeholder and personnel with knowledge of the project in attendance. In case of doubt, further cross checks through additional interviews were conducted, and
- A review of information related to similar projects or technologies which have been used if available to validate the accuracy and completeness of the project description.

In conclusion, TÜV SÜD confirms that the PoA project description, as included in the PoA-DD, is sufficiently accurate and complete in order to comply with the requirements of the CDM.

### 3.5 Eligibility Criteria for CPA Inclusion

The CME employs clear and unambiguous criteria for the inclusion of the CPA. The eligibility criteria's have been stated are verifiable with regards to the applicability of the applied methodology. and the criteria given in EB 65 Annex 3. The key eligibility criteria set for the CPA inclusion into this PoA are

- Geographical boundary of the CPA to be in line with the PoA boundary (Based on the unique identification of the CPA location and GPS coordinates)
- Avoidance of double counting (Based on unique identification of CPA and Confirmation from Project Owner)
- Technology adopted in the CPA (solar, wind and hydro) based on the Detailed Project Report (DPR) and Technical specifications.
- Start date check of the CPA (Based on the Purchase order of equipment related to CPA)

- Compliance with methodology requirements with respect to baseline and monitoring for AMS I.D. Ver.17 (Based on the methodology criteria)
- Additionality check with the criteria specified in the PoA-DD. The Test (a) for additionality check is based on “Guidelines for demonstration of additionality for Microscale project activities” or Test (b) based on investment analysis requires to apply Attachment A to Appendix B version 8 (EB63, Annex 24).
- Local stakeholder consultations and Environmental Impact Assessment (Based on the requirements set out in the CPA-DD)
- Confirmation of any Official Development Assistance (Based on the declaration from the CME and the Loan documents)
- Assessment of the Target group to which the CPA is served and check whether the CPA to be included would only comprise of Greenfield renewable energy power plants (Based on the DPR, site visit and project documents)
- Definition of the Grid and export of renewable energy (Based on the Power Purchase Agreement) and Assessment of Power density threshold in case of a Hydro project and the check of the generation with respect to small scale project activity threshold limit (Based on the DPR and the calculations)
- Debundling check
- Compliance with local regulations
- Contracts of the project implementer with CME

The above eligibility criteria would be checked at the CPA level by the CME and can be confirmed by the DOE during inclusion. Hence it could be confirmed that the eligibility criteria specified in the PoA-DD is in line with EB 65 Annex 3 requirements.

### 3.6 Operational and Management Plan

A clear and transparent description of the operational and management arrangement has been established by ERSPL and stated in the PoA-DD. The CME is responsible for CPA-DDs development and inclusion of CPA's into the PoA, monitoring plan development and distribution of CER revenues with the implementers of CPA. The CPA implementer is responsible for construction, installation and maintenance of the individual projects along with monitoring.

The CME has developed a monitoring manual which clearly specifies the monitoring procedures and elaborates the operational and management plan of the PoA in detail. The monitoring manual underlines clear roles and responsibilities for the personnel involved in monitoring and those involved in inclusion of CPAs. The records of arrangements for training and capacity development for personnel and the competencies of the individuals are also presented. The procedures for technical review of inclusion of CPAs and measures for continuous improvements of the PoA management system are also included in the CME Monitoring manual. This has been verified by the audit team [14]. There is a record keeping system for each CPA under the PoA. The CPAs will follow the CPA implementation plan. ERSPL will be checking the records for each CPA before submission to the DOE [15].

The system to avoid double counting has been indicated in the PoA-DD. This will be done by ERSPL through credentials check and information available on UNFCCC website. Also, as each CPA will have a unique identification number and GPS coordinates in host country India, thus it can be checked whether a CPA under the PoA already is a registered CDM project or CPA in another PoA from the UNFCCC website.



Provisions are in place to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA. The agreement between ERSPL and the CPA implementers ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA.

Hence it could be confirmed that the CME has the capacity and competencies to implement the monitoring plan as per the requirements of EB 65 Annex 3.

### 3.7 Monitoring Plan

The monitoring plan provides a transparent system to ensure that no double accounting occurs and that the status of verification can be determined any time for each CPA. The system to avoid double counting has been indicated in the PoA-DD. This would be done by ERSPL through review of information provided by SSC-CPA with information available with UNFCCC. Also, as each CPA will have a unique serial number with code thus it can be checked whether a CPA under the PoA already is a registered CDM project or CPA in another PoA.

For each Project Activity under a CPA, all relevant parameters defined under Section E.7.1 of PoA-DD will be monitored by the Project Implementer according to the procedures and monitoring framework. The monitoring data will be submitted to the CME, which will check and finalize the monitoring documentation for verification by the DOE and store the data in a database in such a way that the status of verification can be determined for each CPA at any time. The CME will follow the procedure described below for monitoring:

The monitoring plan for parameters included in section E.7.1 will be implemented for each SSC-CPA with assistance from the coordinating entity as follows:

- The CPA owner will implement each SSC-CPA individually and monitor and record all parameters included in section E.7.1.
- The CME will provide guidance to CPA owner on how monitoring should be conducted and data should be collected in regards to emission reductions calculation.
- The CPA owners will provide data on monitored parameters included in section E.7.1 to the CME.
- The CME will document and store all parameters included in section E.7.1 provided by CPA owners in an electronic database, while primary data will be stored by SSC-CPA owner.
- The monitoring data will be recorded from electricity meter records at the project site and/or the grid substation and will be crosschecked with actual sales electricity receipts signed by project owners and the respective Grid authorities. The plant operators will be responsible for collecting the monitoring data and will provide the CME with meter readings for electricity delivered to grid. In case the main meter of the power plant is not functioning, the net electricity delivered to the local grid will be derived from a back-up meter installed and operated by the project owners and/or the grid company. In case the metering equipment does not take into account the Transmission and Distribution losses, the CME will estimate the losses in a conservative manner.
- The project implementers will ensure that QA&QC measures to calibrate and guarantee the accuracy of metering is done in an appropriate manner, as per the local regulations.
- In case of wind projects involving multiple project participants and if there is a common metering system employed for all the wind turbines in that particular farm at the grid interconnection point. apportioning procedures adopted by the respective state electricity authorities would be followed for electricity generation by different project proponents. Invoicing would be done for the energy supplied to the Grid authority.
- In case of hydropower projects, a bidirectional meter would be installed at the powerhouse and the substation (delivery point). Monthly readings would be obtained from both the meters. In case of any difference between the two readings, meter reading at the delivery point

would be considered as final. The meters installed would be calibrated at least once in three years interval or as per the frequency stated in the PPA (whichever is lower).

- In case of solar power projects, a bidirectional meter would be installed at the site as well as at the interconnection point (delivery point of the electricity). Monthly readings would be obtained from both the meters. In case of any difference between the two readings, meter reading at the delivery point would be considered as final. The meters would be calibrated according to the National Standards or IEC standards.

Hence it could be confirmed that the CME has the capacity and competencies and would be able to implement the monitoring plan as specified in the PoA-DD.

### 3.8 Baseline and Monitoring Methodology

#### 3.8.1 Applicability of the selected methodology

Compliance with each applicability condition as listed in the chosen baseline and monitoring methodology AMS-I.D Version 17 has been demonstrated below:

1. PoA Consists CPAs of grid connected Wind, Hydro & Solar PV and Solar thermal projects. This criterion has also been included as eligibility criteria of PoA.
2. The CPAs under the PoA would only be Greenfield activities and the same has been verified for the first CPA. It does not involve a retrofit of existing plant, capacity addition or a replacement of existing plant.
3. A hydro SSC-CPA that comprises a reservoir will have a power density greater than 10 W/m<sup>2</sup>, as per eligibility criteria no. 12 in section A.4.2.2 of the PoA-DD.
4. Each SSC-CPA has only renewable components, as per eligibility criteria no. 3 and 13.
5. The PoA does not include combined heat and power system.
6. The Criteria for Hydro power projects and addition of renewable and non renewable components upto a threshold limit of 15 MW has also been included as an eligibility criteria.
7. The SSC-CPA will consist of a renewable energy generation unit (hydro, wind or solar) that supplies electricity to a regional grid of India, which has been included under eligibility criteria. This is also in line with the point no. 1 of Table 2 of AMS I.D ver.17.
8. The SSC CPA does not involve any replacement of equipment and hence the leakage from the use of the replaced equipment in another activity is not applicable.

The assessment was carried out for each applicability criterion and included, among other checks, a compliance check of the PoA with the applicability conditions in regard to baseline setting and eligible project measures. This assessment also included the review of secondary sources such as published data to demonstrate the compliance with applicability conditions.

The methodology-specific protocol, included in Annex 1, documents the assessment process. The results of the compliance check as well as relevant evidence are detailed in the protocol Annex 1 and the information reference list under Annex 2.

TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the PoA project activity. Emission sources, not addressed by the applied methodology and expected to contribute more than 1% of the overall expected average annual emission reductions, have not been identified.

#### 3.8.2 CPA boundary

The CPA boundary was assessed considering information gathered from the physical site inspection, interviews, and secondary evidence received on the design of the PoA. The information in-



cludes the location of the CPA and its GPS coordinates and feedback from the stakeholders in the region.

The project boundary encompasses the power project site from the source intake to the substation or interconnection point where the electricity is delivered to the grid and also the power plants connected to the Grid.

### 3.8.3 Baseline identification

The PoA is a voluntary coordinated action as evident through the implementation plan as per the PoA-DD. Since the CPA 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, as per AMS I.D. ver.17 paragraph 10. The baseline scenario is as per the legal requirements/laws and the installation of project activity is not mandatory by any laws or requirements.

The information presented in the PoA-DD has been verified during the on-site visit. The sources referenced in the PoA-DD have been quoted correctly.

TÜV SÜD has determined that no reasonable alternative scenario has been excluded.

Based on the validated assumptions used for project activity calculations, TÜV SÜD considers that the identified baseline scenario is reasonable.

Taking the definition of the baseline scenario into account, TÜV SÜD confirms that all relevant CDM requirements, including relevant and/or sectoral policies and circumstances, have been identified correctly in the project PoA-DD.

A verifiable description of the baseline scenario has been included in the PoA-DD.

TÜV SÜD confirms the following statements:

- (a) All the assumptions and data used by the project participants are listed in the PoA-DD, including their references and sources;
- (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PoA-DD;
- (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence, and can be deemed reasonable;
- (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD;
- (e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario, and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

## 3.9 Additionality

### 3.9.1 Prior consideration of the clean development mechanism

The starting date of the PoA is 30<sup>th</sup> March 2011 based on the Board decision by South Pole to invest in the Renewable Energy PoA in India. The CME, ERSPL has been founded by South Pole based on the board decision. This could be considered as the earliest date at which the CME has committed to implement the PoA and subsequently appointed the DOE in August 2011 for Validation activities of the PoA, which clearly shows that the PP has considered CDM in the decision to proceed with the programme of activity [8, 12, 13]. This is in line with paragraphs 97(a) and 98 of VVM.

### 3.9.2 Additionality of PoA

The additionality of the programme has been presented in section A.4.3 of the PoA-DD. The approach used in the PoA-DD has been assessed initially through the document review followed by on-site discussions. Finally, the data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral and financial expertise.

As per paragraph 73 of the 47<sup>th</sup> EB meeting report “additionality is to be demonstrated either at the PoA level or at CPA level” and as prescribed in the Simplified modalities and procedures of small scale project activities, additionality shall be demonstrated as per Attachment A to Appendix B (EB63, Annex 24). Hence, the CME choose to demonstrate the additionality at CPA level by showing that the SSC-CPAs cannot be implemented in the absence of this PoA because of Investment barriers. CME has also decided to incorporate “Guidelines for Demonstrating Additionality of Microscale Project Activities”. Thus additionality would be proven at the CPA level based on one of the following two tests. Furthermore, it has been specified clearly in paragraph 4 of EB 60 Annex 26 that CPAs shall confirm additionality by means of the eligibility criteria (point no.6).

### 3.9.3 Approach for demonstrating CPA additionality

Test a: SSC-CPA will be considered additional if its installed capacity is below the 5 MW threshold and if it is undertaken in an underdeveloped zone of India or SSC-CPA employs specific renewable energy technologies/measures recommended by the host country DNA and approved by the Board to be additional in the host country—~~(conditions apply: the total installed capacity of the technology/measure contributes less than or equal to 5% to national annual electricity generation),~~ which is as per Guidelines for Demonstrating Additionality of Microscale Project Activities”

The location of the SSC-CPA will be determined as the location of the wind turbines/ hydro powerhouse/solar PV or solar thermal projects.

Test	Yes	No
SSC-CPA capacity is below or equal to 5 MW		
SSC-CPA is undertaken in a special underdeveloped zone as defined by Ministry of Rural Development.		

Still as per paragraph 2-d of EB ~~60-63~~ annex ~~2523~~, if at the date of SSC-CPA inclusion, applied technology of the SSC-CPA is recommended by the Host country DNA and approved by the board, test a will be simplified as follows:

Test	Yes	No
SSC-CPA capacity is below or equal to 5 MW		
<del>Indian DNA has recommended applied small Renewable Energy technology/measure, which further has been approved by the Executive Board of the CDM to be additional. Indian DNA has recommended applied small Renewable Energy technology/measure on the basis that it constitutes less than 5% of the national annual electricity generation and the request has been approved by the Executive Board of the CDM.</del>		

Test b: The CME, will test the additionality of the SSC-CPA based on Attachment A to appendix B EB63, Annex 24.

a) In case CPA to be included is a solar power project up to 15 MW capacity, then as per para 2 of Attachment A to Appendix B version 8 (EB63, Annex 24), such a CPA would be automatically

defined as additional. Hence there is no requirement of any further additionality test in case of a CPA comprising Solar PV/Solar thermal projects.

b) In case CPA comprises of Wind & Hydro power generation para 1(a) of Attachment A to Appendix B version 8 (EB63, Annex 24) would be applied, by proving additionality over via investment barriers according to the details mentioned below.

The investment analysis would be demonstrated at CPA level but the PP has provided a framework of the parameters to be assessed for the investment analysis in the PoA-DD. The benchmark calculation and investment analysis parameters will be in line with the 'Guidelines on the Assessment of Investment Analysis' EB 62 Annex 5.

The PoA-DD presents a framework for the calculation of benchmark for different kinds of projects, where as the Benchmark would be applied on the basis of CPA.

The Benchmark has been determined considering an analysis based on the Weighted Average Capital Cost (WACC), which is based on the guidance provided in EB 62 Annex 5- Guidelines for Investment analysis. WACC considers the cost of debt and cost of equity as its main parameters. Cost of equity would be calculated based on Capital Asset Pricing Model (CAPM).

The PoA-DD has provided a clear approach on the calculation of pre or post tax Weighted Average Capital Cost (WACC) benchmark. The post tax or pre tax IRR would be compared with post tax or pre tax benchmark. The CAPM is widely used to determine a theoretically appropriate required rate of return of an asset, and its model takes into account the expected return of a theoretical risk-free asset ( $R_f$ ), the asset's sensitivity to non-diversifiable risk (also known as systematic risk or market risk) represented by Beta ( $\beta$ ), the expected risk premium of the market and the country risk. The parameters used to determine the WACC Benchmark have been validated as per the table below:

Parameter	Source / Cross-check	Auditor Conclusion
Risk-free rate of return	Long-term government bond rate U.S <a href="http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&amp;year=2010">http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&amp;year=2010</a> [#24]	✓ Verified from the weblink of the US long term bond rate, which is considered as a risk free rate. This value could be taken for risk free rate, as per the guidance provided in EB 62 annex 5.
Beta (unlevered)	Total Beta (Unlevered) from Damadoran (Stern Univerisity); most recent before investment decision and for the Power sector: <a href="http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/totalbeta.html">http://pages.stern.nyu.edu/~adamodar/New_Home_Page/datafile/totalbeta.html</a> [#23]	✓ Verified from the Beta calculations by Damodaran Stern University link.
Total risk premium	The total risk premium includes an Equity Risk Premium and a Country Risk Premium: <a href="http://pages.stern.nyu.edu/~adamodar/">http://pages.stern.nyu.edu/~adamodar/</a>	✓ Verified from the Beta calculations by Damodaran Stern University link.

Size Premium	Investors risk when involved in a small project: Ibbotson SBBI 2009 Valuation Yearbook, Chapter 7 [#17]	<p>␣</p> <p>Verified from the Ibbotson SBBI 2009 book. This is deemed to be an appropriate as the document. The PP proposes to apply the size premium corresponding to smallest 10% of companies in the <i>US stock exchanges</i> given in the most recent publication of the <i>SBBI Ibbotson Valuation Year book</i>. In so doing it is being conservative because the risk premium values is drawn from a more mature and lower risk market (US market) than the host country (developing country) where the CPA is to be implemented.</p>
Cost of Debt	Based on Commercial lending rate in the host country	<p>␣</p> <p>Approach verified from EB 62 Annex 5 guidelines</p>
Cost of Equity	Calculation based on the above parameters	<p>␣</p> <p>Approach verified from EB 62 Annex 5 guidelines</p>

The benchmark applicable at the time of CPA investment decision shall be validated which has been identified by the CME as pre-tax or post tax Weighted Average Cost of Capital (WACC) or alternatively commercial lending rate. This framework approach will then be valid for all new CPAs during the PoA crediting period. A CPA implementer determines exactly one benchmark, which is in line with his expected returns and with EB 62 Annex 5- Guidelines for Investment analysis. The framework parameters have been assessed by the audit team and are deemed to be appropriate.

### 3.10 Emission Reductions from a typical CPA

The procedures provided in the methodology are correctly depicted in the PoA-DD and the template CPA-DD.

The formulae are correctly presented for the determination of emission reductions.

TÜV SÜD has assessed the calculations of emission reductions. Corresponding calculations have been carried out based on calculation spreadsheets. The parameters and equations presented in the PoA-DD, as well as other applicable documents, have been compared with the information and requirements presented in the methodology. An equation comparison has been made to ensure

consistency between all the formulae presented in the PoA-DD, template CPA-DD, calculation files, and methodology AMS.I.D version 17.

The assumptions and data used to determine the emission reductions are listed in the PoA-DD and all the sources have been checked and are reasonable. Based on the information reviewed it is confirmed that the sources used are correctly quoted and interpreted in the PoA-DD.

The baseline emissions are the product of electrical energy baseline expressed in MWh of electricity produced by the Power generating unit multiplied by the grid emission factor. The Renewable electricity generation units under this PoA may consume electricity from the grid in the form of imports or on-site DG sets in case of load shedding. The amount of electricity and/or diesel consumption by each of the CPA will be recorded for estimation of project emissions as per AMS I.D v17.

In case of Hydro projects with Power Density greater than  $10 \text{ W/m}^2$ , the project emissions would be considered as zero following the guidance provided in ACM0002, version 12.3.0. The Grid Emission factor is determined according to the 'Tool to calculate the Emission Factor for an electricity system'. As this is a renewable energy project, the leakage emissions are considered to be zero. However if the energy generating equipment is transferred from another activity, leakage would be considered as per the methodology AMS I.D. Ver.17.

In summary, the calculations of emission reductions are considered correct and are replicable. The baseline methodology has been applied correctly according to requirements.

### 3.11 Monitoring Plan of a typical CPA

The monitoring plan for parameters included in section E.7.1 will be implemented for each SSC-CPA with assistance from the coordinating entity as follows:

- SSC-CPA owner will implement each SSC-CPA individually and monitor and record all parameters included in section E.7.1.
- The coordinating entity will provide guidance to SSC-CPA owner on how monitoring should be conducted and data should be collected in regards to emission reductions calculation.
- The SSC-CPA owners will provide data on monitored parameters included in section E.7.1 to the coordinating entity.
- The coordinating entity will document and store all parameters included in section E.7.1 provided by SSC-CPA owners in an electronic database, while primary data will be stored by SSC-CPA owner

#### 3.11.1 Parameters determined ex-ante

The parameters that are determined ex-ante are:

Cap<sub>PJ</sub>- Installed capacity of the hydro power plant- Based on the DPR or Purchase order

Py- Installed Power Generation Capacity based on the nameplate capacity at the generator for Hydro & Wind projects and based on supplier data for solar projects

COEF<sub>i,y</sub>- CO<sub>2</sub> emission factor from diesel use-(3.185)- Based on the IPCC default value for Emission facator of Diesel and IPCC default value for NCV of Diesel

EF<sub>CM,y</sub> = 0.94 tCO<sub>2</sub>/MWh for solar & wind projects for NEWNE Grid (CEA CO<sub>2</sub> Baseline Database for the Indian Power Sector-version 06)

EF<sub>CM,y</sub> = 0.9 tCO<sub>2</sub>/MWh for hydro projects for NEWNE Grid (CEA CO<sub>2</sub> Baseline Database for the Indian Power Sector-version 06)

$EF_{CM,y} = 0.92 \text{ tCO}_2/\text{MWh}$  for solar & wind projects for Southern Grid (CEA CO2 Baseline Database for the Indian Power Sector-version 06)

$EF_{CM,y} = 0.86 \text{ tCO}_2/\text{MWh}$  for hydro projects for Southern Grid (CEA CO2 Baseline Database for the Indian Power Sector-version 06)

In summary, the parameters determined ex-ante are conservative and appropriate and they have been presented correctly according to requirements of the applied methodology.

### **3.11.2 Parameters determined ex-post**

The parameters that are to be monitored ex-post are:

$EG_{B,L,y}$ - Quantity of net electricity generation supplied by the project plant/unit to the grid in year y

$FC_{i,j,y}$ - diesel consumption in the onsite DG sets

PD- Power Density of the reservoir in case of hydro projects

## **3.12 Stakeholder Consultation**

It has been indicated that the local stakeholder consultation would be done at the CPA level.

## **3.13 Environmental Analysis**

The environmental analysis will be done at CPA level.

## 4 COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

TÜV SÜD published the project documents on the UNFCCC website and invited comments by affected Parties, stakeholders, and non-governmental organisations during a 30 day period.

All key information gathered is presented in the table bellow

### GSP Comments

<b>website:</b> <a href="http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/C01TW72RQN0J51Z79ATZMI5C6AENCs/view.html">http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/C01TW72RQN0J51Z79ATZMI5C6AENCs/view.html</a>	
<b>Starting date of the global stakeholder consultation process:</b> 2011-08-26	
<b>Comment submitted by:</b> None	<b>Issues raised:</b> -
<b>Response by TÜV SÜD:</b> -	



## 5 VALIDATION OPINION

TÜV SÜD has performed a validation of the following proposed CDM PoA project:

### Renewable Energy PoA in India

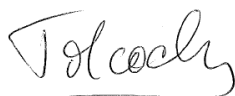
Standard auditing techniques have been used for the validation of the project. A methodology-specific protocol for the PoA has been prepared to conduct the audit in a transparent and comprehensive manner.

The review of the PoA design documentation, subsequent follow-up interviews, and further verification of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In the opinion of TÜV SÜD, the PoA meets all relevant UNFCCC requirements for the CDM if the underlying assumptions do not change. TÜV SÜD recommends the PoA project for registration by the CDM Executive Board.

An analysis, as provided by the applied methodology, demonstrates that the proposed PoA is not a likely baseline scenario. Emission reductions attributable to the PoA are additional to any that would occur in the absence of the project activity. Given that the PoA is implemented as designed, the CPAs under the same are likely to achieve emission reductions.

The validation has been performed following the requirements of the latest version of the CDM VVM and on the basis of the contractual agreement. The single purpose of this report is its use during the registration process as part of the CDM project cycle. Based on the work described in this report, nothing has come to our attention that causes us to believe that any project component or issue has not been covered by the validation process.

Munich, 2524-0709-2012



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Mr. Tolcach, Eric

Certification Body "Climate and Energy"  
TÜV SÜD Industrie Service GmbH

Munich, 2524-0709-2012



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Mr. Maharjan, Bhai Raja

Assessment Team Leader



## **Annex 1: Validation Protocol**

## Validation Protocol CDM-PoA-DD

Programme (PoA) Title: Renewable Energy PoA in India

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**Table 1 Conformity of CDM Programme of Activities**

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
<b>A. General description of small-scale programme of activities (PoA)</b>				
<b>A.1. Title of the small-scale programme of activities (PoA)</b>				
A.1.1. Does the used PoA title clearly enable to identify the unique CDM programme of activities?	1	The title of the PoA is "Renewable Energy PoA in India" and it clearly identifies the PoA.	p	p
A.1.2. Are there any indications concerning the revision number and the date of the revision?	1	Yes, the GSP-PoA-DD indicates version number 1 with date 08/08/2011.	p	p
A.1.3. Is this consistent with the time line of the programme's history?	1	Start date of the PoA is indicated in the GSP-PoA-DD as 16/08/2011. However during the course of the validation, the PoA start date has been revised as 30/03/2011 in accordance with CDM Glossary of terms. The project starting date is after the validation start date. Hence it is line with the PoA history and time line.	CR10	p
<b>A.2. Description of the small-scale programme of activities</b>				
A.2.1. Is the description delivering a transparent overview of the general operating and implementing framework of the PoA?	1, 4	<p>Yes, it has been described clearly that Emission Reduction Services Private Limited (Hereafter referred as ERSPL) will be the coordinating/managing entity (CME) of the PoA. The CDM programme activities (CPAs) included in the PoA will be implemented in India. The SSC-PoA involves Wind, Solar and Hydro based power plants delivering energy to the grid.</p> <p><b><u>Clarification Request No. 1.</u></b></p> <p>ERSPL and Swiss Carbon Assets Ltd. have been indicated as the project participants. But in A.2, it is mentioned that South Pole Carbon Asset management is also involved. Please clarify the relationship between SouthPole and Swiss Carbon Assets Ltd.</p> <p><b><u>Corrective Action Request No.1.</u></b></p>	CAR, CR	p

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		The PoA-DD refers that renewable based power generation capacity is 10% of the total resources in India. But Referred foot note refers some other value, The PP needs to clarify this.		
A.2.2. Is the policy/measure or stated goal of the PoA clearly and unambiguously presented?	1, 4	Yes, it has been clearly presented that the PoA objective is to support small scale Wind, Solar and Hydro based power projects in India by providing a standardized and streamlined access to CDM services.	p	p
A.2.3. Is there a valid confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity?	1, 4	Yes, it is indicated in PoA –DD that proposed PoA is a voluntary action by the CME – ERSPL. There is no mandatory requirement in host country to undertake such a renewable energy PoA.	p	p
A.2.4. Does the description of the technology to be applied provide sufficient and transparent input to evaluate its impact on the greenhouse gas balance?	1, 4	The PoA objective is to support grid connected small scale Wind, Solar and Hydro based power projects in India. The renewable power through these resources would eventually displace the predominantly fossil-fuel based grid thereby resulting in GHG reduction.	p	p
A.2.5. Is the brief explanation how the programme will reduce greenhouse gas emission transparent and suitable?	1, 4	Yes, a brief explanation is provided in the PoA-DD as to how the programme will reduce greenhouse gas emission transparent and suitable.	p	p
<b>A.3. Coordinating/managing entity and participants of SSC-PoA</b>				
A.3.1. Is the form required for the indication of project participants correctly applied?	1	<b><u>Corrective Action Request No.2.</u></b> PP needs to clearly indicate in section A.3 if the Project participants are Public or Private entities.	CAR	p
A.3.2. Is the participation of the listed entities or Parties in the PoA confirmed by each one of them?	1	ERSPL and Swiss Carbon Assets Ltd. have been indicated as the project participants. <b><u>Clarification Request No. 2.</u></b> Letter of authorization & letter of approval needs to be provided from DNA of India and Switzerland.	CR	p
A.3.3. Is all information on participants / Par-	1	No. Please refer section A.2.1	CR	p

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ties provided in consistency with details provided by further chapters of the POA-DD (in particular annex 1)?				
A.3.4. Is it evident that the coordinating or managing entity of the PoA is the entity which communicates with the Executive Board (EB)?	1	It has been mentioned in the POA-DD that coordinating or managing entity of the PoA is ERSPL. <b><u>Clarification Request No. 3.</u></b> PP needs provide the MoC (modalities of communication with CDM EB- UNFCCC).	CR	p
<b>A.4. Technical description of the small-scale programme of activities</b>				
<b>A.4.1. Location of the programme of activities</b>				
A.4.1.1. Does the information provided on the location of the programme allow for a clear definition identification of the boundary for the PoA in terms of a geographical area, within which all CPAs included in this PoA will be implemented?	1	The CPAs under the PoA will be implemented throughout the host country – India. <b><u>Corrective Action Request No.3.</u></b> PP needs to include the latest Geographical Map of India.	CAR	p
A.4.1.2. Is the consideration of all applicable national and/or sectoral policies and regulations of each host country within the boundary evident and substantiated?	1	The information on the applicable national and/or sectoral policies and regulations which are relevant to the PoA has not been provided in section A.4.2.1 of PoA-DD. <b><u>Corrective Action Request No.4.</u></b> PP needs to indicate in section A.4.2.1 of the PoA-POA-DD regarding the applicable national and/or sectoral policies and regulations which are relevant to the PoA. The references/supportive of such policies need to be included in the PoA-DD.	CAR	p
A.4.1.3. Is/are the Host Party(ies) stated?	1	India has been stated as the host party.	p	p
<b>A.4.2. Description of a typical small-scale CDM programme activity (CPA)</b>				
A.4.2.1. Is it unambiguously stated which technology or measures are to be employed by the SSC-CPA?	1, 4	The description of technology provided in the PoA-DD is generic and more specific information pertaining to the technology would be provided in individual CPAs; technology would vary with individual technology types employed by projects as CPAs. However, PoA-DD pro-	CAR	p

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		vides a broader picture with respect to the technological description that is sufficient and transparent in evaluating project's impact on the greenhouse gas balance. <b><u>Corrective Action Request No.5.</u></b> Please include further detailed technology description for each type of technology to be employed in the CPAs under the PoA.		
A.4.2.2. Is the type and category of project activities correctly identified and indicated?	1, 4	<b><u>Corrective Action Request No.6.</u></b> Inclusion criteria for CPA inclusion are not fully descriptive and adequate. Please elaborate the eligibility criteria. List of eligibility criteria for inclusion of SSC-CPA in the PoA in section A.4.2.2 does not discuss applicability of CPAs with respect to additionality, de-bundling, avoidance of double counting. . PP also needs to indicate the likely evidences that are expected to adhere the eligibility requirements shall also be indicated corresponding to the each criterion preferably in a tabular format. The eligibility criteria does not discuss on each type of activity (solar, hydro, wind) specifically. Please revise accordingly.	CAR	p
A.4.2.3. Does the technical design of the project activity reflect current good practices?	1, 4	The PoA would generate energy from renewable source of power i.e Wind, Solar and Hydro and would replace equivalent amount by exporting it to grid thus reflects current good practices.	p	p
A.4.2.4. Does the implementation of the project activity require any technology transfer from Annex-I-countries to the host country (ies)?	1, 4	The project does not require any technology transfer from Annex1 country	p	p
A.4.2.5. Is the technology implemented by the project activity environmentally safe?	1, 4	Yes, the technology implemented by the project activity is expected to be environmentally safe and Environmental Analysis of the same would be done at CPA level as mentioned in Section C.1.	p	p
A.4.2.6. Is the information provided in compliance with actual situation or planning?	1, 4	Yes	p	p
A.4.2.7. Does the project use state of the	1, 4	Please refer to A.4.2.1	CAR	p

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art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?				
A.4.2.8. Does the project require extensive initial training and maintenance efforts in order to be carried out as scheduled during the project period?	1, 4	Project does not require extensive initial training and maintenance efforts.	p	p
A.4.2.9. Is information available on the demand and requirements for training and maintenance?	1, 4	Not required.	p	p
A.4.2.10. Are there clear and unambiguous eligibility criteria for the inclusion of a SSC-CPA into the PoA?	1, 3, 4	Please refer A.4.2.2	CAR	p
<b>A.4.3. Description of how the anthropogenic emissions of GHG by sources are reduced by a SSC-CPA below those that would have occurred in the absence of the registered PoA (assessment and demonstration of additionality of the PoA as a whole)</b>				
A.4.3.1. Is it evident and clearly documented that the proposed PoA is a voluntary coordinated action?	1, 4	It has been clearly documented in the PoA-DD that proposed PoA is a voluntary coordinated action.	p	p
A.4.3.2. Is it evident and substantiated that this voluntary coordinated action would not be implemented in the absence of the PoA?	1, 4, 2	<b><u>Corrective Action Request No.7.</u></b> PP needs to update the reference to the latest EB meeting. A separate timeline for activities related to project implementation and CDM related activities needs to be incorporated.	CAR	p
A.4.3.3. Is it evident and substantiated that in case the PoA implements a mandatory policy or regulation this would not be enforced otherwise?	1, 4	Not applicable (NA)	p	p
A.4.3.4. Is it evident and substantiated that in case the PoA implements a mandatory policy or regulation that is enforced the PoA will lead to a greater level of enforcement?	1, 4	NA	p	p

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A.4.4. Operational, management and monitoring plan for the programme of activities (PoA)				
A.4.4.1. Is there a clear and transparent description of the operational and management arrangements established by the coordinating/managing entity?	1, 4	<b><u>Corrective Action Request No.8.</u></b> Although a description of the operational and management arrangements established by PP has been provided in the PoA-DD, PP needs to further elaborate on the following: <ul style="list-style-type: none"> <li>• Management Team Structure</li> <li>• Record keeping and Documentation system</li> </ul>	CAR	p
A.4.4.2. Is there a record keeping system for each CPA under the PoA?	1, 4	A central Database would be maintained by the PP that would include the following information on uniquely identified CPAs: <ul style="list-style-type: none"> <li>ü Name of the CPA.</li> <li>ü Implementing entity of the CPA.</li> <li>ü Contact Details of Implementing entity (Address / Contact person /Phone/e-mail/fax).</li> <li>ü Technology of the CPA.</li> <li>ü Location of the CPA (GPS coordinates).</li> <li>ü Verification Status</li> </ul> The CME will also be responsible for the management of records and data associated with each CPA. The Excel database will be updated manually using the data supplied by the participating power plants. It will form the basis for the verification of CPAs and be available for inspection by the DOE at any point in time.  Apart from the above this database would contain a system/procedure to avoid double counting and to do de-bundling check. <b><u>Corrective Action Request No.9.</u></b> 1. It is not clear how individual projects in each CPA type are checked and how data would be collected (for eg. a bundle of WTGs or a number of solar devices etc). PP needs to specify clearly how data records are maintained for each of project types.	CAR	p

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		2. Please provide the complete monitoring plan and update the monitoring section accordingly.		
A.4.4.3. Is there a system or procedure to avoid double accounting, i.e. to avoid that an included CPA under this PoA already is a registered CDM project or CPA in another PoA?	1, 4	Yes, the system to avoid double counting has been indicated. This would be done by CME through information available on UNFCCC. Also each CPA implementer will have a contractual agreement with CME that would include provisions to avoid double counting.	p	p
A.4.4.4. Is there a system or procedure to detect whether a SSC-CPA to be included in the PoA is not a de-bundled component of another CPA or CDM project?	1, 4, 3	CME will have a contractual arrangement with each CPA implementer to ensure that it is not a de-bundled component of another CPA or CDM project. The same has been documented in PoA-DD for transparency. Further the CME would also cross check with the information available on UNFCCC website. The de-bundling check for the CPAs will be carried out according to the <i>Guidelines on Assessment of De-bundling for SSC Project Activities, Version 3, Annex 13, EB 54, section II: Guidance for Determining the Occurrence of De-bundling under a Programme of Activities (PoA)</i> .	p	p
A.4.4.5. Are provisions in place to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA?	1, 4	CME will have a contractual arrangement, with each CPA implementer, that would include following pre conditions: <ul style="list-style-type: none"> <li>• The CPA has not been and will not be registered as a single CDM project activity or as a CPA under another PoA.</li> <li>• The CPA implementer is aware that the CPA will be subscribed to the present PoA.</li> <li>• The CPA implementer cedes its rights to claim and own emission reductions under the Clean Development Mechanism of the UNFCCC or any voluntary scheme to the managing entity of the PoA.</li> <li>• Mechanism of the UNFCCC or any voluntary scheme.</li> </ul>	p	p
A.4.4.6. Is there a <b>monitoring plan</b> for the PoA, including a description of the proposed statistically sound sampling methods or procedures to be used by the DOE for the verification (please consider sampling among	1, 2, 3	<b><u>Corrective Action Request No.10.</u></b> As each CPA is expected to have different characteristics and verification periods, please further elaborate the monitoring plan. Describe clearly a transparent system to ensure that no double accounting occurs and that the status of verification can be determined any time	CAR	p



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CPAs and within CPAs)?		for each CPA.		
A.4.4.7. In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA, does the monitoring plan provide a transparent system to ensure that no double accounting occurs and that the status of verification can be determined any time for each CPA?	1	See section A.4.4.7	CAR	p
<b>A.4.5. Public funding of the small-scale project activity</b>				
A.4.5.1. Is the information provided on public funding provided in compliance with the actual situation or planning as available by the project participants?	1, 4	<b>Clarification Request No. 4.</b> Please submit documentary evidence to justify that ODA has not been used.	CR	p
A.4.5.2. Is all information provided consistent with the details given in remaining chapters of the PoA-DD (in particular annex 2)?	1	Yes the information has been consistently provided.	p	p
<b>B. Duration of the programme of activities</b>				
<b>B.1. Starting date of the programme of activities</b>				
B.1.1. Is the programme's starting date clearly defined and reasonable?	1, 2	The start date has been referred as 16/08/2011 corresponding to the submission of documents for validation. However during the course of the validation, the PoA start date has been revised as 30/03/2011 in accordance with CDM Glossary of terms.	CR10	p
<b>B.2. Length of the programme of activities (PoA)</b>				
B.2.1. Is the assumed length of the PoA clearly defined by the coordinating managing entity and reasonable (max 28 years)?	1, 4	Length of the PoA is reasonable (28 years)	p	p
<b>C. Environmental Analysis</b>				
<b>C.1. Definition of the level at which environmental analysis as per requirements of the CDM modalities and procedures is un-</b>				

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<b>dertaken:</b>				
C.1.1. Is it defined whether the environmental analysis takes place at PoA or CPA level?	1, 4	Yes, it has been indicated that the environmental analysis takes place at CPA level based on Indian Acts and Regulation pertaining to Environment as applicable.	p	p
C.1.2. Is the choice whether the environmental analysis takes place at PoA or CPA level justified?	1, 4	Yes, it has been appropriately justified.	p	p
<b>C.2. Documentation on the analysis of the environmental impacts of the PoA, including transboundary impacts:</b>				
C.2.1. Are there any Host Party requirements for an Environmental Impact Assessment (EIA), and if yes, has an EIA been approved?	1, 4	See section C.1.1	p	p
C.2.2. Has the analysis of the environmental impacts of the project activity been sufficiently described?	1, 4	See section C.1.1	p	p
C.2.3. Will the project create any adverse environmental effects?	1, 4	See section C.1.1	p	p
C.2.4. Were trans-boundary environmental impacts identified in the analysis?	1, 4	NA	p	p
<b>C.3. Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA of the PoA:</b>				
C.3.1. Have the identified environmental impacts been addressed in the project design sufficiently?	1	See section C.1.1	p	p
C.3.2. Does the project comply with environmental legislation in the host country?	1	Please refer to C.1.1	p	p
C.3.3. Is, per host country laws/regulations, an environmental impact assessment necessary for a typical CPA?	1	Please refer to C.1.1	p	p

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<b>D. Stakeholders' comments</b>					
<b>D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:</b>					
D.1.1. Is there a clear statement whether the stakeholder comments will be invited at PoA or CPA level?	1, 4	Yes, it has been indicated that the stakeholder comments will be done at CPA level.	p	p	
D.1.2. Is the choice justified in a clear and reasonable manner?	1, 4	Yes, the choice of stakeholder consultation at CPA level in the PoA-DD has been justified in the PoA-DD.	p	p	
D.1.3. If the stakeholder comments will be invited at PoA level, is there sufficient information provided, on how comments by local stakeholders were invited?	1, 4, 5, 6	NA	p	p	
D.1.4. If the stakeholder comments will be invited at PoA level, is there a summary of the contents?	1, 4, 5, 6	NA	p	p	
D.1.5. If the stakeholder comments will be invited at PoA level, is there sufficient information provided, on how due account was taken of any comments received?	1, 4, 5, 6	NA	p	p	
<b>D.2. Brief description how comments by local stakeholders have been invited and compiled</b>					
D.2.1. Have relevant stakeholders been consulted?	1, 4, 5, 6	NA	p	p	
D.2.2. Have appropriate media been used to invite comments by local stakeholders?	1, 4, 5, 6	NA	p	p	
D.2.3. If a stakeholder consultation process is required by regulations/laws in the host country, has the stakeholder consultation process been carried out in accordance with such regulations/laws?	1, 4, 5, 6	NA	p	p	

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D.2.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1	NA	p	p
<b>D.3. Summary of the comments received</b>				
D.3.1. Is a summary of the received stakeholder comments provided?	1, 4, 5, 6	NA	p	p
<b>D.4. Report on how due account was taken of any comments received</b>				
D.4.1. Has due account been taken of any stakeholder comments received?	1, 4, 5, 6	NA	p	p
<b>E. Application of a baseline and monitoring methodology to a typical SSC-CPA</b>				
<b>E.1. Title and reference of the approved SSC baseline and monitoring methodology applied to SSC-CPA included in the PoA</b>				
E.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1	Yes, the methodology referred are as below: <ul style="list-style-type: none"> <li>AMS I.D, Grid connected renewable electricity generation - Version 17.</li> </ul>	p	p
E.1.1.2. Is the applied version the most recent one and / or is this version still applicable?	1	Yes, the version used is the most recent one at the time of uploading the project for GSP.	p	p
E.1.1.3. Is the applied SSC methodology approved by the board, for use in PoA?	1	Yes, the applied SSC methodology has been approved by the board, for use in PoA.	p	p
<b>E.2. Justification of the choice of the methodology and why it is applicable to a SSC-CPA</b>				
E.2.1.1. Is the applied methodology considered the most appropriate one?	1, 3	Yes, the applied methodology is the most appropriate small scale methodology for this kind of a PoA.	p	p
E.2.1.2. Does the SSC methodology account for leakage in the context of a SSC-CPA?	1, 3	As per the applied methodology, leakage would only be accounted if generating equipment is transferred from another activity.	p	p
E.2.1.3. Criterion 1: This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind,	1, 3	Applicability checklist	p	p
		Yes / No / NA		
		Criterion discussed in the POA-DD?		
		Yes		

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<p>geothermal and renewable biomass:</p> <p>ü Supplying electricity to a national or a regional grid; or</p> <p>ü Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.</p>		<table><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> <p>PoA Consists CPAs of grid connected Wind, Hydro &amp; Solar power projects. This criterion has also been included as eligibility criteria of PoA.</p>	Compliance provable?	Yes	Compliance verified?	Yes						
Compliance provable?	Yes											
Compliance verified?	Yes											
<p>E.2.1.4. Criterion 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).</p>	<p>1, 3</p>	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> <p>The CPAs under the PoA would only be Greenfield activities. This criterion has also been included as eligibility criteria Section of PoA-DD under “Target group”.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<p>p</p>	<p>p</p>
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											

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E.2.1.5. Criterion 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"><li>The project activity is implemented in an existing reservoir with no change in the volume of reservoir;</li><li>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/m<sup>2</sup>;</li><li>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<sup>2</sup>.</li></ul>	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> <p>It has been mentioned in the eligibility criteria under “Target group” in the PoA-DD that if the power plant is a hydroelectric plant that comprises a reservoir, the power density of the power plant shall be greater than 10 W/m<sup>2</sup>. Hence the criteria is already considered by the PP.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	p	p
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
E.2.1.6. Criterion 4: If the unit added 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. If the unit added co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table> <p>This criterion has also been included as eligibility criteria section of PoA-DD.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	p	p
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
E.2.1.7. Criterion 5: Combined heat and power (co-generation) systems are not eligible under this category.	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	Yes	Compliance provable?	NA	Compliance verified?	NA	p	p
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	Yes											
Compliance provable?	NA											
Compliance verified?	NA											

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		The PoA does not include Combined heat and power system.										
E.2.1.8. Criterion 6: 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.	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table> <p>CPAs only with Greenfield activities are part of this PoA, same has been referred in eligibility criteria as well.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	Yes	Compliance provable?	NA	Compliance verified?	NA	p	p
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	Yes											
Compliance provable?	NA											
Compliance verified?	NA											
E.2.1.9. Criterion 7: 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.	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table> <p>CPAs only with Greenfield activities are part of this PoA, same has been referred in eligibility criteria as well.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	Yes	Compliance provable?	NA	Compliance verified?	NA	p	p
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	Yes											
Compliance provable?	NA											
Compliance verified?	NA											
E.2.1.10. Criterion 8: In the specific case of biomass project activities the applicability of the methodology is limited to either project activities that use biomass residues only or biomass from dedicated plantations complying with the applicability conditions of AM0042.	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	Yes	Compliance provable?	NA	Compliance verified?	NA	p	p
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	Yes											
Compliance provable?	NA											
Compliance verified?	NA											

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E.2.1.11. Criterion 9: In the specific case of bio-mass project activities the determination of leakage shall be done following the general guidance for leakage in small-scale bio-mass project activities (attachment C of Appendix B of simplified modalities and procedures for small-scale clean development mechanism project activities; decision 4/CMP.1) or following the procedures included in the leakage section of AM0042.	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>yes</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	yes	Compliance provable?	NA	Compliance verified?	NA	p	p
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	yes											
Compliance provable?	NA											
Compliance verified?	NA											
E.2.1.12. Criterion 3: In case the project activity involves the replacement of equipment, and the leakage from the use of the replaced equipment in another activity is neglected because the replaced equipment is scrapped, an independent monitoring of scrapping of replaced equipment needs to be implemented. The monitoring should include a check if the number of project activity equipment distributed by the project and the number of scrapped equipment correspond with each other. For this purpose scrapped equipment should be stored until such correspondence has been checked. The scrapping of replaced equipment should be documented and independently verified.	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the POA-DD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>NA</td></tr><tr><td>Compliance verified?</td><td>NA</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the POA-DD?	Yes	Compliance provable?	NA	Compliance verified?	NA	p	p
Applicability checklist	Yes / No / NA											
Criterion discussed in the POA-DD?	Yes											
Compliance provable?	NA											
Compliance verified?	NA											
E.3.Description of the sources and gases included in the SSC-CPA boundary												
E.3.1.1. Does the SSC-CPA boundary include the physical and geographical location where the programme activities take place?	1	Yes. Please refer to CAR in section A.4.1.1	CAR	p								
E.3.1.2. Are all sources and gases within the	1	The inclusion or exclusion of gases in the project boundary of differ-	p	p								



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boundary considered in a clear manner?		ent type of renewable energy based projects as CPAs has been done in accordance to applied methodology.		
E.3.1.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PoA-DD?	1	Yes.	p	p
<b>E.4. Description of how the baseline scenario is identified and description of the identified baseline scenario:</b>				
E.4.1.1. Have all technically feasible baseline scenario alternatives to the PoA been identified and discussed by the PoA-DD? Why can this list be considered as being complete?	1	<b><u>Corrective Action Request No.11.</u></b> It needs to be included in section E.4 whether the identified baseline scenario is as per the legal requirements/laws and the installation of project activity is not mandatory by any laws or requirements.	CAR	p
E.4.1.2. Does project identify correctly and exclude those options not in line with regulatory or legal requirements?	1	Please refer to CAR in section E.4.1.1	CAR	p
E.4.1.3. Have applicable regulatory or legal requirements been identified?	1	Please refer to CAR in section E.4.1.1	CAR	p
E.4.1.4. Does the PoA-DD identify the most likely baseline scenario in absence of the project activity?	1	Yes	p	p
E.4.1.5. Is this identification supported by official and/or verifiable documents (e.g. studies, web pages, certificates, etc)?	1	NA	p	p
<b>E.5. Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of a typical SSC-CPA, included in a registered PoA (assessment and demonstration of additionality):</b>				
E.5.1. Are the key criteria and data for assessing additionality of a SSC-CPA that is to be included into the PoA clearly and unambiguously stated?	1	In view of the various cost and revenue variations across renewable energy projects in India the Financial barriers will be tested individually for each SSC-CPA	p	p

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E.5.2. Key criteria and data for assessing additionality of a SSC-CPA				
E.5.2.1. Are the key criteria and data for assessing additionality of a SSC-CPA that is to be included into the PoA based on the additionality assessment in section E.5.1 of the PoA-DD?	1	<p>In order to make the assessment of additionality as objective as possible, the PPs has opted to test only for a subset of the barriers:</p> <p><b>Test a:</b> As per "Guidelines for Demonstrating Additionality of Micro-scale Project Activities" version 2: SSC-CPA will be considered additional if its installed capacity is below the 5 MW threshold and if it is undertaken in an underdeveloped zone of India or SSC-CPA employs specific renewable energy technologies/measures recommended by the host country DNA and approved by the Board to be additional in the host country (conditions apply: the total installed capacity of the technology/measure contributes less than or equal to 5% to national annual electricity generation).</p> <p><b>Test b:</b> The CME, will test the financial additionality of the SSC-CPA through an investment analysis.</p> <p><b><u>Clarification Request No. 5.</u></b></p> <p>Considering the fact that PoA uses small scale methodology, CME need to clarify whether Attachment A to Appendix B or Additionality tool has been used for demonstrating additionality at CPA Level.</p>	CR	p
E.5.2.2. Is the choice of the criteria justified, based on the analysis in section E.5.1 of the PoA-DD?	1	Choice of criteria to demonstrate additionality at CPA level, has been justified in PoA-DD. Further, please refer Section E.5.1.2.	CR	p
E.5.2.3. Does it become evident how these criteria would be applied to assess the additionality of a typical CPA at the time of inclusion?	1	Yes. Two separate test for micro level projects and other projects has been discussed. The requirements and guidelines for CPA to demonstrate additionality has been provided. Further, please refer Section E.5.1.2.	CR	p
E.5.2.4. Is this information incorporated into the specific CDM-SSC-CPA-DD ("real case")?	1	Yes	p	p
E.5.2.5. If the starting date of the programme activity is before the date of validation, is	1	Start date of the PoA is after the start date of validation. The starting date of the PoA is 30 <sup>th</sup> March 2011 based on the Board decision by	CR10	p

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evidence available to prove that incentive from the CDM was seriously considered in the decision to proceed with the programme activity?		South Pole to invest in the Renewable Energy PoA in India. This could be considered as the earliest date at which the CME has committed to implement the PoA and subsequently appointed the DOE in August 2011 for Validation activities of the PoA, which clearly shows that the PP has considered CDM in the decision to proceed with the programme of activity																			
E.5.2.6. Is a complete list of barriers developed that prevents the project activity to occur?	1	Please refer section E.5.1.2.			CR	p															
E.5.2.7. Does this list include at least one of the following barriers?	1	<table><tr><th>Barrier</th><th>Discussed?</th><th>Verifiable?</th></tr><tr><td>Investment</td><td>Yes</td><td>No</td></tr><tr><td>Technological</td><td>No</td><td>NA</td></tr><tr><td>Due to prevailing practice</td><td>No</td><td>NA</td></tr><tr><td>Other</td><td>No</td><td>NA</td></tr></table>	Barrier	Discussed?	Verifiable?	Investment	Yes	No	Technological	No	NA	Due to prevailing practice	No	NA	Other	No	NA			CR	p
Barrier	Discussed?	Verifiable?																			
Investment	Yes	No																			
Technological	No	NA																			
Due to prevailing practice	No	NA																			
Other	No	NA																			
		<b><u>Clarification Request No. 6.</u></b> PP needs to provide the framework financial calculation sheets and related supporting documents to validate the investment barrier to be proved at CPA level. Please also submit the evidence for source of each assumption.																			
E.5.2.8. Does the discussion sufficiently take into account relevant national and/or sectoral policies?	1	<b><u>Corrective Action Request No.12.</u></b> PP needs to include all the relevant national and sectoral policies in section E.5.2 of PoA-DD.			CAR	p															
E.5.2.9. Is transparent and documented evidence provided on the existence and significance of these barriers?	1	Please refer Section E.5.1.2 & E.5.1.8			CAR, CR	p															
E.5.2.10. Is it appropriately explained how the approval of the project activity will help to overcome the identified barriers?	1	Please refer Section E.5.1.2 & E.5.1.8			CAR, CR	p															
<b>E.6.Estimation of Emission reductions of a CPA</b>																					
E.6.1. <i>Explanation of methodological choices, provided in the approved baseline and monitoring methodology applied, selected for a typical CPA</i>																					

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E.6.1.1. Is it explained how the procedures provided in the methodology are applied?		Yes, it is explained how the procedures provided in the methodology are applied by the proposed PoA.	p	p	
E.6.1.2. Is every selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site?		Yes, the selection of options offered by the methodology correctly justified and is this justification in line with the situation verified on-site.	p	p	
Determination of Project Emission (Comment on any line answered “No”)					
E.6.1.3. Component 1: Emissions from the consumption of fossil fuel	1	Project emission checklist	Yes / No /NA	p	p
		Component discussed in the POA-DD?	Yes		
		Formulae correctly applied?	Yes		
E.6.1.4. Component 2: Emissions from the consumption of electricity.	1	Project emission checklist	Yes / No /NA	p	p
		Component discussed in the POA-DD?	Yes		
		Formulae correctly applied?	Yes		
E.6.1.5. Component 3: Emissions from the consumption of non-condensable gases.	1	Project emission checklist	Yes / No /NA	p	p
		Component discussed in the POA-DD?	NA		
		Formulae correctly applied?	NA		
E.6.1.6. Component 4: Emissions from water reservoirs of hydro power plant	1	Project emission checklist	Yes / No /NA	p	p
		Component discussed in the POA-DD?	Yes		
		Formulae correctly applied?	Yes		
E.6.2. Equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA:					
E.6.2.1. Are the formulae required for the determination of emission reductions correctly	1	Yes, it is explained how the procedures provided in the methodology are applied by the proposed PoA.	p	p	

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presented, enabling a complete identification of parameters to be used and / or monitored?																						
E.6.2.2. Are the equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA, completely presented?	1	<b><u>Corrective Action Request No.13.</u></b> PP needs to provide us the standard Emission reduction calculation sheet which would be used for ER computation from each CPA type.	CAR	p																		
E.6.3. Data and parameters that are to be reported in CDM-SSC-CPA-DD form																						
E.6.3.1. Is the list of parameters presented in chapter B.6.2 considered to be complete with regard to the requirements of the applied methodology?	1,4	No, the list provided is not complete as per the applied methodology. Parameters are discussed individually below for each methodology. Refer section E.6.3.2. See CARs below.	CAR	p																		
E.6.3.2. Comment on any line answered with “No”																						
Data and parameters for methodology AMS I.D, ‘Grid connected renewable energy generation’.																						
E.6.3.2.1. Parameter Title: EF CO <sub>2</sub> Emission factor of a grid (National or Regional) where the project activity is exporting power	1,4	<table><tr><th>Data Checklist</th><th>Yes / No/NA</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>Yes</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>Yes</td></tr></table>	Data Checklist	Yes / No/NA	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	NA	Has this value been verified?	Yes	Choice of data correctly justified?	NA	Measurement method correctly described?	Yes	p	p
Data Checklist	Yes / No/NA																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	NA																					
Has this value been verified?	Yes																					
Choice of data correctly justified?	NA																					
Measurement method correctly described?	Yes																					
E.6.3.2.2. Parameter Title: Cap <sub>BL</sub> Installed capacity of hydropower plant before the implementation of the project activity	1,4	<table><tr><th>Data Checklist</th><th>Yes / No / NA</th></tr><tr><td>Title in line with methodology?</td><td>No</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr></table>	Data Checklist	Yes / No / NA	Title in line with methodology?	No	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	CAR	p										
Data Checklist	Yes / No / NA																					
Title in line with methodology?	No																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					

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		<table><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table> <b><u>Corrective Action Request No.14.</u></b> The parameter Cap <sub>BL</sub> needs to be included in the PoA-DD as per methodology. <sub>L</sub>	Source clearly referenced?	Yes	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA										
Source clearly referenced?	Yes																					
Correct value provided?	NA																					
Has this value been verified?	NA																					
Choice of data correctly justified?	NA																					
Measurement method correctly described?	NA																					
E.6.3.2.3. Parameter Title: A <sub>BL</sub>  Area of reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full.	1,4	<table><tr><td>Data Checklist</td><td>Yes / No / NA</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>	Data Checklist	Yes / No / NA	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	p	p
Data Checklist	Yes / No / NA																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	NA																					
Has this value been verified?	NA																					
Choice of data correctly justified?	NA																					
Measurement method correctly described?	NA																					
E.6.3.2.4. Parameter Title: EF Res Default emission factor for emissions from reservoirs.	1,4	<table><tr><td>Data Checklist</td><td>Yes / No / NA</td></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Choice of data correctly justified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table>	Data Checklist	Yes / No / NA	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	p	p
Data Checklist	Yes / No / NA																					
Title in line with methodology?	Yes																					
Data unit correctly expressed?	Yes																					
Appropriate description of parameter?	Yes																					
Source clearly referenced?	Yes																					
Correct value provided?	NA																					
Has this value been verified?	NA																					
Choice of data correctly justified?	NA																					
Measurement method correctly described?	NA																					
E.6.3.2.5. Parameter Title: CO <sub>2</sub> emission factor of the fossil fuel consumed on-site.	1,4	<b><u>Corrective Action Request No.15.</u></b> PP needs to include the parameter ‘CO <sub>2</sub> emission factor of the fossil fuel consumed on-site’.	CAR	p																		

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E.7.Application of the monitoring methodology and description of the monitoring plan																													
E.7.1. Data and parameters to be monitored by each SSC-CPA																													
E.7.1.1. Is the list of parameters presented in chapter E.7.1 considered to be complete with regard to the requirements of the applied methodology?		Parameters are discussed individually below for each methodology. Refer section E.7.1.2. See CARs below. <b>Clarification Request No. 7.</b> PP needs to explain how same monitoring procedure will be used for Solar, Hydro and Wind power, especially in case wind where common meter is used and apportioning is used for invoicing.		CAR	p																								
E.7.1.2. Comment on any line answered with “No”																													
E.7.1.2.1. Parameter Title: $EG_{BL,,y}$ , Quantity of net electricity supplied to the grid in year y	1,4	<table><tr><th>Monitoring Checklist</th><th>Yes / No/NA</th></tr><tr><td>Title in line with methodology?</td><td>Yes</td></tr><tr><td>Data unit correctly expressed?</td><td>Yes</td></tr><tr><td>Appropriate description of parameter?</td><td>Yes</td></tr><tr><td>Source clearly referenced?</td><td>Yes</td></tr><tr><td>Correct value provided for estimation?</td><td>NA</td></tr><tr><td>Has this value been verified?</td><td>NA</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr><tr><td>Correct reference to standards?</td><td>NA</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr><tr><td>QA/QC procedures described?</td><td>No</td></tr><tr><td>QA/QC procedures appropriate?</td><td>No</td></tr></table> <b>Corrective Action Request No.16.</b> PP needs to specify the measurement and recording frequency of all the parameter as per the methodology or applicable tool. Also include standard QA/QC or cross check measures in the PoA-DD. Please provide specific QA/QC for each technologies (viz wind, hydro & Solar) to be adopted by CPAs. <b>Clarification Request No. 8.</b> PP needs to mention in section E.7.1 which ‘standard industry norm’	Monitoring Checklist	Yes / No/NA	Title in line with methodology?	Yes	Data unit correctly expressed?	Yes	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided for estimation?	NA	Has this value been verified?	NA	Measurement method correctly described?	NA	Correct reference to standards?	NA	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No		CAR, CR	p
Monitoring Checklist	Yes / No/NA																												
Title in line with methodology?	Yes																												
Data unit correctly expressed?	Yes																												
Appropriate description of parameter?	Yes																												
Source clearly referenced?	Yes																												
Correct value provided for estimation?	NA																												
Has this value been verified?	NA																												
Measurement method correctly described?	NA																												
Correct reference to standards?	NA																												
Indication of accuracy provided?	No																												
QA/QC procedures described?	No																												
QA/QC procedures appropriate?	No																												

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		would be used for calibration of the energy meter and please define appropriately how the accuracy level for parameter $EB_{BL,y}$ would be ensured for all CPAs.			
E.7.1.2.2. Parameter Title: $FC_{i,j,y}$ diesel consumption from auxiliaries	1,4	Monitoring Checklist	Yes / No/NA	p	p
		Title in line with methodology?	Yes		
		Data unit correctly expressed?	Yes		
		Appropriate description of parameter?	Yes		
		Source clearly referenced?	NA		
		Correct value provided for estimation?	NA		
		Has this value been verified?	NA		
		Measurement method correctly described?	NA		
		Correct reference to standards?	Yes		
		Indication of accuracy provided?	NA		
		QA/QC procedures described?	Yes		
		QA/QC procedures appropriate?	Yes		
E.7.2. Description of the monitoring plan for a SSC-CPA					
E.7.2.1. Is the operational and management structure clearly described and in compliance with the envisioned situation?	1, 4	<b>Clarification Request No. 9.</b> PP needs to provide the Operation and Management structure (Administrative Manual) pertaining to the proposed PoA. Mention clearly the responsibilities and institutional arrangements for data collection archiving. <b>Clarification Request No. 10.</b> The start date of the PoA is mentioned as 16/08/2011 which is before the start of GSP. Please justify the significance of the start date of PoA in line with the CDM Glossary of terms. <b>Clarification Request No. 11.</b> It is mentioned in PoA-DD that Bond rate is taken as the 3 month average prior to the investment decision and for a duration equal to the technical lifetime of the project activity, while in the excel sheet it		CR	p



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		says 6 month in the sub sheet 'Risk free rate'. The PP needs to clarify this.		
E.7.2.2. Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1, 4	See CR in section E.7.2.1	CR	p
E.7.2.3. Does the monitoring plan provide current good monitoring practice?	1, 4	See CR in section E.7.2.1	CR	p
E.7.2.4. If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1, 4	NA	p	p
<b>E.8.Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)</b>				
E.8.1.1. Is there any indication of a date when the baseline was determined?	1	Yes	p	p
E.8.1.2. Has dd/mm/yyyy format been used to indicate the date?	1	Yes	p	p
E.8.1.3. Is this consistent with the time line of the PoA-DD history?	1	Yes	p	p
E.8.1.4. Is the information on the person(s) / entity (ies) responsible for the application of the baseline and monitoring methodology provided consistent with the actual situation?	1	Yes.	p	p
E.8.1.5. Is information provided whether this person / entity is also considered a project participant?	3	<b><u>Corrective Action Request No.17.</u></b> PP needs to indicate in section E.8 of CPA-DD whether the person/entity responsible for completion of baseline is considered a project participant or not?	CAR	p

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		<b>Clarification Request No. 12.</b> a) How the statement in chapter A.4.2.1 (PoA DD), regarding Solar power and solar thermal is in compliance with para 6 of AMS I.D. version 17 methodology. b) In same chapter page number 9, the pp shall clarify why national rural electrification policies are included?		
<b>F. Annexes 1 – 4</b>				
<b>F.1. Annex 1: Contact Information</b>				
F.1.1. Is the information provided consistent with the one given under section A.3?	1	Yes	p	p
F.1.2. Is the information on all private participants and directly involved Parties presented?	1	Yes.	p	p
<b>F.2. Annex 2: Information regarding public funding</b>				
F.2.1. Is the information provided on the inclusion of public funding (if any) in consistency with the actual situation presented by the project participants?	1	Yes.	p	p
F.2.2. If necessary: Is an affirmation available that any such funding from Annex-I countries does not result in a diversion of ODA?	1	Yes.	p	p
<b>F.3. Annex 3: Baseline information</b>				
F.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the POA-DD?	1	No further information is provided in Annex-3	p	p

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F.3.2. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1	NA	p	p
F.3.3. Does the additional information substantiate / support statements given in other sections of the POA-DD?	1	No further information is provided in Annex-3	p	p
<b>F.4. Annex 4: Monitoring information</b>				
F.4.1. If additional background information on monitoring is provided: Is this information consistent with data presented in other sections of the PoA-DD?	1	No additional information is provided in Annex-4	p	p
F.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1	NA	p	p
F.4.3. Do the additional information and / or documented procedures substantiate / support statements given in other sections of the PoA-DD?	1	No additional information is provided in Annex-4	p	p

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Table 2 Resolution of Clarification and Corrective Action Requests

Requests by validation team	Ref. to table 1	Summary of programme owner response	Validation team Conclusion
<b><u>Clarification Request No. 1.</u></b> ERSPL and Swiss Carbon Assets Ltd. have been indicated as the project participants. But in A.2, it is mentioned that South Pole Carbon Asset management is also involved. The PP needs to clarify the relationship between SouthPole and Swiss Carbon Assets Ltd.	A.2.1	Both the South Pole Carbon Asset Management and Swiss Carbon Assets Ltd are included as project participants . Section A.2 and Annex1 of the PoA-DD has been revised accordingly.	The project participants are now ERSPL, South Pole Carbon Asset Management and Swiss Carbon Assets Ltd and it has been clearly explained in the PoA-DD. Hence the issue is closed. p
<b><u>Clarification Request No. 2.</u></b> Letter of authorization & letter of approval needs to be provided from DNA of India and Switzerland.	A.3.2	CME has applied for the Letter of Approval Indian DNA. However, we are facing delay as of now. Swiss LoA would be applied only after the receipt of Final Draft Validation Report and would be made available later.	The LoA's of India and Switzerland have been submitted confirming the participation of ERSPL and Southpole Carbon as PPs. Hence the issue is closed. p
<b><u>Clarification Request No. 3.</u></b> PP needs provide the MoC (modalities of communication with CDM EB- UNFCCC).	A.3.4	1 <sup>st</sup> response: Enclosed is the MoC for communication with the CDM EB-UNFCCC (see document A1)  2 <sup>nd</sup> response: The PoA-DD now consists of three Project Participants: Emision Reduction Services Private Limited, Swiss Carbon Assets Ltd. and South Pole Carbon Asset Management Ltd.. The MoC has been revised accordingly and has been signed by all three parties. (see document A1)	The MoC submitted shows one of the entity as Swiss Carbon Assets, which is not consistent with the PoA-DD. Please re- vise,  Final response: The MoC includes all the participants listed in the PoA-DD. Hence the issue is closed. p

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<p><b>Clarification Request No. 4.</b></p> <p>Considering the fact that PoA uses small scale methodology, CME need to clarify whether Attachment A to Appendix B or Additivity tool has been used for demonstrating additivity at CPA Level.</p>	<p>E.5.2.1</p>	<p>1<sup>st</sup> response:</p> <p>Attachment A to appendix B along with Microscale Additivity guidance would be utilized for demonstrating Additivity at the CPA level.</p> <p>Please refer to the revised PoA-DD for the same</p> <p>2<sup>nd</sup> response:</p> <p>As the PoA is only applicable for small-scale project, Attachment A to appendix B is applied. For solar projects paragraph 2 will be applied and for all other project types paragraph 1 (a) will be applied. Paragraph 2 will lead to automatic additivity where as paragraph 1(a) will require a prove of investment barriers. As per EB 35 Annex 34, best practice to prove investment barriers is to conduct a benchmark analysis where the project specific economic performance is compared with a suitable benchmark. The wording in the PoA-DD has been revised to further point out the applied approach.</p> <p>EB 65 Annex 3 is a standard and specifies how additivity for PoAs and its CPAs shall be proven. As per EB 64 Annex 2 such standards will only need to be applied after a grace period of 8 month (see detailed response in CAR 6). However, the additivity tests described in the PoA-DD already took the standard into account.</p>	<p>Please clarify whether the Test b as per PoA-DD is the investment analysis or the “Attachment A to appendix B” as both of them are mentioned.</p> <p>Also Please refer to the EB 65 Annex 3 guidelines for necessary changes in demonstration of additivity.</p> <p>Final response:</p> <p>The additivity tests described in the PoA-DD have taken into account the latest EB guidance on investment analysis (EB 62 Annex 5) and Attachment A to Appendix B. Hence the issue is closed.</p> <p>␣</p>
<p><b>Clarification Request No. 5.</b></p> <p>Please provide the framework financial calculation sheets and related supporting documents to validate the investment barrier to be proved at CPA level. The PP also needs to</p>	<p>E.5.2.1</p>	<p>1<sup>st</sup> response:</p> <p>Attachment A to appendix B along with Microscale Additivity guidance would be utilized for demonstrating Additivity at the CPA level.</p> <p>Please refer to the revised PoA-DD for the same</p>	<p>Please clarify whether the Test b as per PoA-DD is the investment analysis or the “Attachment A to appendix B” as both of them are mentioned.</p>

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submit the evidence for source of each assumption		<p>2<sup>nd</sup> response:</p> <p>As the PoA is only applicable for small-scale project, Attachment A to appendix B is applied. For solar projects paragraph 2 will be applied and for all other project types paragraph 1 (a) will be applied. Paragraph 2 will lead to automatic additionality where as paragraph 1(a) will require a prove of investment barriers. As per EB 35 Annex 34, best practice to prove investment barriers is to conduct a benchmark analysis where the project specific economic performance is compared with a suitable benchmark. The wording in the PoA-DD has been revised to further point out the applied approach.</p> <p>EB 65 Annex 3 is a standard and specifies how additionality for PoAs and its CPAs shall be proven. As per EB 64 Annex 2 such standards will only need to be applied after a grace period of 8 month (see detailed response in CAR 6). However, the additionality tests described in the PoA-DD already took the standard into account.</p>	<p>Also Please refer to the EB 65 Annex 3 guidelines for necessary changes in demonstration of additionality.</p> <p>Final response:</p> <p>The additionality tests described in the PoA-DD have taken into account the latest EB guidance on investment analysis (EB 62 Annex 5) and Attachment A to Appendix B. The benchmark applicable at the time of CPA investment decision shall be validated which has been identified by the CME as pre-tax or post-tax Weighted Average Cost of Capital (WACC) or alternatively commercial lending rate. This framework approach will then be valid for all new CPAs during the PoA crediting period. A CPA implementer determines exactly one benchmark, which is in line with his expected returns and with EB 62 Annex 5-Guidelines for Investment analysis. Hence the issue is closed.</p> <p>p</p>
<b><u>Clarification Request No. 6.</u></b>	A.4.5.1	Please refer to the enclosed is the declaration from the	The declaratrion from the CME

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The PP needs to submit documentary evidence to justify that ODA has not been used.		CME stating the ODA has not been employed in the PoA (see document: A7).	stating that ODA has not been used in the PoA, has been submitted. Hence the issue is closed. p
<b>Clarification Request No. 7.</b> PP needs to explain how same monitoring procedure will be used for Solar, Hydro and Wind power, especially in case wind where common meter is used and apportioning is used for invoicing.	E.7.1.1	1 <sup>st</sup> response: Revised PoA-DD includes a separate procedure to be followed in case of wind projects. Monitoring would remain same in case of solar & hydro projects.  2 <sup>nd</sup> response: Further details have been added in the section E.7.2 of the PoA DD.	Though it has been provided for wind projects, it needs to be still explained clearly for solar and hydro projects.  Final response: Hence the issue is closed. p
<b>Clarification Request No. 8.</b> PP needs to mention in section E.7.1 which 'standard industry norm' would be used for calibration of the energy meter and please define appropriately how the accuracy level for parameter $EG_{BL,y}$ would be ensured for all CPAs.	E.7.1.2.1	1 <sup>st</sup> response: Accuracy details of the metering equipments and calibration details have been included in the revised PoA-DD.  2 <sup>nd</sup> response: As per the General Guidelines to SSC CDM Methodologies, "Measuring equipment should be certified to national or IEC standards and calibrated according to the national standards and reference points or IEC standards and recalibrated at appropriate intervals according to manufacturer specifications, but at least once in three years".  As mentioned in the revised PoA-DD, all the electricity meters installed at individual CPAs would be calibrated at least once in three years or as per the frequency stated in the PPA (whichever is lower). The meters would be calibrated according to the National Standards	The issue is not completely addressed with respect to the calibration frequency of energy meters.  Final response: The revised PoA-DD mentions clearly that meters would be calibrated according to the National Standards maintained by, India or according to IEC standards and the accuracy level would be 0.5. Hence the issue is closed. p

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		<p>or according to IEC standards.</p> <p>Also, the accuracy level of the meters installed at CPAs would be at least 0.5 class. This would be implemented across all the CPAs and can be verified during the 1<sup>st</sup> verification.</p>	
<p><b><u>Clarification Request No. 9.</u></b></p> <p>The PP needs to provide the Operation and Management structure (Administrative Manual) pertaining to the proposed PoA. Mention clearly the responsibilities and institutional arrangements for data collection archiving.</p>	E.7.2.1	<p>Although operation manual is not a mandatory requirement as of now, however, CME has prepared this manual as a best practice. Hence we are submitting the enclosed manual to act as guidance for the procedures to be adopted by CME. However, this is an internal document and we request DOE to not make it available publicly.</p>	<p>The Operation and Management manual has been submitted as a reference document for the monitoring procedures. Hence the issue is closed.</p> <p>ρ</p>
<p><b><u>Clarification Request No. 10.</u></b></p> <p>The start date of the PoA is mentioned as 16/08/2011 which is before the start of GSP. Please justify the significance of the start date of PoA in line with the CDM Glossary of terms.</p>	E.5.3	<p>The CDM Glossary of terms does not contain a definition of a PoA starting date.</p> <p>However, PPs consider the PoA starting date as the date of real commitment to the PoA development. As per the PoA timeline in the table of section A.4.3 of the PoA-DD, the PoA starting date is chosen as 30 March 2011. During the board meeting on the 30 March 2011 and based on internal research it has been decided to implement the PoA, setup a CME and further pursue with validation/registration (see document A3).</p> <p>Section</p>	<p>Based on the board meeting date on 30 March 2011, the CME has committed to the real implementation of the PoA and this could be considered as the start date of the PoA. This is in line with CDM glossary of terms since the PP has appointed DOE for validation after this date. It is deemed reasonable to consider this as start date for PoA. Hence the issue is closed.</p> <p>ρ</p>
<p><b><u>Clarification Request No. 11.</u></b></p> <p>It is mentioned in PoA-DD that Bond rate is taken as the 3 month average prior to the investment decision and for a duration equal to the technical lifetime of the project activity,</p>	E.5.3	<p>In order to provide a bond rate that better reflect the general market situation, PPs chose a 6 month average previous to the investment decision. The PoA-DD has been revised accordingly</p>	<p>The bond rate has been revised as 6 months in the PoA-DD. Hence the issue is closed.</p> <p>ρ</p>



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while in the excel sheet it says 6 month in the sub sheet 'Risk free rate'. The PP needs to clarify this.			
<b><u>Clarification Request No. 12.</u></b> a) How the statement in chapter A.4.2.1 (PoA DD), regarding Solar power and solar thermal is in compliance with para 6 of AMS I.D. version 17 methodology. b) In same chapter page number 9, the pp shall clarify why national rural electrification policies are included?	E.4.3	a) Sentence has been revised b) Policy has been excluded to avoid misunderstanding.	The revised PoA-DD includes the justification for the methodology compliance with respect to solar power and solar thermal component. The PP has removed the rural electrification policy description and reference from the PoA-DD. Hence the issue is closed. p
<b><u>Corrective Action Request No.1.</u></b> The PoA-DD refers that renewable based power generation capacity is 10% of the total resources in India. But Referred foot note refers some other value, The PP needs to clarify.	A.2.1	Referred footnote shows that power generation capacity from Renewable Energy Sources is less than 10%, hence the sentence has been accordingly modified in the PoA-DD. Please refer to the revised PoA-DD for the same.	The power generation capacity from RES is below 10% (6.66%) and the same has been revised in the PoA-DD. Hence the issue is closed. p
<b><u>Corrective Action Request No.2.</u></b> PP needs to clearly indicate in section A.3 if the Project participants are Public or Private entities	A.3.1	Project participants are private entities. It has been explicitly mentioned in the revised PoA-DD. Please refer to the revised PoA-DD for the same	Hence the issue is closed. p
<b><u>Corrective Action Request No.3.</u></b> The PP needs to include the latest Geographical Map of India.	A.4.1.1	Geographical Map has been updated in the PoA-DD to reflect the latest Map. Please refer to the revised PoA-DD for the same	The updated Geographical map has been included in the revised PoA-DD. Hence the issue is closed. p
<b><u>Corrective Action Request No.4.</u></b> PP needs to indicate in section A.4.2.1 of the PoA-DD regarding the applicable na-	A.4.1.2	PoA-DD has been revised to include the applicable policies/regulations relevant to the PoA.	The PoA-DD has been revised to include the relevant national/sectoral policies. Hence

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<p>tional and/or sectoral policies and regulations which are relevant to the PoA. The references/supportive of such policies need to be included in the PoA-DD.</p>		<p>Please refer to the revised PoA-DD.</p>	<p>the issue is closed.</p> <p>␣</p>
<p><b><u>Corrective Action Request No.5.</u></b> The PP needs to include further detailed technology description for each type of technology to be employed in the CPAs under the PoA.</p>	<p>A.4.2.1</p>	<p>Further details have been provided on each of the Solar, Wind &amp; Hydro technologies to be employed in the CPAs under the PoA.</p> <p>Please refer to the revised PoA-DD for the same</p>	<p>The details of technology used in the solar, hydro and wind CPAs under the PoA have been explained clearly in the PoA-DD. Hence the issue is closed.</p> <p>␣</p>
<p><b><u>Corrective Action Request No.6.</u></b> Inclusion criteria for CPA inclusion are not fully descriptive and adequate. Please elaborate the eligibility criteria. List of eligibility criteria for inclusion of SSC-CPA in the PoA in section A.4.2.2 does not discuss applicability of CPAs with respect to additionality, de-bundling, avoidance of double counting. Please revise. PP also needs to indicate the likely evidences that are expected to adhere the eligibility requirements shall also be indicated corresponding to the each criterion preferably in a tabular format. The eligibility criteria does not discuss on each type of activity (solar, hydro, wind) specifically. Please revise accordingly.</p>	<p>A.4.2.2</p>	<p>1<sup>st</sup> response: Applicability criteria have been revised to include all relevant conditions. Also these have now been presented in a tabular format with indication on type of documentation to be used to check the adherence to the eligibility criteria.</p> <p>Also, eligibility criteria are similar for solar, wind and hydro projects apart from one condition on the power density in case of hydro power projects which has been modified and included separately.</p> <p>Please refer to the revised PoA-DD for the same.</p> <p>2<sup>nd</sup> response: EB 65 Annex 3 is a standard and specifies the content the eligibility criteria have to cover. As per EB 64 Annex 2, paragraph 7b), this standard will only need to be applied after a grace period of 8 month: <i>(b) DOEs may upload for registration PoA-related project design documents in which the previous guidelines have been applied not later than the calendar day (2400 hours</i></p>	<p>The eligibility criteria needs to be updated with the latest EB 65 guidance. Please consider the EB 65 Annex 3 guidelines on “Development of eligibility criteria” and make necessary changes in the PoA-DD.</p> <p>Final response:  The eligibility criteria is now revised in the PoA-DD based on EB 65 Annex 3. Hence the issue is closed.</p> <p>␣</p>

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		<p><i>GMT) eight months from the publication date of the report of the sixty-fifth meeting of the Board.</i></p> <p>Therefore the use of the above standard is not mandatory at this stage and should not be taken into account in the validation of the underlying PoA. However, the eligibility criteria have been further revised based on the new guidance in EB 65 Annex 3.</p>	
<p><b><u>Corrective Action Request No.7.</u></b></p> <p>PP needs to update the reference to the latest EB meeting. A separate timeline for activities related to project implementation and CDM related activities needs to be incorporated</p>	A.4.3.2	<p>Timeline of PoA establishment has been included in the revised PoA-DD and reference documents submitted (see documents: A2, A3, A4 and A5)</p>	<p>The timeline of the PoA implementation as well as the supporting documents have been submitted. Hence the issue is closed.</p> <p>p.</p>
<p><b><u>Corrective Action Request No.8.</u></b></p> <p>Although a description of the operational and management arrangements established by PP has been provided in the PoA-DD, PP needs to further elaborate on the following:</p> <ul style="list-style-type: none"> <li>• Management Team Structure</li> <li>• Record keeping and Documentation system</li> </ul>	A.4.4.1	<p>1<sup>st</sup> response:</p> <p>CME has prepared an operational management manual addressing all the issues related to Management, record keeping and monitoring. The manual will be applied for each CPA and might be subject to further improvements upon first experiences. Please refer to the same for details (see document: A6).</p> <p>2<sup>nd</sup> response:</p> <p>The team structure and PoA management approach is further elaborated in the PoA-DD, provided as summary. Also, the Management System Procedure Manual has been referenced as key reference document. Such manual will be subject to revisions, allowing continuous improvements during the PoA crediting period. Please also see revision s in section A.4.4.2, E.7.1 and E.7.2.</p> <p>A CPA record keeping system is implemented in addition to the Data and Project Management System Tool to:</p>	<p>It also needs to be presented in the PoA-DD regarding the team structure. The PoA-DD also should include the summary of the key issues in the manual.</p> <p>Also Please see our response to CAR9.</p> <p>Final response:</p> <p>The revised PoA-DD includes the team structure and the summary of the items described in Monitoring manual. The management team structure, record keeping and documentation system have been included. Hence the issue is closed.</p>

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		<ul style="list-style-type: none"> <li>- maintain general CPA implementer information</li> <li>- avoid double counting</li> <li>- manage monitoring periods of CPAs</li> <li>- prepare verification (sampling or individual verification)</li> <li>- keep track on general management relevant information</li> </ul> <p>It shall be noted that during the PoA crediting period, PPs will further improve the Data and Project Management System Tool, making the CPA record keeping system unnecessary. (see document: A8)</p>	p
<p><b><u>Corrective Action Request No.9.</u></b></p> <p>1. It is not clear how individual projects in each CPA type are checked and how data would be collected (for eg. a bundle of WTGs or a number of solar devices etc). PP needs to specify clearly how data records are maintained for each of project types.</p> <p>2. PP needs to provide the complete monitoring plan and update the monitoring section accordingly.</p>	A.4.4.2	<p>1<sup>st</sup> response:</p> <p>Monitoring sections has been updated to include details specific to different renewable energy technologies. Also, monitoring plan has been further elaborated in the PoA-DD. Please refer to the revised PoA-DD along with the CME operational management manual (see document: A6).</p> <p>2<sup>nd</sup> response:</p> <p>On the issue of general monitoring:</p> <p>Section A.4.4.2 refers now directly to section E.7.1 and E.7.2 where a revised and detailed CPA monitoring plan is provided. Section A.4.4.2 is revised by further explaining the verification approach the CME is following. Such includes inter alia the data collection phase before verification start and sampling procedures during the verification.</p> <p>The key issues from the operation management manual</p>	<p>The monitoring section is still not clear on how individual projects in each CPA type are checked and data collected (wind, solar, hydro). Also sampling procedures need to be elaborated in the monitoring plan. Though the operation management manual is submitted, the key issues still need to be presented in PoA-DD.</p> <p>Final response:</p> <p>The revised PoA-DD includes the team structure and the summary of the items described in Monitoring manual. The management team structure, record keeping document-</p>

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		<p>are further elaborated in section A.4.4.1.</p> <p>A CPA record keeping system is implemented in addition to the Data and Project Management System Tool to:</p> <ul style="list-style-type: none"> <li>- maintain general CPA implementer information</li> <li>- avoid double counting</li> <li>- manage monitoring periods of CPAs</li> <li>- prepare verification (sampling or individual verification)</li> <li>- keep track on general management relevant information</li> </ul> <p>It shall be noted that during the PoA crediting period, PPs will further improve the Data and Project Management System Tool, making the CPA record keeping system unnecessary.</p> <p>(see document: A8)</p> <p>On the issue of sampling:</p> <p>The sampling approach has not been considered in the revised PoA-DD and it has been modified.</p>	<p>tation system have been included. The sampling approach has now removed in the final PoA-DD and the monitoring for the individual CPAs have been described. Hence the issue is closed.</p> <p>þ</p>
<p><b><u>Corrective Action Request No.10.</u></b></p> <p>As each CPA is expected to have different characteristics and verification periods, please further elaborate the monitoring plan. Describe clearly a transparent system to ensure that no double accounting occurs and that the status of verification can be determined any time for each CPA.</p>	A.4.4.6	<p>1<sup>st</sup> response:</p> <p>Please refer to CME operational manual which also provides details on the online project management tool at the CME end which would be utilized for project management (see document: A6). Also refer to section A.4.4.2 for brief procedure to determine the verification status of each CPA at any point in time.</p> <p>2<sup>nd</sup> response:</p> <p>The sampling approach has not been considered in the</p>	<p>Please elaborate on the sampling approach that would be followed and also state the specific EB guideline in the PoA-DD. Also Please see our response to CAR9.</p> <p>Final response:</p> <p>The PoA-DD has been revised and the sampling procedures are not considered in the final</p>

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		revised PoA-DD and it has been modified.	PoA-DD. Hence the issue is closed. p
<b><u>Corrective Action Request No.11.</u></b> It needs to be included in section E.4 whether the identified baseline scenario is as per the legal requirements/laws and the installation of project activity is not mandatory by any laws or requirements.	E.4.1.1	Please refer to the revised PoA-DD where a statement has been included to specify that baseline scenario is as per the legal requirements.	The baseline scenario is re-vised to include the statement on legal requirements. Hence the issue is closed. p
<b><u>Corrective Action Request No.12.</u></b> PP needs to include all the relevant national and sectoral policies in section E.5.2 of PoA-DD	E.5.2.8	Please refer to the revised PoA-DD.	The revised PoA-DD includes all the applicable national policies and regulations concerning the renewable energy. Hence the issue is closed. p
<b><u>Corrective Action Request No.13.</u></b> PP needs to provide us the standard Emission reduction calculation sheet which would be used for ER computation from each CPA type.	E.6.2.2.	1 <sup>st</sup> response: Please refer to enclosed CER Calculation sheet which can be used for all the CPAs under the PoA.  2 <sup>nd</sup> response: Units are revised in the Excel spreadsheet. Further, the PoA-DD mentions kWh/year instead of MWh/year. This inconsistency has been revised as well.	The units mentioned for the parameter EG in the excel spreadsheet are not in line with the methodology requirements. Final response: Hence the issue is closed. p
<b><u>Corrective Action Request No.14.</u></b> The parameter Cap <sub>BL</sub> needs to be included in the PoA-DD as per methodology.	E.6.3.2.2	The parameter Cap <sub>BL</sub> has been included in the revised PoA DD.	Hence the issue is closed. p
<b><u>Corrective Action Request No.15.</u></b> PP needs to include the parameter 'CO <sub>2</sub> emission factor of the fossil fuel consumed on-site'.	E.6.3.2.5	The parameter CO <sub>2</sub> emission factor for the fossil fuel consumed onsite has been included in the revised PoA DD.	Hence the issue is closed. p



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<p><b><u>Corrective Action Request No.16.</u></b> PP needs to specify the measurement and recording frequency of all the parameter as per the methodology or applicable tool. Also include standard QA/QC or cross check measures in the PoA-DD. Please provide specific QA/QC for each technologies (viz wind, hydro &amp; Solar) to be adopted by CPAs.</p>	<p>E.7.1.2.1</p>	<p>1<sup>st</sup> response: Please refer to the revised PoA-DD, all details as requested have been included in the revised PoA-DD.</p> <p>2<sup>nd</sup> response:</p> <ul style="list-style-type: none"> <li>- Quantity of net electricity supplied to the grid in year y would be continuously monitored and would be recorded in log books/electronically at least at the monthly intervals (as per AMS I.D). Same has been mentioned in the PoA-DD.</li> <li>- As per the methodology measurement results shall be crosschecked with records for sold/purchased electricity (e.g. invoices/receipts). This cross check measure would remain same for all the technologies and same has been mentioned in the PoA-DD.</li> </ul> <p>Same has been specified in section E.7.2 of the PoA-DD.</p>	<p>Though the monitoring procedure has been provided for wind projects, it needs to be still explained clearly for solar and hydro projects. Also Please see our response to CR7.</p> <p>Final response: The monitoring procedures are now explained clearly for all the types of projects. Hence the issue is closed. p</p>
<p><b><u>Corrective Action Request No.17.</u></b> PP needs to indicate in section E.8 of CPA-DD whether the person/entity responsible for completion of baseline is considered a project participant or not?</p>	<p>E.8.1.5</p>	<p>Entity/person responsible for completion of baseline is being considered as a project participant. Same has been included in the revised PoA-DD.</p>	<p>The section E.8 has been revised to include that the entity/person responsible for completion of baseline is being considered as a project participant. Hence the issue is closed. p</p>

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**Table 3 Unresolved Corrective Action and Clarification Requests (in case of denials)**


Clarifications and / or corrective action requests by validation team	Id. of CAR/CR	Explanation of Conclusion for Denial
-	-	-




## **Annex 2: Information Reference List**

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Reference No.	Document or Type of Information	Date of document
1	<p>On-site interviews and inspections of the project site of the “Renewable Energy PoA in India” by TUV SÜD validation team, Conducted on September 26, October 10-12, 2011.</p> <p><u>Validation team on site :</u></p> <p>Eswar Murty                      TUV SUD South Asia Vijayanand                      TUV SUD South Asia</p> <p><u>Interviewed persons :</u></p> <p>Thomas Camerata    ERSPL Sandeep Kanda        ERSPL Abhishek Bansal     ERSPL Gowri Shankar        DEPL Vivek Agarwal        DEPL</p>	
2	<p>PoA-DD for GSP  <a href="http://cdm.unfccc.int/filestorage/9/Z/N/9ZNPQLKCR825BJG4X1M0AOYHEUV7TF/PoA-DD.pdf?t=Zmh8bHY4ZDFxfDAV_ZlInq0NEquja71DfWCG">http://cdm.unfccc.int/filestorage/9/Z/N/9ZNPQLKCR825BJG4X1M0AOYHEUV7TF/PoA-DD.pdf?t=Zmh8bHY4ZDFxfDAV_ZlInq0NEquja71DfWCG</a> </p>	
3	<p>UNFCCC homepage for the PoA  <a href="http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/C0ITW72RQN0J51Z79ATZMI5C6AENCS/view.html">http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/C0ITW72RQN0J51Z79ATZMI5C6AENCS/view.html</a> </p>	-----
4	Approved small scale baseline and monitoring methodology AMS I. D, Version.17	
5	Guidelines for Demonstrating Additionality of Microscale Project Activities” version 2 Attachment A to Appendix B version 8 (EB63, Annex 24)	
6	Guidance on the Assessment of Investment Analysis ( EB 62 Annex 5)	
7	PoA-DD version <b>89.0</b>	<b>2421.0709.2012</b>
8	Name change certificate for South Pole Carbon to ERSPL	20.09.2011
9	Declaration form for no ODA by ERSPL	21.10.2011

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Reference No.	Document or Type of Information	Date of document
10	Modalities of Communication form	01.12.2011
11	Investment analysis calculation and Benchmark Framework spreadsheet	
12	South Pole-Board meeting held to make decision to invest in PoA	30.03.2011
13	South Pole- Strategic discussion PoA	08.08.2011
14	CDM Monitoring manual	Dec 2011
15	CPA record keeping system database	
16	LoA from Federal Department of Environment, Switzerland to South Pole Carbon & Swiss carbon Assets Ltd	20.12.2011
17	Ibbotson SBBI 2009 Valuation Yearbook, Chapter 7	
18	Black, Fischer. Michael C. Jensen, and Myron Scholes (1972). The Capital Asset Pricing Model: Some Empirical tests	
19	Velez-Pareja, Ignacio and Tham, Joseph, "A Note on the Weighted Average Cost of Capital WACC" (August 7, 2005). Available at SSRN: <a href="http://ssrn.com/abstract=254587">http://ssrn.com/abstract=254587</a>	
20	Total installed capacity of renewable as per MNRE: <a href="http://cea.nic.in/reports/monthly/inst_capacity/jun11.pdf">http://cea.nic.in/reports/monthly/inst_capacity/jun11.pdf</a>	
21	MNRE policy support for grid interactive renewable power: <a href="http://www.mnre.gov.in/policy/policy-support-grid.htm">http://www.mnre.gov.in/policy/policy-support-grid.htm</a>	
22	LoA from India DNA on authorizing Emission Reduction Services Private Limited	19.06.2012
23	Damodaran Stern University Beta value: <a href="http://pages.stern.nyu.edu/~adamodar/">http://pages.stern.nyu.edu/~adamodar/</a>	

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Reference No.	Document or Type of Information	Date of document
24	US treasury long term Government Bond rate: <a href="http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&amp;year=2010">http://www.treasury.gov/resource-center/data-chart-center/interest-rates/Pages/TextView.aspx?data=yieldYear&amp;year=2010</a>	



## **Annex 3: Appointment Certificates**



Industrie Service

# CERTIFICATE OF APPOINTMENT

Mr Maharjan, Bhai Raja, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	23.03.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		23.03.11	23.03.11	23.03.11		

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	23.03.11				
Financial Expertise					
Date	10.06.11				

Qualification in technical areas	
Technical Area	Date
1.2_Energy generation from renewable energy source	23.03.11
2.1_Electricity distribution	23.03.11
3.1_Energy demand	10.06.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0008/03.

Date	Signature
23.03.12 Extension of Validity	





Industrie Service

# CERTIFICATE OF APPOINTMENT

Mr. Murty, Eswar, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	06.05.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		06.05.11	10.05.11			

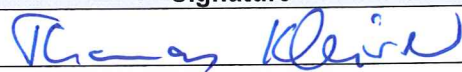
Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	06.05.11				
Financial Expertise					
Date					

Qualification in technical areas	
Technical Area	Date
1.2_Energy generation from renewable energy source	06.05.11
6.1_Construction	06.05.11
13.1_Waste handling and disposal	06.05.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0055/02.

Date	Signature
06.05.12 Extension of validity	



Industrie Service

# CERTIFICATE OF APPOINTMENT

Mr V. Vijayanand, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	12.04.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		30.03.11	12.04.11			

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	30.03.11				
Financial Expertise					
Date	12.04.11				

Qualification in technical areas	
Technical Area	Date
1.2_Energy generation from renewable energy source	12.04.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0042/04.

Date	Signature
30.03.12 Extension of Validity	





Industrie Service

# CERTIFICATE OF APPOINTMENT

Mr Agarwal, Nikunj, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	22.03.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		22.03.11	22.03.11	22.03.11	22.03.11	


Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	22.03.11				
Financial Expertise					
Date	29.03.11				

Qualification in technical areas	
Technical Area	Date
1.2_Energy generation from renewable energy source	22.03.11
13.1_Waste handling and disposal	12.04.11
3.1_Energy demand	27.04.11
13.2_15.2_Animal waste management	21.07.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0001/06.

Date	Signature
22.03.12 Extension of Validity	



Industrie Service

# CERTIFICATE OF APPOINTMENT

Mr Tolcach, Eric Rodolfo, fulfills the requirements of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH to participate in audits.

Qualification applicable to						
Standard	CDM	JI	GS	VCS	VER	Other
Date	23.03.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		23.03.11	23.03.11	23.03.11		

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	23.03.11	23.03.11			
Financial Expertise					
Date					

Qualification in technical areas	
Technical Area	Date
13.1_Waste handling and disposal	23.03.11

This appointment is valid for 1 year from its date of signature below and is bound by internal requirements of the Management System of the Certification Body "climate and energy" of TÜV SÜD Industrie Service GmbH.

In case of loss of validity of this certificate as per result of an assessment according internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference No. CMS-Z-0014/02.

Date	Signature
23.03.12 Extension of Validity	