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Validation Report

VALIDATION OF THE CDM-PoA:
SUSTAINABLE SMALL HYDROPOWER PROGRAMME OF
ACTIVITIES (PoA) IN INDONESIA

REPORT NO. 1419340

27rd April 2012

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Subject: Validation of CDM PoA

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Other Participants:

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PoA Title: Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia

Project Site(s): Indonesia

Applied Methodology / Version:

AMS.I.D / Version 17

Scope(s):

1

Technical Area(s):

1.2

First PoA-DD Version (GSP):

Date of issuance: 14-12-2009

Version No.: 01

Starting Date of GSP 22-12-2009

Final PoA-DD version:

Date of issuance: 26-04-2012

Version No.: 02.6

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Technical Reviewer:

Thomas Kleiser

Robert Mitterwallner

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Responsible Certification Body:

Thomas Kleiser

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 project's fulfilment of all stated criteria. In our opinion, the project meets all relevant UNFCCC requirements for the CDM. Therefore, TÜV SÜD recommends the project 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 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.

*Left TÜV SÜD

ABBREVIATIONS

AMS	Approved Methodology Small scale
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM EB	CDM Executive Board
CER	Certified Emission Reduction
CMP	Conference of the Parties serving as the Meeting of the Parties to the Kyoto Protocol
CPA	CDM Programme activity
CPA-DD	CDM Programme Activity Design Document
CR / CL	Clarification Request
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA / EA	Environmental Impact Assessment / Environmental Assessment
ER	Emission Reduction
FAR	Forward Action Request
GHG	GreenHouse Gas(es)
IPCC	Intergovernmental Panel on Climate Change
IRL	Information Reference List
KP	Kyoto Protocol
MP	Monitoring Plan
PDD	Project Design Document
PoA	Programme of Activities
PoA-DD	Programme of activities design document
PP	Project Participant
TÜV SÜD	TÜV SÜD Industrie Service GmbH
UNFCCC	United Nations Framework Convention on Climate Change
VVM	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:

Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia

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:

- The Kyoto Protocol, in particular § 12 and modalities and procedures for the CDM
- Decision 2/CMP1 and Decision 3/CMP.1 (Marrakech Accords)
- Further COP/MOP decisions with reference to the CDM (e.g. decisions 4 – 8/CMP.1)
- Decisions and specific guidance outlined by the EB which are published under <http://cdm.unfccc.int>
- 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
- Management systems and auditing methods
- Environmental issues relevant to the applicable sectoral scope
- Applicable environmental and social impacts and aspects of CDM project activity
- Sector specific technologies and their applications
- 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, Generic CPA-DD 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.

2 VALIDATION METHODOLOGY

The PoA assessment is based on the “Clean Development Mechanism Validation and Verification Manual” version 1.2 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 PoA documents are 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; and
- 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 sub-divided. 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 Request 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 (✓) or a Corrective Action Request (CAR) is issued due to non-compliance with the checklist question (See below). Clarification Request (CR) is used when the validation team has identified a need for further clarification. Forward Action Request 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: Resolution of Clarification and Corrective Action Requests			
Clarifications and corrective action requests	Ref. to table 1	Summary of project owner response	Validation team conclusion
<i>If the conclusions from table 1 are either a Corrective Action, a Clarification or a Forward action Request, these should be listed in this section.</i>	<i>Reference to the checklist question number in Table 1 where the issue is explained.</i>	<i>The responses given by the managing entity and/or other project participants during the communications with the validation team should be summarised in this section.</i>	<i>This section should summarise the discussion on and revision to PoA documentation together with the validation team's responses and final conclusions. The conclusions should be reflected in Table 1, under "Final".</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:

- Assessment Team Leader (ATL)
- Validator (V)
- Validator Trainee (T)
- Technical Expert (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.

Assessment team:

Name	Qualification	Coverage of sectoral scope	Coverage of technical area	Coverage of financial aspect	Host country experience
Nikunj Agarwal	ATL	☑	☑	☑	☑
Bratin Roy	V	☑	☑	☑	☑
Praveen Pyata*	V	-	-	-	☑
Praveen Tekchandani	V	--	--	--	☑
Stephan Hild	--	--	--	--	--

*Left the organization

Technical Reviewer:

- Thomas Kleiser
- Robert Mitterwallner
- Nevena Pingarova (Financial expert)

2.2 Review of Documents

The PoA-DD and completed CPA-DD for the GSP was submitted to the DOE in December 2009. 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

During the period 12-02-2010 to 15-02-2010, 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
Paul Butarbutar	PT. Hydro Program International (PT. HPI)
Francois Beaurain	South Pole Carbon Asset Management Ltd.
Henricus Hutabarat	South Pole Carbon Asset Management Ltd.
Alin Pratidina	PT. Hydro Program International (PT. HPI)

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 final PoA-DD version-2.6 that was submitted in April 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 participant and managing entity of the PoA is PT. Hydro Program International (PT. HPI) of Indonesia. The other project participant is South Pole Carbon Asset Management Ltd. of Switzerland. Both the host party Indonesia and Switzerland meet the requirements to participate in the CDM PoA. The involved parties meet the requirements to participate in the CDM PoA. The involved parties meet the requirements to participate in the CDM.

The Indonesian DNA has issued a letter of approval (LoA) dated 21 Jan 2010 authorizing PT. Hydro Program International (PT. HPI) as a project participants and as the coordinating and managing entity [16]. The Switzerland DNA has also issued a LoA, dated 23 April 2010, authorizing South Pole Carbon Asset Management Ltd. as a project participant [17]. TÜV SÜD received the letters from the project participants directly and considers the provided letters as authentic.

Furthermore, after checking the provided LoAs, TÜV SÜD confirms that the letters refers to the precise proposed PoA title in line with the title in the PoA-DD: Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia.

The letters also indicates that the participating Parties are Party to the Kyoto Protocol, and that the participation in the PoA is voluntary. The Indonesian LoA also confirms that the proposed PoA contributes to the sustainable development of Indonesia (host country). Based on the information given in the letter, TÜV SÜD considers the approval as unconditional with respect to these items.

The LoAs have been issued by the respective Party's DNA – National Committee on CDM, Government of Indonesia and Federal Department of the Environment, Transport, Energy and Communications, Switzerland, and does not refer to a specific version of the PoA-DD or validation report.

TÜV SÜD considers that the requirements of VVM (§§ 45-48) have been met.

3.2 Participation

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

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 Generic CPA-DD 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. Completeness was 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 PoA involves installation of the small scale hydropower plant in Indonesia which includes both run of river & reservoir type hydro power plants. PT. Hydro Program International (PT. HPI) will be the coordinating and managing entity of the PoA. The CDM programme activities (CPAs) under the PoA will be implemented in Indonesia. It was validated that GTZ & South Pole Carbon Asset Management Ltd are providing PoA development fund [14, 15]. It was validated that there is no mandatory policies or regulations for the installation of the hydropower plant [22]. The proposed PoA is a voluntary action by the coordinating/managing entity – PT. HPI.

Under the PoA, the hydropower plant shall export the generated electricity to regional grid as defined in the Power Purchase Agreement of the respective CPA [8,9,10]. The typical CPA under this PoA would involve the installation of the barrages, diversion tunnels, fore bays, spillways, pressure pipes, powerhouses, and booster stations including turbine & generator for power generation.

There will be no diversion of ODA to finance the project for an individual CPA. The starting date of the PoA is 22nd July 2007 based on the date when the first real concrete proposal for a Public Private Partnership (PPP) regarding the micro-hydro PoA was submitted to GTZ Indonesia, and to the GTZ PPP facility in Germany [13]. The validation of PoA started before 31st December 2009 therefore CPA's with start dates between 22nd June 2007 and commencement of validation of PoA, will also be included in the programme as CPA's (Report of EB 47, paragraph 72). Accordingly a list of such specific CPAs has been provided to validating DOE and UNFCCC secretariat prior to 31/01/2010 [54]. The expected operational lifetime of the PoA is considered to be 28 years.

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; and
- A review of information related to similar projects or technologies which have been used 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 and therefore in compliance with VVM para. 59-64.

3.5 Eligibility Criteria for CPA Inclusion

The managing entity employs clear and unambiguous criteria for the inclusion of the CPA. The eligibility criteria's have been stated below are verifiable with regards to the applicability of the applied methodology AMS I.D/ version 17 including the following:

S.No.	Eligibility criteria as per PoA-DD	Remarks as to how eligibility criteria shall be validated during CPA inclusion
1	Being setup within the geographical boundary of the PoA	Geographical boundary has been fixed as 'Republic of Indonesia'. It shall be validated by a onsite visit or GPS records.
2	CPA must be uniquely identified with the Geographical co-ordinates	It shall be validated during the CPA inclusion by veri-

	of the project location and should not result into double counting	<p>fication of unique geographical coordinates.</p> <p>Template for record keeping system was submitted and validated, details in record keeping system shall be updated by CME and validated during CPA inclusion.</p> <p>Further, a confirmation from CPA owner shall be validated along with cross-check to UNFCCC website.</p>
3	be a greenfield hydropower plant generating electricity with a capacity equal or below the type I small-scale threshold.	CPA shall be validated to be a Greenfield hydropower project with a threshold of small scale project. Details on capacity & power density could be validated from the respective detailed project report or other appropriate documents.
4	<p>Either have:</p> <p>a. have a project start date after the PoA start date, 22 July 2007 and listed in the CPA list sent to the UNFCCC before 1 January 2010.</p> <p>b. have a project start date after the validation start date of the Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia, which is 22 December 2009.</p>	<p>Start date of respective CPA shall be validated to be after 22nd Dec 2009.</p> <p>If the start date of CPA is before 22nd Dec 2009, it shall be validated to be in the CPA list sent to UNFCCC before 1st Jan 2010.</p>
5	Complies with all applicability conditions listed in the applied methodology AMS I.D version 17. Such requirements are listed in section E.2 of the PoA-DD.	CPA shall be validated to be in compliance with all applicability criteria of AMS-I.D ver 17. Further all the applicability criteria of AMS-I.D ver 17 has been validated to be a part of eligibility criteria.
6	Demonstrates that it is in compliance with one of the CPA additionality test as described in section E.5.2 of the PoA-DD.	<p>Additionality test shall be validated during CPA inclusion. Two additionality test have been validated in section E.5.2 of the PoA-DD as follows:</p> <p>a) <u>Test A</u>: If the installed capacity of the CPA is below or equal to 5 MW, and if the SSC-CPA located in an underdeveloped area of Indonesia: It shall be validated that in case the CPA is undertaken in a special underdeveloped zone as defined by State Minister of Underdeveloped Zone Development Decree No. 001 issued in 2005, then the project shall be deemed additional as per EB 54 annex 15.</p> <p>b) <u>Test B</u>: If the installed capacity of the CPA is more than 5 MW then the additionality would be determined based on the benchmark analysis because the project generates financial benefits other than CDM-related income.</p> <p>Please refer to section 3.9.3 for further details on validated additionality approach.</p>

7	Conducts a local stakeholder consultation	Local stakeholder consultation documents shall be validated during the CPA inclusion.
8	Shall show, based on national environmental policies applicable at time of inclusion, whether an environmental impact analysis is required or not. If required, the CPA shall conduct an environmental impact analysis.	Minister of Environment Regulation No. 11 issued in 2006 has been validated to be existing host country regulation governing requirements for Environmental Impact assessment. As per this regulation, it was validated that a hydro power plant with the following specification doesn't need to perform an EIA: a) dam height < 15 m, and b) flooded area < 200 m ² , and c) installed capacity < 50 MW Only Environmental Management and Monitoring Plan (EMMP) shall be prepared as per this regulation. Hence EMMP shall be validated during CPA inclusion.
9	CPA should not result into the diversion of official development assistance	Declaration from respective CPA implementer or available bank loan documents shall be validated during the CPA inclusion.
10	not be a capacity addition/retrofit/replacement activity at an existing power plant. In other words the CPA to be included would only comprise of Greenfield renewable energy power plants.	It shall be validated during the CPA inclusion that the proposed CPA is a greenfield project by the following: 1. Onsite visit, or 2. Available detailed project report
11	export the renewable electricity generated to a relevant and clearly identified grid within the geographical boundary of the host country	It shall be validated that the proposed activity would export electricity to grid within the geographical boundary, it could be validated using the following documents: 1. Power purchase agreement, or 2. Other equivalent documents.
12	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 ² .	Power density of the hydroplant with reservoir shall be validated to be greater than 10 W/m ² . Details on capacity & power density could be validated from the respective detailed project report or other appropriate documents.
13	Generates electricity with a capacity below the type I small-scale threshold	Capacity & generation of electricity shall be validated to ensure the small scale threshold. Details on capacity could be validated from the respective detailed project report or other appropriate documents.
14	The CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity:	Each CPA shall be validated to ensure that the proposed CPA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity

	<p>CPA shall be deemed to be a de-bundled component of a large scale activity if there is already an activity, which satisfies both conditions (a) and (b) below:</p> <p>(a) Has the same activity implementer as the proposed small scale CPA or has a coordinating or managing entity, which also manages a large scale PoA of the same technology/measure, and;</p> <p>(b) The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point.</p> <p>If a proposed small-scale CPA of a PoA is deemed to be a debundled component, but the total size of such a CPA combined with a registered small-scale CPA of the PoA does not exceed the limits for small-scale CDM type I threshold, the CPA can be included in the PoA.</p>	
15	have a contract of services and cessation of rights with the CME that governs the CPA's participation in the RE PoA, and comply with the code of conduct of the CME	Contract between CPA implementer & CME shall be validated to ensure proper governance.
16	be in line with laws and regulations available at the time of inclusion of the CPA into the PoA.	Adherence to host country laws & regulation shall be validated during the CPA inclusion based on the latest available regulation at the time of CPA inclusion.

The eligibility criteria can be checked at the CPA level by the managing entity and can be confirmed by the DOE during inclusion. Further, it has been validated that the listed eligibility criteria above are in line with "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities", EB 65 annex-3.

3.6 Operational and Management Plan

A clear and transparent description of the operational and management arrangement has been established by the PT.HPI and stated in the PoA-DD. This has been verified during site audit from the following:

1. PPP Proposal MicroHydro [13]
2. Cooperation agreement [52]

3. Record keeping system to avoid double counting, de-bundling [47]
4. Agreement between South Pole & GTZ [14]
5. Contract between Indonesian Institute for Energy Economics (IIEE) & GTZ [15]

The Termsheet (proposal & contract with CPA) and Emission Reduction Purchase Agreement (ERPA) for CPA will ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA [53]. The record keeping system for each CPA under the PoA will identify each hydropower plant under a serial numbering system to uniquely identify each location in addition to its technical details, address and GPS co-ordinates.

The system to avoid double counting has been described in the PoA-DD and the concerned database has been validated by the audit team to be sufficient. For this the CME would be screening every new CPA to ensure that no double-counting occurs. Also, as each CPA will have a separate unique title in host country, 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.

As per EB 54, annex 13- Guidelines on Assessment of De-bundling for SSC Project Activities the de-bundling check will be performed for every CPA.

Hence, it was successfully validated that the proposed operation and management plan is in compliance with para 166 of VVM ver 1.2.

3.7 Monitoring Plan

It is transparently indicated in the PoA-DD that all the CPA under this PoA shall be verified without sampling. It shall follow the following path:

- 1- CME to continuously update the list of CPAs
- 2- Collection of monitoring information by CME & preparation of one monitoring report for PoA.
- 3- CPA inclusion: DOE shall perform desk review & an onsite assessment for all CPA as deemed necessary based on procedure determined by VVM.
- 4- The DOE shall verify the total emission reduction claimed by this SSC-PoA.

In general 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 PT.HPI through review of information available from CPA owners/implementers and UNFCCC. Also, as each CPA will have a separate unique title and the unique serial number it is ensured that the double counting is avoided.

The description provided in the PoA-DD on the operational and management arrangements were confirmed based on document review and on-site interviews.

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 – ‘Grid connected renewable electricity generation’ has been demonstrated in PoA-DD section E.2.

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 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 and the information reference list.

The applicability criteria have been demonstrated as indicated below:

- It shall be ensured that a SSC-CPA will consist of a renewable energy generation unit (hydro) that supplies electricity to a regional grid of Indonesia.
- SSC-PoA is only limited to Greenfield projects as a CPA.
- As per eligibility requirements, a SSC-CPA shall be validated to have a reservoir which will have a power density greater than 10 W/m².
- SSC-PoA is only limited to projects which have only renewable components.
- Capacity additions are not eligible under the proposed SSC-PoA.

It was validated that the applicability criteria of the applied methodology forms a part of eligibility criteria and shall be covered while validating eligibility criteria number 3, 10, 11 & 12 mentioned in section 3.5 above. TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the PoA. 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.

As per applied methodology, AMS-I.D version 17, the project boundary of the typical CPA includes the project site (physical, geographical location of project site from the water intake to the substation where electricity is exported including turbines, generators & transformers) and all power plants connected physically to the electricity system.

The sources and gases within the boundary have been considered in a clear manner.

TÜV SÜD confirms that the identified boundary, the selected sources, and gases as documented in the PoA-DD are justified for the project activity and are fully in line with the requirements set by the applied methodology.

3.8.3 Baseline identification

The PoA is a voluntary coordinated action as evident from the fact that there is no mandatory regulation which mandates use hydropower at Indonesia.

Based on the on-site interviews with the PT. HPI, South Pole Carbon Asset Management Ltd and the host country experience of the audit team it is confirmed that there is no mandated legal requirement for generating hydropower in Indonesia.

According to the applied methodology, in the absence of the programme, the baseline scenario would be the generation of equivalent amount of electricity from the grid connected power plants.

The information presented in the PoA-DD has been validated by an initial document review of all data. Further confirmation has been made based on the on-site visit and a review of information from similar projects [1, 2]. 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 start date of the PoA has been defined as 22nd July 2007, based on the date when the first real concrete proposal for a Public Private Partnership (PPP) regarding the micro-hydro PoA was submitted to GTZ Indonesia. As this is before 02nd August 2008 and also before the start of the GSP (22nd December 2009) therefore, the prior and ongoing CDM consideration has been assessed as following the two approaches applicable to this POA:

Approach-1:

Consists of CPA's that started prior to 31st December 2009 and which have additionally informed the host country DNA and the UNFCCC secretariat about the commencement of the project activity and their intention to seek CDM status. This follows the early mover exemption allowed by report of EB 47 paragraph 72. For these CPAs prior consideration shall be determined based on the latest available guideline during the inclusion of CPA. However, start date of CPA shall be validated to be after 22nd June 2007 as per EB 47 para 72.

Approach-2:

Consists of CPA's that shall start later to POA validation start date (22 December 2009) and as a result do not need to demonstrate prior consideration of CDM as per "Guidelines for the Demonstration and Assessment of Prior Consideration of the CDM" as per EB 60 Annex 26. However the start date for projects under this approach shall be clearly defined as per CDM Glossary of Terms.

In addition to the above a list of chronology of events indicating the key dates of PoA development, is presented below to supplement the argument on prior consideration of CDM:

Event	Date	IRL
A proposal for a Public Private Partnership (PPP) regarding the micro-hydro PoA is submitted to GTZ Indonesia, and to the GTZ PPP facility in Germany.	22 July 2007	13
Agreement signed a term sheet between SP and Manggani (first CPA) to develop the CDM of Manggani	21 August 2007	53

under the future PoA or as a stand-alone activity.		
A three year PPP agreement regarding the development of a micro-hydro PoA is signed between GTZ and South Pole.	18 February 2008	14
A PoA stakeholder consultation is held in Jakarta.	18 February 2009	33, 34, 35, 36, 38
PT. HPI is incorporated as per Indonesian laws.	17 March 2009	18
SSC-PoA documentation is uploaded to the UNFCCC server for public comments.	22 December 2009	1

3.9.2 Additionality of PoA

The additionality of the programme has been chosen to be demonstrated at the CPA level as informed in section A.4.3 of the PoA-DD. Due to the heterogeneity across Indonesia the feed-in tariff provided by the PT. PLN does not truly reflect discrepancies between cost of production among IPPs [19, 23, 21], hence the additionality at CPA level is more focused than demonstrating the additionality at PoA level. As per para 9 of EB 65 annex 3, additionality for CPAs shall be demonstrated by means of eligibility criteria validated in section 3.5 above. Therefore it will be ensured that the additionality at CPA level shall be validated as per section 3.9.3 below.

It was validated that GTZ & IIEE have a contract with CME, certain amount of fund has also been allocated by GTZ & IIEE for the proposed PoA, contract has been validated to ensure that this allocated fund only covers development of PoA [14, 15]. As per validated contract, development here refers to PoA documentation from baseline calculation until PoA registration, also to inform stakeholders of SSC hydro power plants on the opportunities and principles of the PoA.

The general approach described in the PoA-DD for demonstration of additionality has been assessed initially through the document review followed by on-site discussions & template for investment analysis.

As the CPA applies a small scale methodology, therefore it is mentioned that the additionality has been demonstrated using the guidance given in 'Attachment A to Appendix B' of the "Simplified modalities and procedures for small-scale CDM project activities".

3.9.3 Approach for demonstrating CPA additionality

The additionality of a CPA under this PoA would be determined based on installed capacity of the CPA, the PoA uses the following two approach:

Test A: If the installed capacity of the CPA is below or equal to 5 MW, and if the SSC-CPA located in an underdeveloped area of Indonesia: It shall be validated that in case the CPA is undertaken in a special underdeveloped zone as defined by State Minister of Underdeveloped Zone Development Decree No. 001 issued in 2005, then the project shall be deemed additional as per EB 54 annex 15. Or in case the Indonesian DNA has recommended small hydro (hydro below 15 MW installed capacity) 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.

Test B: If the installed capacity of the CPA is more than 5 MW then the additionality would be determined based on the benchmark analysis because the project generates financial benefits other than CDM-related income. The template of financial spreadsheet calculation for a typical CPA has been presented to demonstrate that the financial returns of the proposed project are insufficient without CDM consideration to justify the investment [42, 43, 44]. Pre-tax project IRR has been chosen as the financial indicator for the analysis. The benchmark applicable at the time of CPA invest-

ment decision shall be validated which has been identified by the CME as pre-tax Weighted Average Cost of Capital (WACC) or alternatively commercial lending rate. The adopted approach has been checked for the real case CPA submitted along with the PoA-DD [42]. The financial spreadsheet calculation of the real case CPA has also been presented which confirms that the project IRR of the project is below the bench mark without CDM revenues.

Sensitivity analysis: The Guidance on assessment of investment analysis requires the robustness of the conclusion arrived at to be proved through a sensitivity analysis by varying the critical assumptions to a reasonable variation ($\pm 10\%$). Accordingly the PP's have identified investment cost, O&M cost and project revenues as parameters to be subjected for sensitivity analysis. If the IRR exceeds the benchmark while altering one the 3 parameters by 10%, the CPA owner shall provide evidence that this scenario is unlikely to occur. If no sufficient proof is provided, the project activity will be considered as non-additional.

The additionality is therefore demonstrated at CPA level as per aforementioned approach. The barrier shall be applicable to all the CPAs within the geographical boundary of Indonesia. The CPAs that also meet the eligibility criteria for inclusion in the PoA would therefore be deemed additional.

3.10 Emission Reductions from a typical CPA

The procedures provided in the methodology are correctly depicted in the PoA-DD and the Generic CPA-DD. The emission reductions would be calculated using the following formulae 1, 10 & para 21 of the methodology AMS.I.D / Version 17.

Baseline emissions: As per applied methodology, the baseline emissions are the product of electrical energy baseline $EG_{BL,y}$ expressed in MWh of electricity produced by the hydropower plant multiplied by the grid emission factor [45].

Emission factor of the grid shall be calculated as the Combined Margin (CM) emission factor using the 'Tool to calculate the Emission Factor for an electricity system' version 02.2.1. For major grids in Indonesia, ex-ante emission factor has been validated & fixed for first crediting period, for grids other than Sumatera & Jamali, emission factor shall be validated during CPA inclusion (since Indonesia has thousands of island, not all islands have been validated to have available emission factor except for Sumatera & Jamali island) [48, 49, 50]. Please refer to the validated values for grid emission factor applicable during first crediting period [48, 49, 50]:

Grid	$EF_{OM,y}$	$EF_{BM,y}$	$EF_{CM,y}$
Sumatera	0.906	0.581	0.743
Java-Bali (Jamali)	0.844	0.937	0.891

A declaration from the DNA for this emission factor has also been validated for respective island mentioned above. Further, the emission factor for Sumatera & Jamali grid was validated to be published on 19th Jan 2009 (contains emission factor data of 2008), which was validated to be the latest published emission factor with detailed calculation. This emission factor calculation for Sumatera & Jamali Island have been validated and is found to be in line with tool to calculate the emission factor for an electricity system.

Project emissions: As per applied methodology, AMS-I.D ver 17, following could be potential emission source for hydropower plants

- Project emission from water reservoir of hydropower plants in year y (tCO₂/yr), $PE_{HP,y}$: As per eligibility criteria of the PoA, it shall be validated during CPA inclusion that power density should be more than 10 W/m², hence all the CPAs under this PoA should have zero $PE_{HP,y}$.

- Project emission from diesel consumption onsite: As per monitoring plan of PoA-DD, it could be possible that a CPA has a backup diesel generator. Project emission from any diesel consumption during the crediting period shall be validated as per latest available version of “Tool to calculate project or leakage CO₂ emissions from fossil fuel combustion” at the time of CPA inclusion.

Leakage: As per applied methodology, AMS-I.D ver 17, leakage is only applicable when energy generating equipment is transferred from another activity, however as per eligibility criteria CPAs would be green field project with new equipments, hence the leakage has been determined as zero for CPAs under this PoA.

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, 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.

Based on the information reviewed it is confirmed that the sources used are correctly quoted and interpreted in the PoA-DD.

In accordance with para 91 of VVM 1.2, the calculation spreadsheets and the emission reductions can be replicated using the data and parameter values provided in the design documents.

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

3.11 Monitoring Plan of a typical CPA

The monitoring plan presented in the PoA-DD complies with the requirements of the applicable methodology. The assessment team has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found.

The procedures have been reviewed by the assessment team through document review and interviews with the relevant personnel. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the PoA managing entity and the CPA implementers. Specifically; these points include the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the project. Therefore, the PoA managing entity and/or CPA implementer(s) will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

3.11.1 Parameters determined ex-ante

The parameters that are determined ex-ante are:

- Determination of Emission factor for Sumatera electricity grid:
 - $EF_{OM,y}$, the average operating margin CO₂ emission factor of power plant connected to the Sumatera electricity grid: The operating margin of the Sumatera electricity grid has been validated as 0.906 tCO₂/MWh. Other parameter required to calculate the operating margin has also been determined ex-ante and has been validated.

- $EF_{BM,y}$, the build margin CO₂ emission factor of power plants in the sample group 'm' connected to the Sumatera electricity grid: The build margin of the Sumatera electricity grid has been validated as 0.581 tCO₂/MWh. Other parameter required to calculate the operating margin has also been determined ex-ante and has been validated.
- $EF_{CM,y}$, the combined margin CO₂ emission factor of power plants connected to the Sumatera electricity grid: The build margin of the Sumatera electricity grid has been validated as 0.743 tCO₂/MWh.
- Determination of Emission factor for Jamali electricity grid:
 - $EF_{OM,y}$, the average operating margin CO₂ emission factor of power plant connected to the Jamali electricity grid: The operating margin of the Jamali electricity grid has been validated as 0.844 tCO₂/MWh. Other parameter required to calculate the operating margin has also been determined ex-ante and has been validated.
 - $EF_{BM,y}$, the build margin CO₂ emission factor of power plants in the sample group 'm' connected to the Jamali electricity grid: The build margin of the Jamali electricity grid has been validated as 0.937 tCO₂/MWh. Other parameter required to calculate the operating margin has also been determined ex-ante and has been validated.
 - $EF_{CM,y}$, the combined margin CO₂ emission factor of power plants connected to the Jamali electricity grid: The build margin of the Jamali electricity grid has been validated as 0.891 tCO₂/MWh.
- Installed capacity of the hydro plant & area of reservoir: It shall be validated during CPA inclusion using feasibility report, commissioning or other equivalent documents.

In summary, the parameters determined ex-ante have been presented correctly according to requirements are considered in accordance with the applied methodology.

3.11.2 Parameters determined ex-post

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

- $EG_{BL,y}$, Quantity of net electricity supplied by the project plant/unit to the grid in year y: This parameter shall be continuously measured by an energy meter and recorded at least monthly. The recorded data will be cross-checked with the records of electricity sold (using invoices).
- $FC_{i,j,y}$, diesel consumption in auxiliaries: This parameter is applicable for CPAs where it could have diesel consumption in diesel engine for auxiliary consumption. It shall be measured using diesel invoices.

In summary, the parameters determined ex-post have been presented correctly according to requirements and are considered in accordance with the applied methodology as well.

3.11.3 Monitoring and Reporting System and Quality Assurance

The operational and management structure has been clearly described and in compliance with the envisioned situation. The responsibilities and institutional arrangements for data collection and archiving has been clearly provided. The information provided in the PoA-DD could be confirmed based on the on-site interviews and also through the submitted documentary evidence - implementation plan [52, 53].

3.12 Stakeholder Consultation

It has been indicated that the local stakeholder consultation is done at the PoA & CPA level. The justification of doing local stakeholder consultation at the PoA & CPA level has been provided and is deemed appropriate.

The relevant local stakeholders have been invited through invitation letter and email [39]. The summary of this stakeholder meeting is given [35, 36, 37, 38]. The assessment team has reviewed the documentation in order to validate the inclusion of relevant stakeholders. Team local expertise has confirmed that the communication method used to invite the stakeholders is appropriate. The summary of comments presented in the PoA-DD has been verified with the documentation of the stakeholder consultation and has been found to be complete.

Comments presented by the local stakeholders have been taken into account by the PoA managing entity and has been verified with information obtained during interviews.

Hence, the local stakeholder consultation has been performed adequately according to the CDM requirements.

3.13 Environmental Analysis

It has been indicated that the environmental analysis will be done at the CPA level. Current host country requirement has been validated, 'Minister of Environment Regulation No. 11 issued in 2006', as per eligibility criteria and existing host country regulation, a hydro power plant needs to have an Environmental Impact Assessment if the plant exceeds any of the following limit [12]:

- a) dam height of 15 m,
- b) flooded area of 200 m²,
- c) installed capacity of 50 MW.

However an Environmental Management and Monitoring Plan (EMMP) has to be developed by the individual CPAs as required by the local Indonesian law. Therefore likely environmental impacts specific to CPA will be discussed at the 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 below

GSP Comments

website: http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/J7BOTN9LCWLN2SNVRY5LIGMT0B22D1/view.html	
Starting date of the global stakeholder consultation process: 2009-12-22	
Comment submitted by: None	Issues raised: -
Response by TÜV SÜD: -	

5 VALIDATION OPINION

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

Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia

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

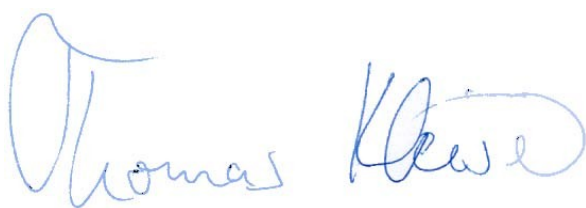
The review of the PoA design documentation, subsequent follow-up interviews, and further verification of references have provided TÜV SÜD with sufficient evidence to determine the fulfilment of stated criteria in the protocol. In the opinion of TÜV SÜD, the PoA meets all relevant UNFCCC requirements 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 is based on the information made available to TÜV SÜD, as well as the engagement conditions detailed in this report. The validation has been performed following the VVM requirements. 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, 27-04-2012

Munich, 27-04-2012



Thomas Kleiser

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



Nikunj Agarwal

Assessment Team Leader

Annex 1: Validation Protocol

Validation Protocol CDM-PoA-DD

Programme (PoA) Title: Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia

Date of Completion: 27-04-2012

Number of Pages: 34



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Table 1 Conformity of CDM Programme of Activities

CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
A. General description of small-scale programme of activities (PoA)				
A.1. Title of the small-scale programme of activities (PoA)				
A.1.1. Does the used PoA title clearly enable to identify the unique CDM programme of activities?	1	Yes, the PoA title clearly enables to identify the unique CDM PoA.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.2. Are there any indications concerning the revision number and the date of the revision?	1	Yes, the GSP-PoA-DD is indicated version number 01, dated 14/12/2009. The final PoA-DD is indicated as version number 2.6, dated 26 th April 2012.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.1.3. Is this consistent with the time line of the programme's history?	1	Yes, it is consistent with the timeline of PoA.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2. Description of the small-scale programme of activities				
A.2.1. Is the description delivering a transparent overview of the general operating and implementing framework of the PoA?	1, 4	Yes, it has been described clearly that PT. Hydro Program International will be the coordinating/managing entity of the PoA. The CDM programme activities (CPAs) included in the PoA will be implemented in Republic of Indonesia. The SSC-PoA involves hydropower plants delivering energy to main grid or isolated grid as CPAs	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.2.2. Is the policy/measure or stated goal of the PoA clearly and unambiguously presented?	1, 4, 14, 15	Yes, it has been clearly presented that the PoA objective is to support small hydropower projects in Indonesia by providing a standardized and streamlined access to CDM services Clarification Request No. 1. Please provide all the documents quoted in PoA-DD under policy/measure (translated to English where required). Also provide any documentary evidence which refers to the collaboration between PT.HPI, GTZ and IIEE as stated in the PoA-DD. Further please clar-	CR	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
		ify in PoA-DD whether CPA/PoA would receive any funds from GTZ.		
A.2.3. What proofs are available demonstrating that the project description is in compliance with the actual situation or planning?	1, 4	Please refer to A.2.2	CR	☑
A.2.4. Is the information provided by these proofs consistent with the information provided by the PoA-DD?	1, 4	Please refer to section A.2.2	CR	☑
A.2.5. Is there a valid confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity?	1, 4, 16	Yes, it has been indicated that proposed PoA is a voluntary action by the coordinating/managing entity – PT.HPI Clarification Request No. 2. Submit a valid confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity (DNA approval).	CR	☑
A.2.6. 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	Yes, the description of technology to be applied provides sufficient and transparent input to evaluate its impact on the greenhouse gas balance.	☑	☑
A.2.7. Is the brief explanation how the programme will reduce greenhouse gas emission transparent and suitable?	1, 4	Yes, the brief explanation is provided as to how the programme will reduce greenhouse gas emission transparent and suitable.	☑	☑
A.3. Coordinating/managing entity and participants of SSC-PoA				
A.3.1. Is the form required for the indication of project participants correctly applied?	1	Yes, the form has been correctly applied.	☑	☑
A.3.2. Is the participation of the listed entities or Parties in the PoA confirmed by each one of them?	1, 16, 17	PT.HPI and South Pole Carbon Asset Management Ltd have been indicated as the project participant. However, letter of authorization & letter of approval needs to be provided from Indonesian DNA and Swiss DNA respectively. Clarification Request No. 3. Letter of authorization & letter of approval needs to be provided from	CR	☑

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
		Indonesian DNA and Swiss DNA respectively.		
A.3.3. Is all information on participants / Parties provided in consistency with details provided by further chapters of the PDD (in particular annex 1)?	1	PT.HPI and South Pole Carbon Asset Management Ltd have been indicated as the project participant and has been consistently included in Annex-1.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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 PDD that coordinating or managing entity of the PoA is the entity which communicates with the EB.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.3.5. Is it evident whether individual project participants are involved in one of the CPAs related to the PoA?	1, 18	<u>Clarification Request No. 4.</u> Please provide confirmation of the incorporation of PT.HPI in Indonesia as per local regulations. Also confirm the date of such incorporation in the PDD.	CR	<input checked="" type="checkbox"/>
A.4. Technical description of the small-scale programme of activities				
A.4.1. Location of the programme of activities				
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 – Republic of Indonesia. <u>Corrective Action Request No.1.</u> Please include the Geographical Map and coordinate range of the Host country in section A.4.1.2	CAR	<input checked="" type="checkbox"/>
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?	1,9 ,10, 11, 12	<u>Corrective Action Request No.2.</u> Although It has been indicated in section A.2 of the PDD that there are no mandatory policies or regulations for the generating Hydro Power in the region. However, please include the information on all applicable national and/or sectoral policies and regulations which are relevant to the PoA.	CAR	<input checked="" type="checkbox"/>

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
A.4.1.3. Is/are the Host Party(ies) stated?	1	Indonesia has been stated as the host party.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2. Description of a typical small-scale CDM programme activity (CPA)				
A.4.2.1. Is it unambiguously stated which technology or measures are to be employed by the SSC-CPA?	1, 4	<u>Corrective Action Request No.3.</u> Please describe appropriately all the relevant project details in section A.4, A.4.2 and A.4.2.1	CAR	<input checked="" type="checkbox"/>
A.4.2.2. Is the type and category of project activities correctly identified and indicated?	1, 4	<u>Corrective Action Request No.4.</u> Please indicate the type and category of the project activity in section A.4.2.1 of the PoA-DD.	CAR	<input checked="" type="checkbox"/>
A.4.2.3. Does the technical design of the project activity reflect current good practices?	1, 4	The PoA generates energy from renewable source of power and replaces equivalent amount by exporting it to grid, thus reflects current good practices	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	<u>Corrective Action Request No.5.</u> Please indicate whether the implementation of the project activity require any technology transfer from Annex-I-countries to the host country.	CAR	<input checked="" type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.6. Is the information provided in compliance with actual situation or planning?	1, 4	Please refer to CR 1 and CAR 3	CR, CAR	<input checked="" type="checkbox"/>
A.4.2.7. Does the project use state of the art technology and / or does the technology result in a significantly better performance than any commonly used technologies in the host country?	1, 4	Please refer section A.4.2.1 for CAR raised.	CAR	<input checked="" type="checkbox"/>
A.4.2.8. Is the project technology likely to be substituted by other or more efficient technologies within the project period?	1, 4	As the PoA envisages Hydro power generation therefore it is unlikely that the technology would be substituted within the project period	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Validation Protocol CDM-PoA-DD

Programme (PoA) Title: Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final
A.4.2.9. 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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.10. Is information available on the demand and requirements for training and maintenance?	1, 4	Not required.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.2.11. Is a schedule available for the implementation of the project and are there any risks for delays?	1, 4	<u>Clarification Request No. 5.</u> Project implementation schedule needs to be submitted.	CR	<input checked="" type="checkbox"/>
A.4.2.12. Are there clear and unambiguous eligibility criteria for the inclusion of a SSC-CPA into the PoA?	1, 3, 4	Yes, the eligibility criteria has been stated clearly with regards to the following: 1. applicability of the applied methodology AMS.I.D ver17, 2. geographical boundary, 3. restriction of capacity addition/retrofit/replacement, 4. cooperation agreement with PT.HPI and bundling issues. 5. Greenfield power plant with a threshold of type-I small scale capacity. 6. Demonstrates that it is in compliance with one of the CPA additionality test as described in section E.5.2 of the PoA-DD. 7. Conducts a local stakeholder consultation 8. Shall show, based on national environmental policies applicable at time of inclusion, whether an environmental impact analysis is required or not. If required, the CPA shall conduct an environmental impact analysis . 9. CPA should not result into the diversion of official development assistance 10. Shall not be a capacity addition/retrofit/replacement activity at an existing power plant. In other words the CPA to be included would	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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		<p>only comprise of Greenfield renewable energy power plants.</p> <p>11. export the renewable electricity generated to a relevant and clearly identified grid within the geographical boundary of the host country.</p> <p>12. 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/m².</p> <p>13. Generates electricity with a capacity below the type I small-scale threshold.</p> <p>14. The CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity.</p> <p>15. have a contract of services and cessation of rights with the CME that governs the CPA's participation in the hydro PoA, and comply with the code of conduct of the CME.</p> <p>16. be in line with laws and regulations available at the time of inclusion of the CPA into the PoA.</p>		
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)				
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	<p>The final PoA-DD is validated to have the starting date as 22nd July 2007, which is validated as the date of a proposal for a Public Private Partnership (PPP) regarding the micro-hydro PoA is submitted to GTZ Indonesia, and to the GTZ PPP facility in Germany.</p> <p><u>Corrective Action Request No.6.</u></p> <p>Please provide justification to substantiate that this voluntary coordinated action would not be implemented in the absence of the PoA. A</p>	CAR	<input checked="" type="checkbox"/>

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		separate time line for activities related to project implementation and CDM related activities needs to be incorporated.		
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)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	The clear and transparent description of the operational and management arrangements established by the PT. HPI has been provided.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
A.4.4.2. Is there a record keeping system for each CPA under the PoA?	1, 4, 47	Distinct record for each CPA under PoA would be maintained by Pt. HPI. <u>Corrective Action Request No.7.</u> As stated in the PoA-DD, please include 'record of technical specification' in the provided spreadsheet of 'record keeping system' (only installed capacity has been included as per PoA-DD).	CAR	<input checked="" type="checkbox"/>
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 PT. HPI through information available on UNFCCC using spreadsheet of 'record keeping system'. Also each CPA will have a contractual agreement with ME which includes provisions to avoid double counting.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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 an-	1, 4, 3	PT. HPI will have a contractual arrangement with each CPA 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 transparen-	CAR	<input checked="" type="checkbox"/>

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other CPA or CDM project?		cy. Furthermore, CME would also cross check with the information available on UNFCCC and update in the record keeping system. <u>Corrective Action Request No.8.</u> Please include all the criteria for de-bundling check in PoA-DD (section A.4.4.1) as mentioned in "Guidelines on assessment of de-bundling for SSC project activities", EB 47 annex 32.		
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	Please refer to CR 1	CR	<input checked="" type="checkbox"/>
A.4.4.6. Is there a monitoring plan 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 CPAs and within CPAs)?	1, 2, 3	GSP PoA-DD has indicated sampling of CPAs during the verification exercise. However, in the final PoA-DD has been validated to have no sampling and 100% verification of all the CPAs under this PoA. <u>Corrective Action Request No.9.</u> Please use "General Guidelines for sampling and surveys for small scale CDM project activities", EB50 annex 30, for proposing a sound sampling method in PoA-DD for verification. <u>Clarification Request No. 6.</u> Please define the categories in sampling method more transparently. The eligibility criteria for including CPA indicates that power is exported to grid, however category II includes Hydropower plants without PPA, therefore please clarify how the export of power from the CPA can be ensured. <u>Corrective Action Request No.10.</u> Please indicate in the PoA-DD whether ME intends to do sampling within the CPA for verification (if in case there are many small hydro power plants within one CPA).	CR, CAR	<input checked="" type="checkbox"/>

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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, 47	<u>Corrective Action Request No.11.</u> As each CPA is expected to have different characteristics and verification periods, please 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.	CAR	<input checked="" type="checkbox"/>
A.4.5. Public funding of the small-scale project activity				
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	PoA has not received any public funding for the project activity.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
B. Duration of the programme of activities				
B.1. Starting date of the programme of activities				
B.1.1. Is the programme's starting date clearly defined and reasonable?	1, 2	<u>Clarification Request No. 7.</u> EB47 para72 simply permits the PoA to include CPA with start date prior to the commencement of validation of PoA. Please clarify on what basis starting date of the PoA has been chosen as 22 nd June 2007. Further please provide the list of specific CPAs under this PoA having start date prior to the validation of PoA (if any) to us and UNFCCC secretariat before 31 st January'2010.	CR	<input checked="" type="checkbox"/>
B.2. Length of the programme of activities (PoA)				
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)	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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C. Environmental Analysis				
C.1. Definition of the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken:				
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.2. Documentation on the analysis of the environmental impacts of the PoA, including transboundary impacts:				
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	EIA has been done at CPA level and the same has been documented in CPA-DD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.2.2. Has the analysis of the environmental impacts of the project activity been sufficiently described?	1, 4	EIA has been done at CPA level and the same has been documented in CPA-DD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.2.3. Will the project create any adverse environmental effects?	1, 4	EIA has been done at CPA level and the same has been documented in CPA-DD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
C.2.4. Were trans-boundary environmental impacts identified in the analysis?	1, 4	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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:				
C.3.1. Have the identified environmental impacts been addressed in the project design sufficiently?	1,12	Clarification Request No. 8. Please provide us the Environment Decree No.11 discussed in section C.3 from any publically available domain or certified document	CR	<input checked="" type="checkbox"/>
C.3.2. Does the project comply with environmental legislation in the host country?	1, 12	Please refer to C.3.1	CR	<input checked="" type="checkbox"/>

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C.3.3. Is, per host country laws/regulations, an environmental impact assessment necessary for a typical CPA?	1, 12	Please refer to C.3.1	CR	<input checked="" type="checkbox"/>
D. Stakeholders' comments				
D.1. Please indicate the level at which local stakeholder comments are invited. Justify the choice:				
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 invited at PoA level and CPA level as well	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.2. Is the choice justified in a clear and reasonable manner?	1, 4	Yes the choice has been justified in the PoA-DD	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	Evidences as to how comments have been invited have been provided to the Audit team. Stakeholder meeting was conducted on 18 th Feb'09 for PoA level.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.1.4. If the stakeholder comments will be invited at PoA level, is there a summary of the contents?	1, 4, 5, 6	Full recording of the stakeholder meeting has been provided to audit team. Further minutes of meeting is also provided for further assessment.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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	All the comments by stakeholder were addressed by PT.HPI as mentioned in section D.3 (this was also crosschecked using recording of the meeting provided to the Audit team).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2. Brief description how comments by local stakeholders have been invited and compiled				
D.2.1. Have relevant stakeholders been consulted?	1, 4, 5, 6	Yes, the relevant stakeholders have been consulted.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.2.2. Have appropriate media been used to invite comments by local stakeholders?	1, 4, 5, 6	Yes, appropriate measures (like invitation letter through fax and mail) have been used to invite the relevant stakeholder at PoA-level.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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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, 32, 33, 34, 35, 36, 37, 38, 41	Clarification Request No. 9. Please clarify and include in PoA-DD whether stakeholder consultation process is required by regulation/laws in the host country. If yes, please document how this stakeholder meeting has been carried out as per the regulations/laws.	CR	<input checked="" type="checkbox"/>
D.2.4. Is the undertaken stakeholder process that was carried out described in a complete and transparent manner?	1	Yes, it was validated that the undertaken stakeholder process was carried out in a transparent manner.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.3. Summary of the comments received				
D.3.1. Is a summary of the received stakeholder comments provided?	1, 4, 5, 6, 35	Yes, the summary of all the comments have been provided in section D.3 of PoA-DD, which is crosschecked with recorded conversation of the stakeholder meeting.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
D.4. Report on how due account was taken of any comments received				
D.4.1. Has due account been taken of any stakeholder comments received?	1, 4, 5, 6, 35	All the comments by stakeholder were addressed by PT.HPI as mentioned in section D.3 (this was also crosschecked using recording of the meeting provided to the Audit team).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E. Application of a baseline and monitoring methodology to a typical SSC-CPA				
E.1. Title and reference of the approved SSC baseline and monitoring methodology applied to SSC-CPA included in the PoA				
E.1.1.1. Are reference number, version number, and title of the baseline and monitoring methodology clearly indicated?	1	AMS-I.D ver 15 has been used for the GSP PoA-DD. However in due course of validation, the version of the applied methodology has been updated to ver 17.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.1.1.2. Is the applied version the most recent	1	Yes, the version used is the most recent one at the time of uploading	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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one and / or is this version still applica-ble?		the project for GSP (AMS-I.D ver15). However in due course of vali-dation, the version of the applied methodology has been updated to ver 17.										
E.1.1.3.Is the applied SSC methodology ap-proved by the board, for use in PoA?	1	Yes, the applied SSC methodology has been approved by the board, for use in PoA.	☑	☑								
E.2.Justification of the choice of the methodology and why it is applicable to a SSC-CPA												
E.2.1. Is the applied methodology considered the most appropriate one?	1, 3	Yes, the applied methodology AMS I.D- Grid connected renewable electricity generation, is the most appropriate small scale methodolo-gy for this kind of programme.	☑	☑								
E.2.2. 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.	☑	☑								
Integrate the required amount of sub-checklists on the applicability criteria as given by the applied methodology and comment on at least every line answered with “No”;												
E.2.2.1.Criterion 1: This methodology comprises renewable energy gen-eration units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: a. Supplying electricity to a national or a regional grid; or b. Supplying electricity to an identified consumer facil-ity via national/regional grid through a contractual arrangement such as wheeling.	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	☑	☑
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
E.2.2.2. Criterion 2: Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	Yes	Compliance provable?	No	Compliance verified?	No	CAR	☑
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	Yes											
Compliance provable?	No											
Compliance verified?	No											

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<p>this methodology:</p> <ul style="list-style-type: none">The project activity is implemented in an existing reservoir with no change in the volume of reservoir;The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4 W/m²; <p>The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4 W/m².</p>		<p><u>Corrective Action Request No.12.</u></p> <p>Please correct the Applicability criteria (Hydro power plants with reservoirs that satisfy..) as per the methodology, AMS-I.D.</p>										
E.2.2.3.Criterion 3: This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
E.2.2.4.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 ¹ , the capacity of the entire unit shall not exceed the limit of	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table> <p><u>Corrective Action Request No.13.</u></p> <p>Please discuss in the PoA-DD section E.2 how the eligibility limit of</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	Yes	Compliance provable?	No	Compliance verified?	No	CAR	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	Yes											
Compliance provable?	No											
Compliance verified?	No											

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15 MW..		15 MW would be taken care in the PoA.										
E.2.2.5.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 PDD?</td><td>Yes</td></tr><tr><td>Compliance provable?</td><td>Yes</td></tr><tr><td>Compliance verified?</td><td>Yes</td></tr></table>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
E.2.2.6.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 PDD?</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>Eligibility criteria no. iii doesn't allow CPAs with capacity addition under this PoA.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
E.2.2.7.Criterion 7: Project activities that seek to retrofit or modify an existing facility for renewable energy generation are included in this category. To qualify as a small-scale project, the total output of the modified or retrofitted 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 PDD?</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>Eligibility criteria no. iii doesn't allow CPAs with capacity addition/modification/ retrofitting under this PoA.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
E.2.2.8.Criterion 8: In the specific case of biomass project activities the determination of leakage shall be done following the general guidance for leakage in small-scale biomass project activities (attachment C of appendix B7 of simplified modalities and procedures for small-	1, 3	<table><tr><td>Applicability checklist</td><td>Yes / No / NA</td></tr><tr><td>Criterion discussed in the PDD?</td><td>No</td></tr><tr><td>Compliance provable?</td><td>No</td></tr><tr><td>Compliance verified?</td><td>No</td></tr></table> <p><u>Corrective Action Request No.14.</u></p>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	No	Compliance provable?	No	Compliance verified?	No	CAR	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	No											
Compliance provable?	No											
Compliance verified?	No											

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scale clean development mechanism project activities; decision 4/CMP.1) or following the procedures included in the leakage section of AM0042.		Please include the applicability criteria given in page 7 of methodology (AMS-I.D), applicable to PoAs using this methodology										
E.2.2.9. Criterion 9: 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><th>Applicability checklist</th><th>Yes / No / NA</th></tr><tr><td>Criterion discussed in the PDD?</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>Not applicable as per eligibility criteria no. 10 of the PoA-DD.</p>	Applicability checklist	Yes / No / NA	Criterion discussed in the PDD?	Yes	Compliance provable?	Yes	Compliance verified?	Yes	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Applicability checklist	Yes / No / NA											
Criterion discussed in the PDD?	Yes											
Compliance provable?	Yes											
Compliance verified?	Yes											
E.3.Description of the sources and gases included in the SSC-CPA boundary												
E.3.1. Does the SSC-CPA boundary include the physical and geographical location where the programme activities take place?	1, 3	<u>Corrective Action Request No.15.</u> Please include a generalized flow diagram of the project boundary for all CPAs under this POA	CAR	<input checked="" type="checkbox"/>								
E.3.2. Are all sources and gases within the boundary considered in a clear manner?	1, 3	Yes, the sources and gases within the boundary have been considered in a clear manner. The CO ₂ emissions from the power plants	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>								

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		connected to the grid have been included.		
E.3.3. Do the spatial and technological boundaries as verified on-site comply with the discussion provided by / indication included to the PoA-DD?	1, 3	Yes, the technological boundaries has been discussed and verified to be as per AMS.I.D	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.4. Description of how the baseline scenario is identified and description of the identified baseline scenario:				
E.4.1. 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, 8	<u>Corrective Action Request No.16.</u> Please update section E.4 of PoA-DD to include discussion about grids where the power from Project activity would be exported in project scenario. Also include 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	<input checked="" type="checkbox"/>
E.4.2. Does project identify correctly and exclude those options not in line with regulatory or legal requirements?	1	Please refer to CAR raised in section E.4.1 above.	CAR	<input checked="" type="checkbox"/>
E.4.3. Have applicable regulatory or legal requirements been identified?	1	Please refer to CAR raised in section E.4.1 above.	CAR	<input checked="" type="checkbox"/>
E.4.4. Does the PoA-DD identify the most likely baseline scenario in absence of the project activity?	1	Please refer to CAR raised in section E.4.1 above.	CAR	<input checked="" type="checkbox"/>
E.4.5. Is this identification supported by official and/or verifiable documents (e.g. studies, web pages, certificates, etc)?	1	<u>Clarification Request No. 10.</u> Please provide and quote some evidences for substantiating the identified baseline alternative of the project activity in section E.4 of PoA-DD	CR	<input checked="" type="checkbox"/>
E.4.6. Is the identified baseline scenario in line with regulatory or legal requirements?	1	Please refer to CAR raised in section E.4.1 above.	CAR	<input checked="" type="checkbox"/>

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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):				
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, 3	As per the GSP PoA-DD applies the small scale methodology therefore the additionality can be demonstrated using the guidance given in 'Attachment A to Appendix B' of the "Simplified modalities and procedures for small-scale CDM project activities". However, the final PoA-DD has been updated to indicate two additionality test as follows: Test a: Is the installed capacity of the CPA below or equal to 5 MW, and is the SSC-CPA located in an underdeveloped area of Indonesia: For all the CPA which belong to this category, the additionality test is based on annex 15 of EB 54. Test b: Investment analysis: For rest other CPAs, it shall follow investment analysis which shall be performed as per additionality tool (version 6.0).	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.5.2. 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, 2	<u>Corrective Action Request No.17.</u> Please use the latest version of the below mentioned guidance in section E.5.2 of the PoA-DD 1. "Guidance on the demonstration assessment of prior consideration of the CDM". 2. "Guidance on the assessment of Investment Analysis" Also clarify in PoA-DD whether the CPA-DD would use the same or updated version of tools and guidance during the inclusion of CPA	CAR	<input checked="" type="checkbox"/>
E.5.3. Is the choice of the criteria justified, based on the analysis in section E.5.1 of the PoA-DD?	1, 4	The description on how the Project IRR & benchmark would be calculated has been provided in the PoA-DD. <u>Corrective Action Request No.18.</u> Please provide appropriate explanation to determine technical life-	CAR	<input checked="" type="checkbox"/>

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		time for any CPA (section E.5.2 of PoA-DD)																	
E.5.4. Does it become evident how these criteria would be applied to assess the additional-ity of a typical CPA at the time of inclu-sion?	1, 42	Please refer to CAR17 <u>Clarification Request No. 11.</u> Please submit the standard excel worksheet developed for IRR com-putation as discussed in section E.5.2 of PoA-DD	CAR, CR	☑															
E.5.5. Is this information incorporated into the specific CDM-SSC-CPA-DD (“real case”)?	1	Yes, this information has been incorporated into the specific SSC-CPA.	☑	☑															
E.5.6. If the starting date of the programme activity is before the date of validation, is evi-dence available to prove that incentive from the CDM was seriously considered in the de-cision to proceed with the programme activi-ty?	1	Please refer to section A.4.4.2 for the CAR raised.	CAR	☑															
E.5.7. Is a complete list of barriers developed that prevents the project activity to occur?	1, 2	As per Attachment A to appendix B to the simplified Modalities & Procedures financial barrier has been taken into consideration.	☑	☑															
E.5.8. Does this list include at least one of the following barriers?	1, 2	<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> Please refer to CR 11	Barrier	Discussed?	Verifiable?	Investment	Yes	No	Technological	No	NA	Due to prevailing practice	No	NA	Other	No	NA	CR	☑
Barrier	Discussed?	Verifiable?																	
Investment	Yes	No																	
Technological	No	NA																	
Due to prevailing practice	No	NA																	
Other	No	NA																	
E.5.9. Does the discussion sufficiently take into account relevant national and/or sectoral policies?	1	<u>Corrective Action Request No.19.</u> Please include all the relevant national and sectoral policies in sec-tion E.5.2	CAR	☑															
E.5.10. Is transparent and documented evi-dence provided on the existence and signifi-cance of these barriers?	1	Please refer E.5.6	CAR	☑															

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E.5.11. Is it appropriately explained how the approval of the project activity will help to overcome the identified barriers?	1	Please refer E.5.4	CR	<input checked="" type="checkbox"/>						
E.6.Estimation of Emission reductions of a CPA										
E.6.1. Explanation of methodological choices, provided in the approved baseline and monitoring methodology applied, selected for a typical CPA										
E.6.1.1.Is it explained how the procedures provided in the methodology are applied?	1,3	Yes, it is explained how the procedures provided in the methodology are applied by the proposed PoA.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>						
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?	1	Please refer to E.4.1 <u>Clarification Request No. 12.</u> Please include what all measures or evidences can be provided by each CPA to conclude that there is lack of sufficient data to calculate the Combined Margin emission factor.	CAR, CR	<input checked="" type="checkbox"/>						
Determination of Project Emission (Comment on any line answered “No”)										
E.6.1.3.Component 1: Emissions from the consumption of fossil fuel	1, 3	<table><tr><td>Project emission checklist</td><td>Yes / No /NA</td></tr><tr><td>Component discussed in the PDD?</td><td>No</td></tr><tr><td>Formulae correctly applied?</td><td>No</td></tr></table> <u>Clarification Request No. 13.</u> Please clarify whether a CPA can have a standby fossil fuel based auxiliary power consumption, if yes, please include the project emission parameter for its monitoring	Project emission checklist	Yes / No /NA	Component discussed in the PDD?	No	Formulae correctly applied?	No	CR	<input checked="" type="checkbox"/>
Project emission checklist	Yes / No /NA									
Component discussed in the PDD?	No									
Formulae correctly applied?	No									
E.6.1.4.Component 2: Emissions from the consumption of electricity.	1, 3	<table><tr><td>Project emission checklist</td><td>Yes / No /NA</td></tr><tr><td>Component discussed in the PDD?</td><td>No</td></tr><tr><td>Formulae correctly applied?</td><td>No</td></tr></table> Comments: Auxiliary consumption would be provided by the gener-	Project emission checklist	Yes / No /NA	Component discussed in the PDD?	No	Formulae correctly applied?	No	CR	<input checked="" type="checkbox"/>
Project emission checklist	Yes / No /NA									
Component discussed in the PDD?	No									
Formulae correctly applied?	No									

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		ated hydro power. However, please refer to E.6.1.3 above								
E.6.1.5.Component 3: Emissions from the consumption of non-condensable gases.	1, 3	<table><tr><td>Project emission checklist</td><td>Yes / No /NA</td></tr><tr><td>Component discussed in the PDD?</td><td>NA</td></tr><tr><td>Formulae correctly applied?</td><td>NA</td></tr></table> Comments: Not Applicable	Project emission checklist	Yes / No /NA	Component discussed in the PDD?	NA	Formulae correctly applied?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Project emission checklist	Yes / No /NA									
Component discussed in the PDD?	NA									
Formulae correctly applied?	NA									
E.6.1.6.Component 4: Emissions from water reservoirs of hydro power plant	1, 3	<table><tr><td>Project emission checklist</td><td>Yes / No /NA</td></tr><tr><td>Component discussed in the PDD?</td><td></td></tr><tr><td>Formulae correctly applied?</td><td></td></tr></table> <u>Corrective Action Request No.20.</u> Since the PoA allows inclusion of ‘Hydro power plants with reservoirs’, therefore please include project emission as per applied AMS.I.D.	Project emission checklist	Yes / No /NA	Component discussed in the PDD?		Formulae correctly applied?		CAR	<input checked="" type="checkbox"/>
Project emission checklist	Yes / No /NA									
Component discussed in the PDD?										
Formulae correctly applied?										
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 presented, enabling a complete identification of parameters to be used and / or monitored?	1	<u>Corrective Action Request No.21.</u> Please include all the formulae required for the determination of emission reduction in section E.6.2. As per the methodology, emission factor for alternative 2 mentioned in section E.6.1 needs to be updated for each verification period, whereas PoA-DD keeps it fixed ex-ante for all the alternatives, please clarify.	CAR	<input checked="" type="checkbox"/>						
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	Please refer to E.6.2.1 <u>Corrective Action Request No.22.</u> Please provide us the standard Emission reduction calculation sheet which would be used for ER computation from each CPA	CAR	<input checked="" type="checkbox"/>						

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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	Yes, the list of parameters presented in chapter B.6.2 is validated to be complete.	☑	☑																		
E.6.3.2.Comment on any line answered with “No”																						
E.6.3.2.1. Parameter Title: Annual electricity supplied to the grid prior to retrofit (applicable only for retrofit and modification activities)	1, 3	<table><tr><th>Data Checklist</th><th>Yes / No/NA</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</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> <p>Comments: NA to this PoA</p>	Data Checklist	Yes / No/NA	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	Source clearly referenced?	NA	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	NA	Measurement method correctly described?	NA	☑	☑
Data Checklist	Yes / No/NA																					
Title in line with methodology?	NA																					
Data unit correctly expressed?	NA																					
Appropriate description of parameter?	NA																					
Source clearly referenced?	NA																					
Correct value provided?	NA																					
Has this value been verified?	NA																					
Choice of data correctly justified?	NA																					
Measurement method correctly described?	NA																					
E.6.3.2.2. Parameter Title: surface area of full reservoir level (for new hydroelectric activities only)	1, 3	<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>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr></table>	Data Checklist	Yes / No/NA	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	CAR	☑										
Data Checklist	Yes / No/NA																					
Title in line with methodology?	No																					
Data unit correctly expressed?	No																					
Appropriate description of parameter?	No																					

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		Source clearly referenced?	No																				
		Correct value provided?	No																				
		Has this value been verified?	No																				
		Choice of data correctly justified?	No																				
		Measurement method correctly described?	No																				
		Comments: Please refer to E.6.1.6																					
E.6.3.2.3. Parameter Title: EF _{CO2} – Emission factor of the grid (CM) where the hydropower is exporting (or would have exported) its electricity to	1, 3	<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>No</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>Yes</td></tr><tr><td>Measurement method correctly described?</td><td>NA</td></tr></table> <p>Please refer to CAR21 & 22</p> <p><u>Corrective Action Request No.23.</u></p> <p>Please correct the data unit of emission factor to tCO2/kWh as per the methodology. Further please submit the spreadsheet which would be used to calculate the emission factor for each CPA</p>		Data Checklist	Yes / No / NA	Title in line with methodology?	Yes	Data unit correctly expressed?	No	Appropriate description of parameter?	Yes	Source clearly referenced?	Yes	Correct value provided?	NA	Has this value been verified?	NA	Choice of data correctly justified?	Yes	Measurement method correctly described?	NA	CAR	☑
Data Checklist	Yes / No / NA																						
Title in line with methodology?	Yes																						
Data unit correctly expressed?	No																						
Appropriate description of parameter?	Yes																						
Source clearly referenced?	Yes																						
Correct value provided?	NA																						
Has this value been verified?	NA																						
Choice of data correctly justified?	Yes																						
Measurement method correctly described?	NA																						
Additional parameters used for the calculation of the grid factors (if necessary)																							
E.6.3.2.4. Parameter Title: Operating margin (OM) emission factor of the grid	1, 3	<table><tr><td>Data Checklist</td><td>Yes / No/NA</td></tr></table>		Data Checklist	Yes / No/NA	CAR	☑																
Data Checklist	Yes / No/NA																						

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Note: OM should be calculated as per the procedures described in the “Tool to calculate the emission factor for an electricity system”		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description?	No		
		Source clearly referenced?	No		
		Correct value provided?	No		
		Has this value been verified?	No		
		Choice of data correctly justified?	No		
		Measurement method correctly described?	No		
		<u>Corrective Action Request No.24.</u> As mentioned in PoA-DD, “tool to calculate the Emission Factor for an Electricity system” would be used to calculate the emission factor of Grid. Therefore please include the following parameter in section E.6.3 of PoA-DD (depending upon the option chosen for calculation of EF in tool) <ul style="list-style-type: none">• Operating margin (OM) emission factor of the grid• Build margin (BM) emission factor of the grid• fuel consumption of each power source• emission coefficient of each fuel• electricity generation of each power source• fraction of time with low costs /must run plant at the margin (for simple adjusted OM only)• electricity imports• CO₂ emission coefficient of fuels used in connected grids			
E.6.3.2.5. Parameter Title:	1, 3		CAR	☑	

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Build margin (BM) emission factor of the grid Note: BM should be calculated as per the procedures described in the “Tool to calculate the emission factor for an electricity system”		Data Checklist	Yes / No/NA		
		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided?	No		
		Has this value been verified?	No		
		Choice of data correctly justified?	No		
		Measurement method correctly described?	No		
		Please refer to CAR 24 above			
E.6.3.2.6. Parameter Title: fuel consumption of each power source	1, 3			CAR	☑
		Data Checklist	Yes / No/NA		
		Title in line with methodology?	No		
		Data unit correctly expressed?	No		
		Appropriate description of parameter?	No		
		Source clearly referenced?	No		
		Correct value provided?	No		
		Has this value been verified?	No		
		Choice of data correctly justified?	No		
		Measurement method correctly described?	No		

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		Please refer to CAR 24 above																				
E.6.3.2.7. Parameter Title: emission coefficient of each fuel	1, 3	<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>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table> <p>Comments: Please refer to CAR 24 above</p>	Data Checklist	Yes / No/NA	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	CAR	<input checked="" type="checkbox"/>
Data Checklist	Yes / No/NA																					
Title in line with methodology?	No																					
Data unit correctly expressed?	No																					
Appropriate description of parameter?	No																					
Source clearly referenced?	No																					
Correct value provided?	No																					
Has this value been verified?	No																					
Choice of data correctly justified?	No																					
Measurement method correctly described?	No																					
E.6.3.2.8. Parameter Title: electricity generation of each power source	1, 3	<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>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr></table>	Data Checklist	Yes / No/NA	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	CAR	<input checked="" type="checkbox"/>						
Data Checklist	Yes / No/NA																					
Title in line with methodology?	No																					
Data unit correctly expressed?	No																					
Appropriate description of parameter?	No																					
Source clearly referenced?	No																					
Correct value provided?	No																					

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		Has this value been verified?	No																				
		Choice of data correctly justified?	No																				
		Measurement method correctly described?	No																				
		Comments: Please refer to CAR 24 above																					
E.6.3.2.9. Parameter Title: fraction of time with low costs /must run plant at the margin (for simple adjusted OM only)	1, 3	<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>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table> Comments: Please refer to CAR 24 above		Data Checklist	Yes / No/NA	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	CAR	☑
Data Checklist	Yes / No/NA																						
Title in line with methodology?	No																						
Data unit correctly expressed?	No																						
Appropriate description of parameter?	No																						
Source clearly referenced?	No																						
Correct value provided?	No																						
Has this value been verified?	No																						
Choice of data correctly justified?	No																						
Measurement method correctly described?	No																						
E.6.3.2.10. Parameter Title: electricity imports	1, 3	<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>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr></table>		Data Checklist	Yes / No/NA	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	CAR	☑										
Data Checklist	Yes / No/NA																						
Title in line with methodology?	No																						
Data unit correctly expressed?	No																						
Appropriate description of parameter?	No																						

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS		GSP	Final																		
		Source clearly referenced?	No																				
		Correct value provided?	No																				
		Has this value been verified?	No																				
		Choice of data correctly justified?	No																				
		Measurement method correctly described?	No																				
		Comments: Please refer to CAR 24 above																					
E.6.3.2.11.Parameter Title: CO ₂ emission coefficient of fuels used in connected grids	1, 3	<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>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Choice of data correctly justified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr></table> Comments: Please refer to CAR 24 above		Data Checklist	Yes / No/NA	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided?	No	Has this value been verified?	No	Choice of data correctly justified?	No	Measurement method correctly described?	No	CAR	☑
Data Checklist	Yes / No/NA																						
Title in line with methodology?	No																						
Data unit correctly expressed?	No																						
Appropriate description of parameter?	No																						
Source clearly referenced?	No																						
Correct value provided?	No																						
Has this value been verified?	No																						
Choice of data correctly justified?	No																						
Measurement method correctly described?	No																						
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	1, 3	Yes		☑	☑																		

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final																								
chapter B.7.1 considered to be complete with regard to the requirements of the applied methodology?																												
E.7.1.2. $EG_{BL,y}$ Energy baseline in year y	1, 3	<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>No</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>No</td></tr><tr><td>Correct reference to standards?</td><td>No</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> <p><u>Corrective Action Request No.25.</u> Please correct the parameter and data unit as per the methodology to $EG_{BL,y}$ & <i>KWh respectively</i>. As per the methodology this parameter needs to be directly monitored and can't be calculated, please incorporate the same in PoA-DD.</p> <p><u>Clarification Request No. 14.</u> Please specify the measurement and recording frequency of the parameter ($EG_{BL,y}$)as per the methodology. Also include standard QA/QC measures, "Measurement results shall be cross-checked with records for sold electricity", as mentioned in the methodology.</p> <p><u>Clarification Request No. 15.</u> Please mention in section E.7.1 which "recognized standards" would be used for calibration of the energy meter and please define appro-</p>	Monitoring Checklist	Yes / No/NA	Title in line with methodology?	Yes	Data unit correctly expressed?	No	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?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	QA/QC procedures described?	No	QA/QC procedures appropriate?	No	CAR, CR	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No/NA																											
Title in line with methodology?	Yes																											
Data unit correctly expressed?	No																											
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?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											
QA/QC procedures described?	No																											
QA/QC procedures appropriate?	No																											

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CHECKLIST TOPIC / QUESTION	Ref.	COMMENTS	GSP	Final																								
		priately how the accuracy level for parameter $EB_{BL,y}$ would be defined for all CPAs																										
E.7.1.3.Amount of biomass input (if applicable)	1, 3	NA <div><table><tr><th>Monitoring Checklist</th><th>Yes / No/NA</th></tr><tr><td>Title in line with methodology?</td><td>NA</td></tr><tr><td>Data unit correctly expressed?</td><td>NA</td></tr><tr><td>Appropriate description of parameter?</td><td>NA</td></tr><tr><td>Source clearly referenced?</td><td>NA</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>NA</td></tr><tr><td>QA/QC procedures described?</td><td>NA</td></tr><tr><td>QA/QC procedures appropriate?</td><td>NA</td></tr></table></div>	Monitoring Checklist	Yes / No/NA	Title in line with methodology?	NA	Data unit correctly expressed?	NA	Appropriate description of parameter?	NA	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?	NA	Indication of accuracy provided?	NA	QA/QC procedures described?	NA	QA/QC procedures appropriate?	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Monitoring Checklist	Yes / No/NA																											
Title in line with methodology?	NA																											
Data unit correctly expressed?	NA																											
Appropriate description of parameter?	NA																											
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?	NA																											
Indication of accuracy provided?	NA																											
QA/QC procedures described?	NA																											
QA/QC procedures appropriate?	NA																											
E.7.1.4.Amount of fossil fuel (if applicable)	1, 3	<div><table><tr><th>Monitoring 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>No</td></tr><tr><td>Appropriate description of parameter?</td><td>No</td></tr><tr><td>Source clearly referenced?</td><td>No</td></tr><tr><td>Correct value provided for estimation?</td><td>No</td></tr><tr><td>Has this value been verified?</td><td>No</td></tr><tr><td>Measurement method correctly described?</td><td>No</td></tr><tr><td>Correct reference to standards?</td><td>No</td></tr><tr><td>Indication of accuracy provided?</td><td>No</td></tr></table></div>	Monitoring Checklist	Yes / No/NA	Title in line with methodology?	No	Data unit correctly expressed?	No	Appropriate description of parameter?	No	Source clearly referenced?	No	Correct value provided for estimation?	No	Has this value been verified?	No	Measurement method correctly described?	No	Correct reference to standards?	No	Indication of accuracy provided?	No	CR	<input checked="" type="checkbox"/>				
Monitoring Checklist	Yes / No/NA																											
Title in line with methodology?	No																											
Data unit correctly expressed?	No																											
Appropriate description of parameter?	No																											
Source clearly referenced?	No																											
Correct value provided for estimation?	No																											
Has this value been verified?	No																											
Measurement method correctly described?	No																											
Correct reference to standards?	No																											
Indication of accuracy provided?	No																											

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		QA/QC procedures described?	No		
		QA/QC procedures appropriate?	No		
		Comments: Please refer to section E.6.1.3			
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	Yes, the operational and management structure has been defined in the PoA-DD. <u>Clarification Request No. 16.</u> Please describe the monitoring plan for CPA without PPA more transparently in section E.7.2. Further please clarify which kind of agreement would be there in case of power export from CPA to small isolated grids <u>Corrective Action Request No.26.</u> Please incorporate the measures to be taken if in case the main meter of any CPA breaks down (section E.7.2 of PoA-DD).		CR, CAR	<input checked="" type="checkbox"/>
E.7.2.2.Are responsibilities and institutional arrangements for data collection and archiving clearly provided?	1, 4	Yes, it has been indicated.		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.7.2.3.Does the monitoring plan provide current good monitoring practice?	1, 4	<u>Clarification Request No. 17.</u> It cannot be verified from the monitoring plan as to how the Emission factor for alternative 2 (computation of weighted average emission factor) would be done ex-post		CR	<input checked="" type="checkbox"/>
E.7.2.4.If applicable: Does annex 4 provide useful information enabling a better understanding of the envisioned monitoring provisions?	1, 4	NA		<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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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)				
E.8.1.1.Is there any indication of a date when the baseline was determined?	1	Yes, the date has been mentioned in the PoA-DD transparently.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.8.1.2.Has dd/mm/yyyy format been used to indicate the date?	1	<u>Corrective Action Request No.27.</u> Please indicate the dd/mm/yyyy format to indicate the date of base-line determination.	CAR	<input checked="" type="checkbox"/>
E.8.1.3.Is this consistent with the time line of the PoA-DD history?	1	Yes, it is validated to be in consistent with the time line of the PoA-DD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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, the information of responsible entity is provided in PoA-DD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
E.8.1.5.Is information provided whether this person / entity is also considered a project participant?	1	Please refer to CAR 22 above	CAR	<input checked="" type="checkbox"/>
F. Annexes 1 – 4				
F.1.Annex 1: Contact Information				
F.1.1. Is the information provided consistent with the one given under section A.3?	1	Yes, the information presented in section A.3 is validated to be consistent with other chapters of the PoA-DD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.1.2. Is the information on all private participants and directly involved Parties presented?	1	Yes, all the required information has been presented in the PoA-DD.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.2.Annex 2: Information regarding public funding				
F.2.1. Is the information provided on the inclusion of public funding (if any) in consis-	1	It has been indicated that no public funding has been received for the	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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tency with the actual situation presented by the project participants?		proposed PoA.		
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	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3. Annex 3: Baseline information				
F.3.1. If additional background information on baseline data is provided: Is this information consistent with data presented by other sections of the PDD?	1	Detailed information on the calculation of emission factor has been presented for Sumatera & Jamali island. Source of the input parameters have also been validated.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.2. Is the data provided verifiable? Has sufficient evidence been provided to the validation team?	1	Yes, the provided data in this section has been verified from the DNA website.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.3.3. Does the additional information substantiate / support statements given in other sections of the PDD?	1	Yes, the provided information gives detailed calculation approach for grid emission factor.	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4. Annex 4: Monitoring information				
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	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4.2. Is the information provided verifiable? Has sufficient evidence been provided to the validation team?	1	NA	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
F.4.3. Do the additional information and / or documented procedures substantiate /	1	No additional information is provided in Annex-4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

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support statements given in other sections of the PoA-DD?				

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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
<p><u>Clarification Request No. 1.</u></p> <p>Please provide all the documents quoted in PoA-DD under policy/measure (translated to English where required). Also provide any documentary evidence which refers to the collaboration between PT.HPI, GTZ and IIEE as stated in the PoA-DD. Further please clarify in PoA-DD whether CPA/PoA would receive any funds from GTZ.</p>	A.2.2	<p>Documentation quoted in PoA-DD under policy/measure have been submitted as following:</p> <ol style="list-style-type: none"> 1. PLN National Generation Development Plan year 2009-2018 (Indonesian: Rencana Usaha Penyediaan Tenaga Listrik PT. PLN Persero tahun 2009 s.d. 2018); 2. PLN Annual Report 2002 (link: http://www.pln.co.id/pro00/images/stories/annual_report/Annual%20Report%202002.pdf); 3. PLN Annual Report 2008 (link: http://www.pln.co.id/pro00/images/stories/annual_report/Annual%20Report%202008.pdf); 4. The Ministry of Energy and Mineral Resources Decree No. 1122 K issued in 2002 about The Guidance of Small-Scattered Scale Electricity Generation (link: http://www.esdm.go.id/prokum/kepmen/2002/kepmen-1122-2002.pdf); 5. The Ministry of Energy and Mineral Resources Regulation No. 02 issued in 2006 about The Electricity Purchase Price by PT. PLN from Small and Medium Renewable Energy Power Plant or electricity excess (link: http://www.esdm.go.id/prokum/permen/2006/permen-esdm-02-2006.pdf); 6. The Ministry of Energy and Mineral Resources Regulation No. 31 issued in 2009 about The Guidance of Electricity Purchase Price by PT. PLN for Coopera- 	<p><input checked="" type="checkbox"/></p> <p>Relevant sources for data mentioned in the PoA-DD has been provided. However, weblinks mentioned in point 1 to 3 in response cannot be accessed. Please update the PoA-DD with the correct weblink.</p> <p>For point 4 to 6 in response: Documents are in Bahasa, hence we cannot cross check these sources. Please submit us the English version or atleast the summery of the referred documents in English.</p> <p>Copy of agreement between southpole & GTZ has not been attached with the response. Please provide us the copy of the agreement. As requested before, also provide some documentary evidence to justify the involvement of IIEE as stated in PoA-DD.</p>

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		<p>tive or Other Public/Private Entities (link: http://www.esdm.go.id/prokum/permen/2009/Permen%20ESDM%2031%202009.pdf);</p> <p>7. Public-Private Partnership agreement between South Pole Carbon Asset Management Ltd. and GTZ;</p> <p>8. Public-Private Partnership Agreement between IIEE and GTZ.</p> <p>As per PPP agreement between South Pole CAM and GTZ, the PoA development fund would only cover the proposed SSC-PoA development while each SSC-CPA included in the SSC-PoA will not be funded by GTZ under the PPP agreement. The explanation about GTZ fund has been added in the PoA-DD.</p> <p>2nd response:</p> <p>The weblink for point 1 is not accessible anymore, thus soft copy of the document has been submitted to DOE. While for weblink point 2 and 3 have been updated refer to PT. PLN's new website. Soft copy of Annual Reports 2002 and 2008 have also been submitted to DOE in case the weblinks are not accessible in the future. The PoADD has also been revised accordingly.</p> <p>The soft copy of Ministry of Energy and Mineral Resources Decrees and Regulations in points 4, 5, and 6 including their English translation or summary have been submitted to DOE.</p> <p>Copies of agreements between SP & GTZ and IIEE & GTZ in points 7 and 8 have been submitted to DOE.</p>	<p>Second response:</p> <p>1. PLN National Generation Development Plan year 2009-2018 is in Bahasa, please send us the relevant translated page.</p> <p>All other referred documents from point 2 to 8 has been submitted & verified. PoA-DD has also been updated to include the correct weblink.</p> <p>Conclusion:</p> <p>PLN National Generation Development Plan year 2009-2018 has been submitted and validated.</p> <p>All the requested evidence to prove the framework & implementation of PoA have been submitted and validated.</p> <p>Hence it is acceptable and this issue is closed.</p>
<p>Clarification Request No. 2.</p> <p>Submit a valid confirmation that the proposed PoA is a voluntary action by the coordinat-</p>	A.2.5	<p>A confirmation from the Indonesian DNA that the coordinating entity participated voluntarily in the proposed PoA development inexplicitly shown from the statement "The Republic of Indonesia (that includes all stakeholders in</p>	<p>☑</p> <p>Please provide us the copy of LoA from the Indonesian DNA to substantiate the voluntary</p>

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ing/managing entity (DNA approval).		Indonesia e.g. the PoA coordinating entity) participates voluntarily in the Clean Development Mechanism". Therefore, the LoA from the Indonesian DNA could be substantiated a valid confirmation for the voluntary action by the coordinating entity from the DNA. 2nd response: LoA from the Indonesian DNA has been submitted.	action by the managing entity. Second response: LoA from the Host country has been submitted and verified. Hence it is acceptable and this issue is closed.
<u>Clarification Request No. 3.</u> Letter of authorization & letter of approval needs to be provided from Indonesian DNA and Swiss DNA respectively.	A.3.2	Letters of authorization and approval from Indonesian DNA and Swiss DNA have been submitted respectively.	<input checked="" type="checkbox"/> Letter of authorization & approval has not been submitted yet. Second response: LoA from the respective country has been submitted and verified. Hence it is acceptable and this issue is closed.
<u>Clarification Request No. 4.</u> Please provide confirmation of the incorporation of PT.HPI in Indonesia as per local regulations. Also confirm the date of such incorporation in the PDD.	A.3.5	In order to confirm that PT. HPI's incorporation is legal under the local regulations, the PT. HPI's company registry has been submitted. In addition to that, the date of PT. HPI's incorporation has been added in the PoA-DD.	<input checked="" type="checkbox"/> PT. HPI's company registry has not been submitted to the audit team. Please provide us the copy of the same. Second response: Company registration certificate has been submitted. It can be now verified that PT HPI I a

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			registered legal entity. Hence it is acceptable and this issue is closed.
<u>Corrective Action Request No.1.</u> Please include the Geographical Map and coordinate range of the Host country in section A.4.1.2	A.4.1.1	The Geographical Map and coordinate range of the Host country in section A.4.1.2 have been added in the PoA-DD.	<input checked="" type="checkbox"/> Geographical map & coordinate range has been updated in the PoA-DD.
<u>Corrective Action Request No.2.</u> Although It has been indicated in section A.2 of the PDD that there are no mandatory policies or regulations for the generating Hydro Power in the region. However, please include the information on all applicable national and/or sectoral policies and regulations which are relevant to the PoA.	A.4.1.2	Information on all applicable national and/or sectoral policies and regulations related to hydropower plant development in Indonesia are as following: <ul style="list-style-type: none"> The Law of the Republic of Indonesia No. 30 issued in 2009: The Electrical Law (Indonesian: Ketenagalistrikan) (link: http://www.esdm.go.id/prokum/uu/2009/UU%2030%202009.pdf); The Ministry of Energy and Mineral Resources Decree No. 1122K issued in 2002: The Development of Scattered Small Scale Renewable Energy Power Plant (Indonesian: Pedoman Pengusahaan Pembangkit Tenaga Listrik Skala Kecil Tersebar) (link: http://www.esdm.go.id/prokum/kepmen/2002/kepmen-1122-2002.pdf)—REPLACED; The Ministry of Energy and Mineral Resources Regulation No. 02 issued in 2006: The Development of Medium Scale Renewable Energy Power Plant (Indonesian: Pengusahaan Pembangkit Listrik Tenaga Energi Terbarukan Skala Menengah) (link: http://www.esdm.go.id/prokum/permen/2006/permen-esdm-02-2006.pdf)—REPLACED; The Ministry of Energy and Mineral Resources Regulation No. 31 issued in 2009: The Electricity Purchase 	<input checked="" type="checkbox"/> All the applicable laws have been identified by the ME, however please provide us with the soft copy or necessary web link of the same. <u>Second response:</u> Weblinks have been corrected & replaced, and all the existing identified laws have been verified. Hence it is acceptable and this issue is closed.

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		<p>Price by PT. PLN from Power Plants Utilizing Small or Medium Scale Renewable Energy or Electricity Excess (Indonesian: Harga Pembelian Tenaga Listrik Oleh PT. PLN (Persero) Dari Pembangkit Tenaga Listrik Yang Menggunakan Energi Terbarukan Skala Kecil dan Menengah Atau Kelebihan Listrik) (link: http://www.esdm.go.id/prokum/permen/2009/Permen%20ESDM%2031%202009.pdf);</p> <ul style="list-style-type: none"> The Ministry of Environment Regulation No. 11 issued in 2006: Project Activity that Must Have Environmental Impact Assessment (Indonesian: Jenis Rencana Usaha dan/Atau Kegiatan yang Wajib Dilengkapi Dengan Analisis Mengenai Dampak Lingkungan Hidup) (link: http://www.menlh.go.id/Peraturan/PERMEN/PermenLH11-2006.pdf). <p>These laws and regulations are expected to change during the lifetime of the PoA. CPA should be therefore in line with the laws and regulations at the time of inclusion and not with laws and regulations at the time of validation. As a consequence, the consistency check with laws and regulations is to be done at CPA level.</p> <p>2nd response:</p> <p>Weblinks of all applicable national and/or sectoral policies and regulations in Indonesia mentioned above have been added. In case the weblinks are not accessible in the future, all regulations soft copies have been submitted to DOE.</p>	
<p><u>Corrective Action Request No.3.</u></p> <p>Please describe appropriately all the relevant project details in section A.4, A.4.2 and</p>	A.4.2.1	<p>Relevant project details such as type of technology limitation have been added in section A.4.2.1 of the PoA-DD.</p>	<p><input checked="" type="checkbox"/></p> <p>Appropriate description has been added in section A.4.2 &</p>

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A.4.2.1		<p>2nd response:</p> <p>Technical description of the small-scale programme has been included section A.4 of the PoA-DD.</p>	<p>A.4.2.1.</p> <p>The PoA-DD format by UNFCCC provides an indication to fill appropriate details on section A.4 as well. Please update the PoA-DD to include the same.</p> <p><u>Second response:</u></p> <p>PoA-DD has been revised & updated to include details on technology for CPAs. Hence it is acceptable and this issue is closed.</p>
<p><u>Corrective Action Request No.4.</u></p> <p>Please indicate the type and category of the project activity in section A.4.2.1 of the PoA-DD.</p>	A.4.2.2	The type and category of the project activity has been added in section A.4.2.1 of the PoA-DD.	<p>☑</p> <p>PoA-DD has been updated to include the type & category of the project activity. Hence it is acceptable and this issue is closed.</p>
<p><u>Corrective Action Request No.5.</u></p> <p>Please indicate whether the implementation of the project activity require any technology transfer from Annex-I-countries to the host country.</p>	A.4.2.4	The implementation of every SSC-CPA can require technology transfer from Annex-I countries, which will depend on the technology used in the SSC-CPA. The description of technology transfer possibility has been added in section A.4.2 of the PoA-DD.	<p>☑</p> <p>It has now been indicated by the ME that the CPA might involve the possibility of technology transfer from Annex-1 countries. Hence it is acceptable and this issue is closed.</p>

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<u>Clarification Request No. 5.</u> Project implementation schedule needs to be submitted.	A.4.2.11	<p>Project implementation schedule showing prior consideration of the proposed SSC-PoA until its development is provided in section A.4.3 of the PoA-DD.</p> <p>2nd response:</p> <p>Step 1 (Proposal for a PPP submitted to GTZ), step 4 (PPP signed contract between SP and GTZ), and step 6 (PT. HPI company registration) in the timeline in section A.4.3 of the PoA-DD have been submitted to DOE.</p>	<p><input checked="" type="checkbox"/></p> <p>Project implementation chronology has been included in the PoA-DD. Please provide us the documents for step 1, 4 & 6 of the PoA timeline mentioned in the PoA-DD.</p> <p><u>Second response:</u></p> <p>All the evidence for implementation schedule of this PoA has been submitted and has been verified. Hence it is acceptable and this issue is closed.</p>
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<p><u>Corrective Action Request No.6.</u></p> <p>Please provide justification to substantiate that this voluntary coordinated action would not be implemented in the absence of the PoA. A separate time line for activities related to project implementation and CDM related activities needs to be incorporated.</p>	<p>A.4.3.2</p>	<p>As per EB54 paragraph 44, additionality is now provided at PoA level and retested at CPA level. In section A.4.3, the PPs first demonstrate that the PoA is voluntary coordinated action and will not occur in the absence of the CDM because of lack of prevailing practice and investment barriers. At least one of these two barriers is to be retested at CPA level (see section E.5.1 and E.5.2).</p> <p>2nd response: Supporting documents for footnote 13-19 have been submitted to DOE.</p> <p>As described in the PoA-DD, lack of equipment or supplier in Indonesia was justified from GTZ experiences in Indonesia as described in the Participatory Capacity Needs Assessment paper that was an evaluation of GTZ works in the field of micro/mini hydro in Indonesia. In addition to that, the World Bank has also the same opinion as described in the Promoting Environmentally Sound and Renewable Energy Resources through:</p> <p>Integrated Microhydro Development and Application Program (IMIDAP) paper page 9 (link: http://www.undp.or.id/archives/prodoc/ProDoc-IMIDAP.pdf), which why World Bank is cooperating with the Government of Indonesia through this program to cope barriers in micro/mini hydro development in Indonesia. As for financial barrier, it is specific to hydro IPPs, which has been clarified in the PoA-DD. Furthermore, Figure 2 describes total PLN's generation costs (renewable and non-renewable) vs revenue in different regions in Indonesia as described in the Indonesia Energy Assessment paper page 22.</p> <p>A justification of most installed hydro power plant belong to PT. PLN and only small numbers are IPPs has been added in the PoA-DD referred to "Development of Mini/Micro Hydro Power Plant For Rural Electricity in Indonesia" written by Sarwono Hardjomuljadi and Sriyono D. Siswoyo.</p>	<p><input checked="" type="checkbox"/></p> <p>It has been clarified by the ME that there are no existing rules or obligation to implement this PoA.</p> <p>Please provide the supporting documents for footnote 13, 14, 15, 16 of PoA-DD. Also justify how there is lack of equipment or supplier in Indonesia.</p> <p>As per section A.2 of PoA-DD, there is 3,504 MW of hydro power installed in Indonesia, please provide appropriate evidences to justify that most of the installed capacity belong to PT PLN with only 12 IPP installed hydro power plant. PDD of Ranteballa mini hydro project cannot be accepted as the source of this information because this project is still under validation.</p> <p>For financial barrier, it cannot be verified whether the justification in PoA-DD applies only to Hydro power plants or is generalized for power generation. Further, also clarify whether figure 2 is cost of service for only hydro power generation projects?</p>
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			<p><u>Second response:</u></p> <p>Justification for lack of equipment & supplier has been verified from “Participatory Capacity Needs Assessment in the Sub-sector of Micro/Mini Hydro-power in Indonesia. Axel Biegert, April 2010” , “Indonesia Energy Assessment, USAID, November 2008”.</p> <p>The list of existing mini hydro power plants has been verified from “Development of Mini/Micro Hydro Power Plant For Rural Electricity in Indonesia, Sarwono Hardjomuljadi and Sriyono D. Siswoyo, February 2008”, it can also be verified that these existing hydro power plants are dominated by PLN.</p> <p>Appropriate documentary evidences has been obtained & verified to ensure the existence of prevailing practice & financial barrier. Further, investment analysis of each CPA would be verified during inclusion of the same to ensure additionality at CPA level.</p>
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<p><u>Corrective Action Request No.7.</u></p> <p>As stated in the PoA-DD, please include 'record of technical specification' in the provided spreadsheet of 'record keeping system' (only installed capacity has been included as per PoA-DD)</p>	<p>A.4.4.2</p>	<p>1st response:</p> <p>A revised record keeping system with basic information (location, UNFCCC ID, size, technology type) of all hydropower projects in Indonesia has been provided. The 'record of technical specification' is changed to technology type employed in each hydropower plant participating in the proposed SSC-PoA.</p> <p>2nd response:</p> <p>The PPs received a request for review for another PoA addressing the sampling procedures. This PoA under request for review has applied similar sampling procedures as the underlying PoA. Due to this fact, PPs decided to further elaborate the sampling plan. The request for review referred to EB 50 Annex 30 in particular paragraph 33. Meanwhile a new sampling standard got released where as EB 65, Annex 2, Appendix 3 corresponds to EB 50, Annex 30, Paragraph 33 of the old guideline, The new paragraph acts as basis for the revision in the PoA-DD section A.4.4.2 and should provide a better understanding of the sampling plan applied for CPA level sampling.</p> <p>3rd response:</p> <p>As for now, General Guidelines for Sampling as approved in EB 50, Annex 30, address in detail sampling for parameters. However, clear guidance on CPA level sampling is missing. The PoA-DD intends to describe a sampling procedure for CPAs within a PoA.</p> <p>As a consequence and to avoid a potential request for review, sampling of CPAs is now given as an option that</p>	<p>Spreadsheet 'record keeping system' has been updated to include technology type as well.</p> <p><u>Second response:</u></p> <p>Step 4(c) of section A.4.4.2 of the PoA-DD indicates that sampling size will be defined to meet the 90/10 confidence/precision level, however para 19 EB 65 annex 2 specifies the sample size to be 95/10 confidence/precision level. Please follow EB 65 annex-2 to develop the sampling plan for PoA..</p> <p><u>Third response:</u></p> <p>Revised PoA-DD has been validated to have no sampling process anymore. Hence all the CPAs shall be verified without any sampling, which is deemed appropriate for the PoA.</p> <p>It is acceptable and this issue is closed.</p>
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		<p>can be applied whenever a CPA sampling guideline/standard will be released. As long no CPA level sampling guideline/standard exist, the PoA will not apply CPA level sampling, until such sampling guideline/standard is adopted, and a sampling approach which is line with such guideline/standard is validated by a DOE and approved by the UNFCCC.</p> <p>Site visits are done if deemed necessary and in line with the VVM and VVS.</p>	
<p><u>Corrective Action Request No.8.</u></p> <p>Please include all the criteria for de-bundling check in PoA-DD (section A.4.4.1) as mentioned in “Guidelines on assessment of de-bundling for SSC project activities”, EB 47 annex 32.</p>	A.4.4.4	<p>The criteria for de-bundling check as per “Guidelines on assessment of de-bundling for SSC project activities”, EB 54 annex 13 have been added in section A.4.4.1 of the PoA-DD.</p>	<p><input checked="" type="checkbox"/></p> <p>PoA-DD has been updated in include the criteria from latest de-bundling guideline.</p> <p>Hence it is acceptable and this issue is closed.</p>
<p><u>Corrective Action Request No.9.</u></p> <p>Please use “General Guidelines for sampling and surveys for small scale CDM project activities”, EB50 annex 30, for proposing a sound sampling method in PoA-DD for verification</p>	A.4.4.6	<p>The sampling method for verification is based on the stratified random sample methodology described in “General Guidelines for sampling and surveys for small scale CDM project activities”, EB50 annex 30. The PoA-DD has been modified accordingly.</p>	<p><input checked="" type="checkbox"/></p> <p>Sampling method proposed by the client is acceptable. However as per EB 55 annex 38, CME would have to update the sampling plan during verification in line with the available EB guideline on the same.</p> <p>The final PoA-DD version has been validated to have no sampling process anymore. Hence all the CPAs shall be verified without any sampling, which is deemed conservative for the PoA.</p>

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			It is acceptable and this issue is closed.
<p><u>Clarification Request No. 6.</u></p> <p>Please define the categories in sampling method more transparently. The eligibility criteria for including CPA indicates that power is exported to grid, however category II includes Hydropower plants without PPA, therefore please clarify how the export of power from the CPA can be ensured.</p>	A.4.4.6	<p>The choice of the stratum has been updated to take into account the methodology revision rejection associated to the PoA. The PoA is not anymore targeting off-grid projects. The PPs propose therefore new stratum for sampling to differentiate SSC-CPA with different monitoring plans (with or without diesel engines).</p> <p>2nd response:</p> <p>Choice whether to include each SSC-CPA into the sampling group or to verify it individually will be determined on case by case basis before each verification. Indeed it is not possible to predict ex-ante how the SSC-CPAs that need to be verified individually or not will be chosen. This will depend on many factors that cannot be anticipated.</p> <p>As a rule, individual verification will occur:</p> <ol style="list-style-type: none"> 1. For the first verification of a SSC-CPA 2. Following some exceptional circumstances (SSC-CPAs being damaged, change of operator...) 3. If required by the carbon credits buyer of the SSC-CPA 	<p><input checked="" type="checkbox"/></p> <p>PoA-DD has been updated to new category for sampling & it doesn't involve grid & off-grid category anymore.</p> <p>As per section A.4.4.2, ME shall identify all the SSC-CPA who wants to be individually verified. However, it cannot be verified from the PoA-DD as to how the ME shall identify these CPAs for individual verification. Please document the criteria to be classified as CPA for individual verification.</p> <p>Second response:</p> <p>PoA-DD has been updated to include transparent criteria for verification of CPA.</p> <p>The final PoA-DD version has been validated to have no sampling process anymore. Hence all the CPAs shall be verified without any sampling, which is deemed conservative for the PoA.</p> <p>It is acceptable and this issue is</p>

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			closed.
<u>Corrective Action Request No.10.</u> Please indicate in the PoA-DD whether ME intends to do sampling within the CPA for verification (if in case there are many small hydro power plants within one CPA)	A.4.4.6	Sampling will not be allowed within one CPA. Point has been added in section A.4.4.2 of the PoA-DD	<input checked="" type="checkbox"/> It has been clarified by the ME & has also been included in the PoA-DD that no sampling shall be done within the CPA.
<u>Corrective Action Request No.11.</u> As each CPA is expected to have different characteristics and verification periods, please 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.	A.4.4.7	Verification status of each CPA included in the PoA will be reported in the record keeping system. The record keeping system and monitoring reports will be made available to DOE at any time on request.	<input checked="" type="checkbox"/> Recording keeping system has been updated to keep the verification status of all the CPAs.
<u>Clarification Request No. 7.</u> EB47 para72 simply permits the PoA to include CPA with start date prior to the commencement of validation of PoA. Please clarify on what basis starting date of the PoA has been chosen as 22 nd June 2007. Further please provide the list of specific CPAs under this PoA having start date prior to the validation of PoA (if any) to us and UNFCCC secretariat before 31 st January'2010.	B.1.1	The choice of the starting date of the PoA has been initially misunderstood by the PPs since it is not defined by the UNFCCC (this is not part of the glossary of CDM terms). The PPs have therefore added to the PoA-DD a project timeline to determine the start of real action of the PoA which will be considered as "PoA project start date" 2nd response: As refer to CR 5, all documentation has been submitted to DOE.	<input checked="" type="checkbox"/> PoA-DD timeline has been added in section A.4.3, however please refer to CR 5. <u>Second response:</u> All the evidence for the timeline presented in PoA-DD has been submitted and verified.
<u>Clarification Request No. 8.</u> Please provide us the Environment Decree No.11 discussed in section C.3 from any publicly available domain or certified document	C.3.1	The Environmental Regulation discussed in section C.3 has been submitted. In addition to that, the link of the environmental regulation has been added in the PoA-DD and CPA-DD. 2nd response:	<input checked="" type="checkbox"/> The weblink provided in the PoA-DD is not working. Please update the correct weblink in the PoA-DD.

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		The correct weblink has been added in section C.3 of the PoA-DD. In addition to the updated weblink, soft copy of The Environmental Regulation has also been submitted to DOE in case the weblink is not accessible in the future.	<u>Second response:</u> PoA-DD has been updated to include the correct weblink for Environment Decree No.11. The English translation of the same has also been submitted.
<u>Clarification Request No. 9.</u> Please clarify and include in PoA-DD whether stakeholder consultation process is required by regulation/laws in the host country. If yes, please document how this stakeholder meeting has been carried out as per the regulations/laws.	D.2.3	No stakeholder consultation at PoA level is required by laws/regulations. However, in order to receive Letter of Approval/Letter of Authorization from the Indonesian DNA, documentation e.g. Minutes of Meeting of stakeholder consultation must be submitted together with other documentation e.g. Project Design Document, etc. Besides meeting the DNA requirements, the stakeholder consultation organized was also to inform and increase awareness among national stakeholders e.g. national NGOs, government representatives, etc, which mostly resided in Jakarta. At that time, the Gold Standard rules were adopted to ensure that sustainable criteria defined by the GS were properly addressed even before the GS provided full overview of requirements registering CDM PoA under the GS.	<input checked="" type="checkbox"/> It has been clarified by the ME that stakeholder meeting is required by DNA to receiving LoA. Adherence to host country rules for stakeholder can be verified from the LoA of the project.
<u>Corrective Action Request No.12.</u> Please correct the Applicability criteria (Hydro power plants with reservoirs that satisfy..) as per the methodology, AMS-I.D. Further please justify how eligibility criteria no. (vi) mentioned in PoA-DD for inclusion of CPA, which provides provision for inclusion of CPA with power density less than 4 W/m ² , satisfies this applicability criteria.	E.2.2.2	In the seek of simplicity and sustainability, the eligibility criteria " <i>not result in the construction of new reservoirs or in an increase in the capacity of existing reservoirs where the power density of the power plant is less than 4 W/m²</i> " is changed to " <i>not involve reservoirs where the power density of the power plant is less than 10 W/m²</i> "	<input checked="" type="checkbox"/> Eligibility criteria (vi) has been removed & it has been updated to include that CPAs cannot be capacity addition or retrofit project activity.
<u>Corrective Action Request No.13.</u> Please discuss in the PoA-DD section E.2	E.2.2.3	The eligibility limit of 15 MW will be checked based on technical specification of the equipment involved in each	<input checked="" type="checkbox"/> PoA-DD has been updated to

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how the eligibility limit of 15 MW would be taken care in the PoA.		SSC-CPA. 2rd response: EIA conditions mentioned in section C.3. of the PoA-DD have been added in the eligibility criteria section A.4.2.2 of the PoA-DD (relevant document: A8).	include this applicability criterion. Further, this shall be assessed at CPA level while inclusion. Further, please clarify why eligibility criteria has not included conditions for EIA mentioned in chapter C.3 of the PoA-DD. <u>Second response:</u> Revised PoA-DD has been validated to have the eligibility criteria for EIA. Hence it is accepted and this issue is closed.
<u>Corrective Action Request No.14.</u> Please include the applicability criteria given in page 7 of methodology (AMS-I.D), applicable to PoAs using this methodology	E.2.2.7	Eligibility criteria for the proposed SSC-PoA as defined in page 13 of AMS-I.D version 16 have been added to the PoA-DD.	<input checked="" type="checkbox"/> PoA-DD has been updated to include this applicability criterion. It has been verified that the same is not applicable to this PoA. However, in the due course of validation, PoA-DD has been updated to use the applicability criteria from version 17 of AMS-I.D. Hence it is accepted and this issue is closed.
<u>Corrective Action Request No.15.</u> Please include a generalized flow diagram of the project boundary for all CPAs under this POA	E.3.1	Diagram of the project boundary has been added in section E.3 in PoA-DD. 2rd response:	<input checked="" type="checkbox"/> PoA-DD has been updated to include this generalized project boundary for CPAs under this

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		Diagram of the project boundary has been revised to include the substation or interconnection point in section E.3. of PoA-DD.	<p>PoA. The same has been verified as per the applied methodology. Further, please ensure the substation is inside the project boundary to ensure that all losses are accounted in CERs (as indicated in the PoA-DD).</p> <p><u>Second response:</u></p> <p>Revised PoA-DD has been validated to have the substation inside the project boundary. Hence it is accepted and this issue is closed.</p>
<p><u>Corrective Action Request No.16.</u></p> <p>Please update section E.4 of PoA-DD to include discussion about grids where the power from Project activity would be exported in project scenario. Also include 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.</p>	E.4.1	<p>Section E.4 of the PoA-DD has been updated. Baseline scenario is now only determined as per AMS I.D. v16 paragraph 10, at which the electricity generated could only be exported to regional and national grids. Therefore, the discussion of power grids consisting of diesel power plants is not required anymore.</p> <p>The baseline scenario is the generation of electricity in one of the Indonesian grids by its existing power plants, the baseline scenario is therefore in line with all laws and regulations of Indonesia.</p> <p><u>2nd response:</u></p> <p>Regional grid or electricity system definition will be referred to PLN definition of grid that includes interconnected or isolated grids. This grid definition is described in the PLN National Generation Development Plan. The currently valid and latest published PLN National Generation Development Plan is developed for the year 2010-2019 (Indonesian: Rencana Usaha Penyediaan</p>	<p><input checked="" type="checkbox"/></p> <p>PoA-DD has been updated to include the baseline scenario as per applied methodology AMS I.D ver16. Further, please update the PoA-DD to indicate how regional grid is defined and shall be selected during each CPA.</p> <p><u>Second response:</u></p> <p>PLN national generation development plan has been submitted and validated. It has also been clarified that regional grid identified shall be done as per published PLN national generation development plan.</p>

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		Tenaga Listrik PT. PLN Persero tahun 2010 s.d. 2019) (relevant document: A29).	Hence it is acceptable and this issue is closed.
<u>Clarification Request No. 10.</u> Please provide and quote some evidences for substantiating the identified baseline alternative of the project activity in section E.4 of PoA-DD	E.4.5	Baseline scenario is now determined as paragraph 10 of the methodology which does not require the identification of alternatives to the baseline scenario.	<input checked="" type="checkbox"/> PoA-DD has been updated to include the baseline scenario as per applied methodology AMS I.D ver16.
<u>Corrective Action Request No.17.</u> Please use the latest version of the below mentioned guidance in section E.5.2 of the PoA-DD 1. "Guidance on the demonstration assessment of prior consideration of the CDM", latest version is ver03, EB49 2. "Guidance on the assessment of Investment Analysis", latest version is ver03, EB51 Also clarify in PoA-DD whether the CPA-DD would use the same or updated version of tools and guidance during the inclusion of CPA	E.5.2	<p>The latest versions of "Guidance on the demonstration assessment of prior consideration of the CDM" (Version 03, EB 49) and "Guidance on the assessment of Investment Analysis" (Version 05, EB 62) have been used in section E.5.2 of the PoA-DD.</p> <p>The same above tools will be used consistently throughout the proposed PoA crediting period for all SSC-CPAs inclusion. The clarification statement has been added in the PoA-DD.</p> <p>2nd response: Prior consideration update: Most recent "Guidance on the demonstration assessment of prior consideration of the CDM", version 04, has been used in section E.5.2 of the PoA-DD. Revised additionality guideline: PoA-DD has been revised to take into account the revised Guidance on the assessment of investment analysis, version 5. PoA development fund from GIZ: PoA development fund from GIZ (formerly known as GTZ) would only finance PoA development. This fund would not be financed CPA construction activity; therefore it would not have an impact on additionality. In additionality</p>	<input checked="" type="checkbox"/> PoA-DD has been updated to include these criteria to assess the additionality of CPAs. Further, please justify with evidences whether the developmental fund provided for the PoA would have an impact on additionality, if yes, please consider the same in the assessment of CPA additionality. <u>Second response:</u> Contract between GTZ & SP, GTZ & IIEE has been submitted and it was validated that fund from GIZ only covers for development and not for implementation at CPA level. Further in the course of validation latest version of "Guidance on the demonstration assessment of prior consideration of the CDM" & "Guidance on the assessment of Investment Analysis" has been validated to be used by

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		<p>tion to that, PoA development fund covers only the first 3 years period between 2007 until 2010 (relevant document: A10).</p> <p>Correction of first WACC benchmark approach:</p> <p>1. A slight inconsistency in the prescribed pre-tax project WACC benchmark calculation has been spotted. While calculating a pre-tax WACC benchmark from a post-tax WACC benchmark, the tax should not be set to zero in the calculation itself. Rather the whole WACC equation needs to be divided through (1-tax rate) to reflect the actual pre-tax benchmark which would give the following formula:</p> $\text{WACC (pre-tax)} = \text{WACC (post-tax)} / (1 - T)$ <p>2. As a second inconsistency, no country specific differentiation between levered and unlevered Beta has been done in the WACC calculation. To take into account the financial risks of the equity investment in the particular host country, the unlevered Beta has to be adjusted by taking into account the typical Debt/Equity ratio and the underlying taxes of the country the project is situated in. The unlevered Beta has now been taken and adjusted by the following formula to gain the levered Beta:</p> $\text{Beta}_l = \text{Beta}_u (1 + (1 - t) D/E)$ <p>Detailed explanation is given in the WACC calculation spreadsheet.</p> <p>3. The Beta value was taken as an average of 5 years including the investment decision year. In the CPA example this was the year 2007. Beta of 2007 was theoretically not available at the investment decision date. Hence, an average has been taken from 2006 downwards, which results in a more conservative (lower) Beta. As the earliest data from Damadoran came from</p>	<p>the CME.</p> <p>Issues related to benchmark has been appropriately addressed in CR 18 below.</p> <p>Hence it is accepted and this issue is closed.</p>
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		<p>2003, only a four year average was taken for the specific CPA. However, for future CPAs a 5 year average shall be taken.</p> <p>4. The link provided to determine the government bond rate was not working anymore and the applied value was not found anymore. As a consequence, a second specific data source is added next to the Bank of Indonesia, Bloomberg. The first CPA now uses Bloomberg for the government bond rate determination.</p> <p>5. The commercial lending rate, used as cost of debt, shall be in the currency the actual debt is expected. If it can be proven that majority of investment is made in local currency, the commercial lending rate should be denominated in local currency, otherwise in USD. In the specific CPA, the denomination is changed from IDR to USD.</p> <p>Alternative WACC calculation:</p> <p>PPs recognized that their WACC benchmark approach using inter alia Indonesian stock market values is rather a time-consuming benchmark calculation approach. The PoA-DD mentions the eligibility of other approaches to be applied as well but PPs fear that approaches introduced at CPA inclusion will cause time delays due to DOEs liability. Further, introducing new approaches at CPA inclusion will significantly increase the transaction costs due to the additional work from PPs and DOEs side. Applying a new benchmark approach at CPA inclusion level will as well increase the inclusion risks. Hence, considering the goal of lowering transaction costs and decreasing implementation risks for future CPA inclusions a well-defined framework at PoA level is key. Such PoA framework should predefine as much applicable benchmark cases as possible so future CPA inclusions</p>	
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		<p>can be handled smoothly. In light of the above, PPs decided to describe another WACC benchmark calculation approach. The second approach is easier to apply due to its very clear reference sources and will allow a fast and effective CPA inclusion process if applied.</p> <p>Both WACC benchmark calculation approach prescribed in the PoA-DD are following the existing guidelines such as "Guidelines on the Assessment of Investment Analysis" version 5, and are therefore eligible to be applied by any CPA. E.g. paragraph 12 of the above mentioned guideline mentions the need of matching the benchmark with the type of IRR calculated. The IRR to be calculated in each CPA is defined as pre-tax project IRR. Therefore local commercial lending rates and WACC calculations are applicable benchmarks as per paragraph 12 of the above guideline and as defined in the PoA-DD.</p>	
<p><u>Corrective Action Request No.18.</u></p> <p>Please provide appropriate explanation to determine technical lifetime for any CPA (section E.5.2 of PoA-DD)</p>	E.5.3	<p>The technical lifetime of the equipment will be determined as per manufacturer specification or as per expert's opinion, which has been added in section E.5.2 of the PoA-DD.</p>	<p><input checked="" type="checkbox"/></p> <p>PoA-DD has been updated to include the appropriate justification for technical lifetime of the CPA.</p>
<p><u>Clarification Request No. 11.</u></p> <p>Please submit the standard excel worksheet developed for IRR computation as discussed in section E.5.2 of PoA-DD</p>	E.5.4	<p>The standard excel worksheet for IRR computation as discussed in section E.5.2 has been submitted to DOE.</p> <p>2nd response:</p> <p>The blank IRR sheet has been submitted to DOE.</p> <p>Beta is a parameter used to calculate the cost of equity as per CAPM. Cost of equity is then used as a parameter for the WACC that is the mass balance of the cost of equity and cost of debt. According to a communication from Professor Aswath Damodaran, it is more suitable to use levered beta in the context of CAPM. The PoA-DD</p>	<p><input checked="" type="checkbox"/></p> <p>Only IRR sheet for the real case CPA has been submitted, please submit the draft IRR sheet which forms the template for all the CPAs using test-2 under section 5.2 of PoA-DD.</p> <p>A.</p> <p>Further, please clarify whether the CPA shall consider levered or unlevered Beta values for</p>

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		<p>has been corrected accordingly.</p> <p>In the absence of data or for simplification, the PPs can opt for the commercial lending rate.</p>	<p>calculation of WACC.</p> <p>B.</p> <p>Also clarify why doesn't PoA-DD provide an option of choosing benchmarks other than WACC in case of unavailability of data. Investment guideline by EB provides the flexibility of choosing other benchmark like prime lending rate as well.</p> <p><u>Second response:</u></p> <p>IRR template applicable for all the CPAs has been submitted. Further, PoA-DD has also been updated to include commercial lending rate as a backup option in the absence of data for WACC calculation.</p>
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<p><u>Corrective Action Request No.19.</u></p> <p>Please include all the relevant national and sectoral policies in section E.5.2 of PoA-DD</p>	<p>E.5.9</p>	<p>The relevant national and sectoral policies will be checked at CPA level (see CAR 2 for an explanation).</p> <p>2nd response:</p> <p>Appropriate weblinks have updated and soft copies together with their English translation have been submitted to DOE as refer to CAR 2.</p>	<p><input checked="" type="checkbox"/></p> <p>Please provide the appropriate weblinks of the sectoral policies identified above.</p> <p><u>Second response:</u></p> <p>Soft copies of the applicable legal regulations & sectoral policies have been submitted & verified.</p>
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<p><u>Clarification Request No. 12.</u></p> <p>Please include what all measures or evidences can be provided by each CPA to conclude that there is lack of sufficient data to calculate the Combined Margin emission factor.</p>	<p>E.6.1.2</p>	<p>The PPs propose to redesign section E.6 in order to be closer to the methodology employed. Emission factor used for the baseline determination will be calculated using the '<i>Tool to calculate the Emission Factor for an electricity system</i>' version 02.</p> <p>2nd response:</p> <p>Emission factors will be fixed <i>ex-ante</i> for the crediting periods of all CPAs. To determine the EF of a specific CPA we will distinguish two cases:</p> <ul style="list-style-type: none"> - EF from main islands (see list in PDD) are provided at PoA level. - For CPAs located in other islands and for which no calculation is provided in the PoA-DD, EF will be determined in the CPA-DD. <p>3rd response:</p> <p>EF grid calculation for Sumatera and Jamali Grids has been updated using the latest version of "Tool to calculate the emission factor for an electricity system" version 2.2.1.</p> <p>On 19 January 2009, the Indonesian DNA published 2008 Sumatera and Jamali EF grids (relevant document: E7). In 2011, the new 2010 Jamali Grid (relevant document: E18) was published. However, only the final EF grid value is given and no excel sheet calculation is publicly available (it is confirmed by the DNA, relevant document: E20). An application of the newly published value is not possible as underlying calculation steps and the data leading to the result is not known and therefore can not be verified. As a result, the EF grid value for Jamali grid published in 19 January 2009 is the most recent EF grid which allows an application in a CDM project. For Sumatera Grid, no new EF grid value is yet published and therefore the value published on 19 January 2009 is still valid (it is confirmed by the DNA, relevant document: E17). Thus, referring to current condition in Indonesia, PPs decided to use the 2008 Sumatera and Jamali EF Grids as fixed values for the first crediting period of the PoA and will be updated at</p>	<p><input checked="" type="checkbox"/></p> <p>Please clarify whether the ME intends to calculate EF for each CPA & fix it for its respective crediting period?</p> <p>Second response:</p> <p>Please clarify why latest available values for Sumatra & Jawabali EF has not been used (values from 2002 to 2006 have been verified).</p> <p>Also provide us the English translated copy for document E7.</p> <p>Third response:</p> <p>Confirmation from DNA has been provided for the Emission factor used. Further, please update the calculation of emission factor using the latest '<i>Tool to calculate the Emission Factor for an electricity system</i>' ver 2.2.1. Also update the PoA-DD to indicate the detail calculation of emission factor.</p> <p>Fourth response:</p> <p>PoA-DD has been revised to indicate the detailed calculation of emission factor of respective grid. It was validated that emission factor for three grids has</p>
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		<p>renewal of the PoA crediting period. Other grids would need to be calculated at inclusion of a CPA in a grid not connected to Jamali or Sumatera. The applied published DNA EF grid calculation and values have also been used by other registered projects in Sumatera and Java-Bali islands as following:</p> <p>1. Sumatera grid: Asahan 1 Hydroelectric Power Plant 2 x 90 MW (http://cdm.unfccc.int/Projects/DB/RWTUV1289918532.4/view) and Silau-2 small hydro power plant in North Sumatera Province, Indonesia, registration date 1 March 2011 (http://cdm.unfccc.int/Projects/DB/BVQI1269930205.32/view)</p> <p>2. Jamali grid: Wayang Windu Phase 2 Geothermal Power Project, registration date 2 December 2010 (http://cdm.unfccc.int/Projects/DB/TUEV-SUED1260194062.48/view) and Partial Substitution of fossil fuels with biomass at Semen Gresik cement plant in Tuban, registration date 25 February 2011 (http://cdm.unfccc.int/Projects/DB/ERM-CVS1274361514.11/view)</p> <p>Annex 3 of PoA-DD has been revised to include the detail calculation of available emission factor of Sumatera and Jamali Grids.</p> <p>4th response: Detailed calculation for Sumatera and Jamali grids presented in Annex 3 of PoADD is referring to EF grid calculation (reference document no. E8 and E9) published by the Indonesian DNA as per DNA formal decision dated 19 January 2009 (reference document no. E7) and also under following link: http://pasarkarbon.dnpi.go.id/web/index.php/komnasmpb/read/14/faktor-emisi-jaringan-listrik-sumatera-dan-jamali-2008.html</p>	<p>been fixed ex-ante for first crediting period.</p> <p>Relevant confirmation from DNA has also been validated for the emission factor.</p> <p>Further, please clarify/provide the source of detailed information mentioned in the PoA-DD for EF calculation (in annex-3, eg: tables in pg-60, 61, 63, 65, 66).</p> <p>Fifth response: Source of calculation has been submitted with the input values from DNA website. Hence it is acceptable and this issue is closed.</p>
<p>Clarification Request No. 13. Please clarify whether a CPA can have a standby fossil fuel based auxiliary power consumption, if yes, please include the pro-</p>	E.6.1.3	<p>Standby fossil fuel based auxiliary power consumption has been added to the monitoring plan of each CPA and will be counted as the project emission.</p>	<p><input checked="" type="checkbox"/> PoA-DD has been updated to include the project emissions from fossil fuel consumption.</p>

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ject emission parameter for its monitoring			
<u>Corrective Action Request No.20.</u> Since the PoA allows inclusion of 'Hydro power plants with reservoirs', therefore please include project emission as per para 14 of applied AMS.I.D	E.6.1.6	As per methodology requirements, the project emission as per paragraph 14 of AMS I.D. is not considered in the proposed PoA because: <ul style="list-style-type: none"> - the CPA does not consist of a geothermal plant. - the CPA has a reservoir with a power density above 10 W/m². 	<input checked="" type="checkbox"/> PoA-DD has been updated to include the eligibility criteria for reservoir as 10 W/m ² , hence project emissions shall not be accounted as per ACM0002 (has been referred to ACM002 from AMS-I.D for project emissions).
<u>Corrective Action Request No.21.</u> Please include all the formulae required for the determination of emission reduction in section E.6.2. As per the methodology, emission factor for alternative 2 mentioned in section E.6.1 needs to be updated for each verification period, whereas PoA-DD keeps it fixed ex-ante for all the alternatives, please clarify.	E.6.2.1	In the seek of simplification, two alternatives (ex-alternative 2 defined as per paragraph 11b) have been cancelled from the PoA-DD.	<input checked="" type="checkbox"/> Off-grid hydro power plants have been excluded from the PoA-DD as per revised eligibility criteria. All the formulae required to compute emission reduction has also been included in the PoA-DD.
<u>Corrective Action Request No.22.</u> Please provide us the standard Emission reduction calculation sheet which would be used for ER computation from each CPA	E.6.2.2	The standard emission reduction calculation for SSC-CPA has been submitted. 2nd response: ER sheet template has been submitted to DOE.	<input checked="" type="checkbox"/> ER sheet for real case CPA has been submitted, however blank template to use under this PoA is still not submitted to the audit team. <u>Second response:</u> Emission calculation sheet template for CPAs has been provided & verified.
<u>Corrective Action Request No.23.</u> Please correct the data unit of emission fac-	E.6.3.2.2	While applying the tool to determine the Combined emission factor, the way to estimate the EF could	<input checked="" type="checkbox"/>

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<p>tor to tCO₂/kWh as per the methodology. Further please submit the spreadsheet which would be used to calculate the emission factor for each CPA</p>	<p>change from grid/island to the other and it is not clear yet whether the same set of data would be available for each grid/island. Hence, the standardized spreadsheet to calculate the emission factor will not be provided, but will be attached into each CPA as per the latest guidance from the UNFCCC.</p> <p>PPs are expecting more than 80 % of future SSC-CPAs included in the SSC-PoA will be connected to Sumatera, Jamali, Suluttenggo, Sultanbatara, East Kalimantan, West Kalimantan and Central Kalimantan-South Kalimantan Grids. Therefore, PPs inserted fixed emission factor based on DNA published value for those 7 (seven) Grids in section E.6.2 of the PoA-DD.</p> <p>2nd response:</p> <p>The available EF grid values that were defined in the PoA-DD or the future calculated EF grid values will be fixed through one crediting period and all values will be re-checked before renewal of crediting periods. The above statement has been added in section E.6.2 of the PoA-DD.</p>	<p>It is not clear if the EF will be fixed for entire PoA lifecycle or will it be fixed for CPA life time or will it be during first crediting period. Please make a transparent statement with proper justification.</p> <p><u>Second response:</u></p> <p>PoA-DD has been revised to transparently document that EF for the PoA would be fixed ex-ante for each crediting period. The same has been verified, hence closed.</p>
<p><u>Corrective Action Request No.24.</u></p> <p>As mentioned in PoA-DD, “tool to calculate the Emission Factor for an Electricity system” would be used to calculate the emission factor of Grid. Therefore please include the following parameter in section E.6.3 of PoA-DD (depending upon the option chosen for calculation of EF in tool)</p> <ul style="list-style-type: none"> Operating margin (OM) emission factor of the grid Build margin (BM) emission factor of 	<p>E.6.3.2.3</p> <p>Parameters to calculate the Emission Factor have been added in section E.6.2 of the PoA-DD.</p> <p>2nd response:</p> <p>Soft copies of EF calculation for Sumatera and Jamali Grids have been submitted to DOE. While EF calculation for Suluttenggo, Sultanbatara, Kaltim, Kalbar and Kalsulteng grids are not yet available from the Indonesian DNA. However, formal decisions from the Indonesian DNA for all 7 (seven) grids have been submitted to DOE. Sources of all the default EF mentioned in the PoA-DD</p>	<p><input checked="" type="checkbox"/></p> <p>Please include the sources of all the default EF mentioned in the PoA-DD. Also include relevant weblink or soft copy of respective sources.</p> <p><u>Second response:</u></p> <p>Excel spreadsheet for Sumatera & Jamali grid have been submitted & the requested pa-</p>

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<p>the grid</p> <ul style="list-style-type: none"> • fuel consumption of each power source • emission coefficient of each fuel • electricity generation of each power source • fraction of time with low costs /must run plant at the margin (for simple adjusted OM only) • electricity imports • CO₂ emission coefficient of fuels used in connected grids 		has been added in section E.6.2 of the PoA-DD.	parameter in CAR has been included in the PoA-DD.
<p><u>Corrective Action Request No.25.</u></p> <p>Please correct the parameter and data unit as per the methodology to $EG_{BL,y}$ & KWh respectively. As per the methodology this parameter needs to be directly monitored and can't be calculated, please incorporate the same in PoA-DD</p>	E.7.1.2	<p>The corrections have been incorporated.</p> <p>We also invite the DOE to have a look at the "Clarification on the monitoring of net electricity in AMS-I.D." (SSC_371) to see that "The grid electricity export and the import are measured either by two separate energy meters or by a single bidirectional energy meter used for billing purposes and installed at the grid interface."</p> <p>There is therefore no need to modify our monitoring approach.</p> <p>2nd response:</p> <p>In Indonesia, it is a common practice that revenue coming from electricity generation will be derived from revenue meter at an interconnection point or sub-station, which is already considering technical transmission losses from power plant to the interconnection point, if any. This is also clarified in the PPA signed between PT.</p>	<p><input checked="" type="checkbox"/></p> <p>It is acceptable to calculate net electricity export by subtracting the auxiliary consumption from the gross generation. However, please justify how the technical losses in transmission shall be considered. Also incorporate the same in PoA-DD.</p> <p><u>Second response:</u></p> <p>PoA-DD has been revised to include the details on the location of energy meter for CPAs, the same is verified & deemed realistic, hence accepted.</p>

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		<p>PLN and project owner.</p> <p>An additional explanation of where net electricity generation being recorded has been included under $EG_{BL,y}$ in section E.7.1 of the PoA-DD.</p>	
<p>Clarification Request No. 14.</p> <p>Please specify the measurement and recording frequency of the parameter ($EG_{BL,y}$) as per the methodology. Also include standard QA/QC measures, "Measurement results shall be cross-checked with records for sold electricity", as mentioned in the methodology</p>	E.7.1.2	<p>The net electricity production will be monitored continuously and sales receipt will be cross-checked with regular monthly production reports.</p> <p>These points have been added to the PoA-DD.</p> <p>2nd response:</p> <p>Additional explanation of hourly recording has been included under $EG_{BL,y}$ in section E.7.1 of the PoA-DD.</p>	<p><input checked="" type="checkbox"/></p> <p>As per applied methodology, please update section E.7.1 to indicate hourly recording for $EG_{BL,y}$.</p> <p>Section B.7.2 has been updated to include QA/QC measure.</p> <p>Second response:</p> <p>PoA-DD has been revised & verified to include hourly recording frequency.</p>
<p>Clarification Request No. 15.</p> <p>Please mention in section E.7.1 which "recognized standards" would be used for calibration of the energy meter and please define appropriately how the accuracy level for parameter $EB_{BL,y}$ would be defined for all CPAs</p>	E.7.1.2	<p>A recognized standard in Indonesia is national standard described under Government of Indonesia Law no. 2 issued in 1981 about legal metrology. The Law has been submitted to DOE.</p> <p>While for the level of accuracy will be defined by PT. PLN if not regulated by regulation.</p>	<p><input checked="" type="checkbox"/></p> <p>Please provide us with the copy of 'Government of Indonesia no. 2' referred in the response.</p> <p>Second response:</p> <p>Copy of 'Legal metrology, law of the republic of Indonesia' has been submitted & verified.</p>
<p>Clarification Request No. 16.</p> <p>Please describe the monitoring plan for CPA without PPA more transparently in section E.7.2. Further please clarify which kind of agreement would be there in case of power</p>	E.7.2.1	<p>Only CPAs with PPA will be included in the PoA. The option CPA without PPA has been cancelled.</p>	<p><input checked="" type="checkbox"/></p> <p>Eligibility criteria of the PoA-DD has been updated to exclude CPA without PPA.</p>

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export from CPA to small isolated grids			
<u>Corrective Action Request No.26.</u> Please incorporate the measures to be taken if in case the main meter of any CPA breaks down (section E.7.2 of PoA-DD).	E.7.2.1	Measures have been incorporated in the PoA-DD in case the main meter of any CPA breaks down. 2nd response: Measures in case of a revenue meter break down are following: <ol style="list-style-type: none"> 1. The net electricity delivered to the local grid will be derived from a back-up revenue meter at the interconnection point or sub-station. 2. If there is not any back-up revenue meter, there will not be any emission reductions claimable from the SSC-CPAs. 	<input checked="" type="checkbox"/> PoA-DD is still not updated to include backup measures in case main meter of the CPA breaks down. <u>Second response:</u> PoA-DD has been revised to include appropriate measures in case of revenue meter break-down.
<u>Clarification Request No. 17.</u> It cannot be verified from the monitoring plan as to how the Emission factor for alternative 2 (computation of weighted average emission factor) would be done ex-post	E.7.2.3	Alternative 2 has been cancelled from the PoA-DD.	<input checked="" type="checkbox"/> Alternative—2 has been removed & emission factor of the grid shall be calculated as per applied methodology (which refers to tool to calculate emission factor).
<u>Corrective Action Request No.27.</u> Please indicate the dd/mm/yyyy format to indicate the date of baseline determination.	E.8.1.2	Date format has been modified. Whether South Pole is a project participant or not is not a relevant information for section E.8 since this info requested already in section A.3. of the PoA-DD.	<input checked="" type="checkbox"/> Date format has been updated as required.
<u>Clarification Request No. 18.</u> With regards to benchmark approach please clarify the following issues: 1. The PoA-DD leaves the opportunity to apply benchmarks not yet defined at PoA level. Please further define when and under what		1st response: 1. Initially two WACC approaches and a commercial lending rate have been described and proposed as possible benchmarks. Further CPA implementers had the option to choose any suitable benchmark in line with the UNFCCC regulations. The rational behind is the indi-	<input checked="" type="checkbox"/> 1. It has been clarified from the revised PoA-DD that only WACC shall be the benchmark for CPA, however if the IRR is found to be less than commer-

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<p>circumstance such might be the case.</p> <p>2. Pre-tax benchmark means that the return doesn't depend on the taxes paid. In your presented WACC formula the tax plays quite an important role in the WACC value, please clarify.</p> <p>3. Beta in the formula is not valid at the decision date (in your calculation sheet) but calculated as an average for betas from last 4 years. This is not in line with the Guidance that all value should be applicable at the time of decision.</p> <p>4. Small size premium of 5.81% is added in the WACC calculation. This premium is already included into the total risk premium because the total risk premium is taken as a general value for the country. From another side, your small size premium value is for small size market in USA where the scale is different. This needs further clarification.</p>	<p>validity of each investment decision. Depending on the CPA implementer, different benchmarks might be chosen as suitable for a specific project. E.g it could be that a CPA implementer has an internal benchmark applied for several years and he will certainly apply the same for his project to be included in the PoA.</p> <p>As requested in CR 18., PPs are not able to frame out all possibilities of when to apply what benchmark due to the individuality of each investment decision. Said that, the benchmark determination has been restricted.</p> <p>As a first step, CPA implementers will determine the commercial lending rate as a benchmark. As a commercial lending rate is a very conservative benchmark and not applied by actual project developers, CPA implementer might opt to calculate the WACC, as described in the PoA-DD, in a second step. A commercial lending rate will always be below the WACC as it only considers costs of debt and neglects costs of equity. Assuming 100% debt financing to determine a benchmark is therefore not realistic but can be used for simplification purposes.</p> <p>2. While calculating a pre-tax WACC benchmark from a post-tax WACC benchmark, the tax should not be set to zero in the calculation itself. Rather the whole WACC equation needs to be divided through (1-tax rate) to reflect the actual pre-tax benchmark which would give the following formula:</p> $\text{WACC (pre-tax)} = \text{WACC (post-tax)} / (1 - T)$ <p>Please find the following references to underline the equation above:</p> <p>http://www.finance30.com/forum/topics/pretax-cost-of-</p>	<p>cial lending rate at first place then CPA implementer shall not proceed with WACC, it has been accepted because commercial lending rate is a part of WACC calculation.</p> <p>2. Revised formula for calculation of WACC considering tax has been validated and is accepted.</p> <p>3. Beta measures the degree to which any portfolio of stocks is affected as compared to the effect on the market as a whole, and since the total risk premium is referenced yearly, but the beta value is taken from the average of last 4 years as per the PP response (however in the excel sheet this is five years), so risk premium multiplied by beta average is in general not suitable approach but can be accepted for this real case CPA as it is validated to be a conservative approach.</p> <p>However, please provide justification by PPs has not taken beta value applicable at the time of investment decision.</p> <p>The excel sheet use a 5 years average. It is not consistent with</p>
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		<p>debt-post-tax?commentId=1987892%3AComment%3A222937 http://www.zanders.nl/publicaties/documents/WACCpart8.pdf</p> <p>The same has been described in the PoA-DD.</p> <p>3. All values shall be valid and applicable at the investment decision date as per investment guidance. Hence, PP took the average of the betas available previous to the investment decision date. By taking the average instead of the current year Beta value, the long-term view of an investor shall be reflected. Annual fluctuations in the market should be leveled. PPs believe a four-year average of the Beta value will generate a more representative Beta.</p> <p>4. The total risk premium used and multiplied with Beta consists of the country risk and the market risk. Those risk premiums are acting as an adder to the risk free rate. However, those risk premiums do not yet account for the size of a project. E.g. if one invests in a large hydropower project or in a micro-scale hydropower project makes a difference in terms of associated risks as cited below:</p> <p><i>“One of the important characteristics not necessarily captured by the CAPM is what is know as the size effect. The need for this premium when using the CAPM arises because, even after adjusting for the systematic (beta) risk of small stocks, they outperform large stocks. The betas for small companies tend to be greater than those for large companies; however, these higher betas do not account for all of the risks faced by those who invest in</i></p>	<p>your reply to CR 18. Hence the issue is not closed.</p> <p>4. The weblink provided for the input values from Damodaran does not show the value for risk premium indicated in the PoA-DD, please update the PoA-DD to have the correct weblink.</p> <p><u>Second response:</u></p> <p>3. Revised PoA-DD has been validated to have Beta value at the time of investment decision which is deemed as more appropriate for the calculation. Hence it is acceptable and this issue is closed.</p> <p>4. PoA-DD has been revised to indicate the correct weblink from Damodaran and appropriate Beta value is considered for the WACC calculation. Hence it is acceptable and this issue is closed.</p>
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		<p><i>small companies. This premium can be added directly to the results obtained using CAPM.</i>" 2009 Ibbotson Valuation Yearbook (see scan attached)</p> <p>Smaller business have less flexibility to deal with financial problems than larger firms do and therefore investors expect greater returns to compensate for the risk they take. Ibbotson 2009 statistics for example show how risk premium reduces as the size of a firm reduces.</p> <p>In our opinion it is reasonable to expect that small companies in developing countries would not be in a better position to deal with such financial problems than their US counterparts would. On the contrary, they would find it more difficult and thus for an investor the risks would even be higher and the returns demanded, higher too as a result.</p> <p>Nevertheless, the PP proposes to apply the size premium corresponding to smallest 10% of companies in the US stock exchanges given in the most recent publication of the SBBI Ibbotson Valuation Year book. 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> <p>2nd response:</p> <p>3. DOE correctly flagged the inconsistency in the 1st response. It should have been a five-year average as per PoA documents and Excel sheets. PPs noted DOE's comment on the unsuitability of taking an average of a Beta value. Hence, PPs decided to revise the wording in the PoA-DD. Now, the Beta applicable at investment decision date is proposed as suitable Beta value to calcu-</p>	
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		late the WACC, instead of a 5 year average. 4. Further guidance have been given in the PoA-DD in order to find the relevant value on the weblink. The value is found in a downloadable pdf file. A direct weblink to the value does unfortunately not exist.	
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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
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Annex 2: Information Reference List

Final Report	27-04-2012	PoA Title: Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia	Page 1 of 6	 Industrie Service
		Information Reference List		


IRL No.	Editor/Auth or	Document or Type of Information	Date of document/submission to DOE
1	CME	PoA-DD for GSP http://cdm.unfccc.int/ProgrammeOfActivities/Validation/DB/J7BOTN9LCWLN2SNVRY5LIGMT0B22D1/view.html	22.12.2009
2	-	UNFCCC homepage: http://cdm.unfccc.int	--
3	UNFCCC	Approved small scale baseline and monitoring methodology AMS I D, Version.17	--
4	-	On-site interviews and inspections of the project site of the “Sustainable Small Hydropower Programme of Activities (PoA) in Indonesia” by TUV SÜD validation team, Conducted from 12 th to 15 th Feb 2010. <u>Validation team on site :</u> Bratin Roy	

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		Information Reference List		


IRL No.	Editor/Auth or	Document or Type of Information	Date of document/submission to DOE
		Link: http://www.esdm.go.id/prokum/kepmen/2002/kepmen-1122-2002.pdf)	
9	PT PLN	Legislation by PLN for buying renewable electricity (The Minister of Energy and Mineral Resources Regulation No. 02 issued in 2006: The Development of Medium Scale Renewable Energy Power Plant Link: http://www.esdm.go.id/prokum/permen/2006/permen-esdm-02-2006.pdf)	2006
10	PT PLN	Guidance by PLN for renewable electricity (REGULATION OF THE MINISTER OF ENERGY AND MINERAL RESOURCES No: 31 of 2009) (having price for purchased power)	2009
11	Government of Indonesia	Applicable national and/or sectoral policies and regulations in Indonesia: The Law of Republic of Indonesia No. 30 issued in 2009 about The Law of Electricity Sector	2009
12	Government of Indonesia	Applicable national and/or sectoral policies and regulations in Indonesia: Ministry of Environment Regulation No. 11 (2006)	2006
13	South Pole Carbon Asset Management Ltd (SP)	Proposal of Public Private Partnership dated 22 July 2007	22.07.2007
14	SP & GTZ	Agreement SP-GTZ for cooperation dated 18 February 2008	18.02.2008
15	GTZ & IIEE	Documents showing relation of GTZ with IIEE	01.12.2008
16	DNA of Indonesia	A12. LoA host_Indonesian DNA	21.01.2010
17	DNA of Switzerland	LoA from Annex 1 countries (Swiss DNA)	23.04.2010
18	Government of Indonesia	Document to prove the existence of PT.HPI as a company (PT. HPI's company registration) dated 17 March 2009	17.03.2009
19	United States Agency for	Indonesia Energy Assessment, USAID, November 2008	22.11.2008

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		Information Reference List		


IRL No.	Editor/Auth or	Document or Type of Information	Date of document/submission to DOE
	International development (USAID)		
20	GTZ	GTZ Personal communication (Copy of E-mail and its attachment)	04.05.2010
21	Axel Biegert	Participatory Capacity Needs Assessment in the Subsector of Micro/Mini Hydropower in Indonesia, Axel Biegert, April 2010	01.04.2010
22	Hanan Nugroho, Syamsidar Thamrin and Gumilang Hardjakoeseema	Electricity Industry in Indonesia after the Implementation of Electricity Law Number 20/2002: Proposed Agendas to Support Implementation of the Law www.bappenas.go.id/get-file-server/node/2782/	06.06.2005
23	Sarwono Hardjomuljadi and Sriyono D. Siswoyo	Development of Mini/Micro Hydro Power Plant For Rural Electricity in Indonesia, Sarwono Hardjomuljadi and Sriyono D. Siswoyo, February 2008	06.02.2008
24	P. Raja Siregar	Cinta Mekar MHP additional information	29.11.2007
25	The Mini Hydro Power Project (MHPP)	Salido Kecil MHP additional information	01.07.2003
26	The Mini Hydro Power Project	Kalimaron MHP additional information	01.10.2003

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		Information Reference List		

IRL No.	Editor/Auth or	Document or Type of Information	Date of document/submission to DOE
	(MHPP)		
27	Thomas Meier	Curug Agung MHP additional information	27.11.2011 (submission to DOE)
28	UNEP	Waikelosawah MHP additional information	25.02.2005
29	APJ Ponorogo	Dompyong MHP additional information	12.01.2011
30	Indonesia Business Today	Kampung Melong MHP additional information	08.10.2010
31	PT. PLN	Parluasan MHP additional info	25.05.2007
32	SP & PT. HPI	Stakeholder document - Invitation letter	04.04.2011 (submission to DOE)
33	SP & PT. HPI	Stakeholder document - Non-technical summary provided to all the stakeholders (Indonesian)	04.04.2011 (submission to DOE)
34	SP & PT. HPI	Stakeholder document - Non-technical summary provided to all the stakeholders (English)	04.04.2011 (submission to DOE)
35	SP & PT. HPI	Stakeholder document - Minutes of meeting (English)	04.04.2011 (submission to DOE)
36	SP & PT. HPI	Stakeholder document - Minutes of meeting (hand writing)	04.04.2011 (submission to DOE)
37	SP & PT. HPI	Stakeholder document - Minutes of meeting (voice recording)	04.04.2011 (submission to DOE)
38	SP & PT. HPI	Stakeholder document - List of participants	04.04.2011 (submission to DOE)
39	SP & PT. HPI	Stakeholder document - Example of confirmation letter	04.04.2011 (submission to DOE)

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		Information Reference List		

IRL No.	Editor/Auth or	Document or Type of Information	Date of document/submission to DOE
40	SP & PT. HPI	Stakeholder document - Example of evaluation form	04.04.2011 (submission to DOE)
41	SP & PT. HPI	Stakeholder document - LSC report	04.04.2011 (submission to DOE)
42	SP & PT. HPI	Template of IRR + Benchmark sheet (which shall be used for all CPAs)	04.04.2011 (submission to DOE)
43	SP & PT. HPI	E-mail communication with Prof. Damodaran about Levered Beta	04.04.2011 (submission to DOE)
44	SP & PT. HPI	Indonesian Stock Exchange (IDX) Statistics 2008	04.04.2011 (submission to DOE)
45	SP & PT. HPI	Template of sheet for Emission reduction calculation	04.04.2011 (submission to DOE)
46	Government of Indonesia	Underdeveloped zone criteria in Indonesia The State Minister of Underdeveloped Zone Development Decree No. 001 issued in 2005 about National Strategy for Underdeveloped Zone Development Link: http://www.kemeneqpdtd.go.id/hukum/KEPMEN_001-2005.pdf	04.04.2011 (submission to DOE)
47	SP & PT. HPI	Spreadsheet used for 'record keeping system' of CPAs	04.04.2011 (submission to DOE)
48	Host country DNA	Jamali and Sumatera grids DNA formal decision	19.01.2009
49	Host country DNA	Jamali grid calculation provided by the DNA	04.04.2011 (submission to DOE)
50	Host country DNA	Sumatera grid calculation revised as per Tool V 2.2.1	04.04.2011 (submission to DOE)
51	Government of Indonesia	Law about legal metrology	04.04.2011 (submission to DOE)
52	SP	Revised Cooperation agreement with PT.PPN	16.09.2008

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IRL No.	Editor/Author	Document or Type of Information	Date of document/submission to DOE
53	SP & PT HPI	Agreement signed a term sheet between SP and Manggani to develop the CDM of Manggani under the future PoA or as a stand-alone activity.	21.08.2007
54	SP & PT HPI	List of CPA sent to secretariat (for CPAs having start date before the validation start date)	Jan 2010
55	SP & PT HPI	Final PoA-DD version 2.6	26.04.2012

Annex 3: Appointment Certificates



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 Stephan Hild, 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	07.09.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	PoA Expert
Date						07.09.11

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	07.09.11				
Further countries	Angola, Brazil, Portugal, Mozambique				
Financial Expertise					
Date	01.12.11				

Qualification in technical areas	
Technical Area	Date

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-001/0067.

Date	Signature
07.09.11	<i>Thomas Klein</i>
01.12.11	<i>Thomas Klein</i>



Industrie Service

CERTIFICATE OF APPOINTMENT

Mr Roy, Bratin, 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	25.03.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		25.03.11	25.03.11			

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	25.03.11				
Financial Expertise					
Date	29.03.11				

Qualification in technical areas	
Technical Area	Date
13.1_Waste handling and disposal	29.03.11
1.2_Energy generation from renewable energy source	29.03.11
3.1_Energy demand	29.03.11

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-0028/02.

Date	Signature
25.03.12 Extension of Validity	<i>Thomas Kleiser</i>



Industrie Service

CERTIFICATE OF APPOINTMENT

Mr Pyata, Praveen, 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	31.01.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		31.03.11	31.03.11			

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	31.03.11				
Financial Expertise					
Date					

Qualification in technical areas	
Technical Area	Date
13.1_Waste handling and disposal	31.03.11
13.2_15.2_Animal waste management	31.03.11
15.1_Agriculture	31.03.11

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-0036/02.

Date	Signature
31.03.12 Extension of Validity	<i>Thomas Kewer</i>



Industrie Service

CERTIFICATE OF APPOINTMENT

Mr Tekchandani Praveen, 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	05.07.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date	05.07.11					

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	05.07.11				
Further countries					
Financial Expertise					
Date					

Qualification in technical areas	
Technical Area	Date

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-0122/01.

Date	Signature
05.07.2011	



Industrie Service

CERTIFICATE OF APPOINTMENT

Ms Pingarova, Nevena, 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	27.04.11	11.10.11				

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		11.10.11	11.10.11			

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	11.10.11				
Further countries	Russia, Serbia, Macedonia, Bulgaria				
Financial Expertise					
Date	27.04.11				

Qualification in technical areas	
Technical Area	Date

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-0047/02.

Date	Signature
27.04.2011	
11.10.11	



Industrie Service

CERTIFICATE OF APPOINTMENT

Mr Mitterwallner, Robert, 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	23.03.1	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
1.2_Energy generation from renewable energy source	23.03.11
4.1_Cement sector	23.03.11
4.3_Iron and steel sector	23.03.11
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-0011/02.

Date	Signature
23.03.12 Extension of Validity	



Industrie Service

CERTIFICATE OF APPOINTMENT

Mr Kleiser, Thomas, 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	25.03.11					

Qualification as						
Status	Trainee	Validator	Verifier	Team Leader	Technical Reviewer	Technical Expert
Date		25.03.11	25.03.11	25.03.11	25.03.11	

Other qualification					
Country Expertise					
Region	1	2	3	4	5
Date	25.03.11				
Financial Expertise					
Date	25.03.11				

Qualification in technical areas	
Technical Area	Date
1.1_4.10_Thermal energy generation...	25.03.11
1.2_Energy generation from renewable energy source	25.03.11
4.1_Cement sector	25.03.11

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-0027/02.

Date	Signature
25.03.12 Extension of Validity	