VALIDATION REPORT

"Programme of Activities for Small Scale Hydropower CDM in Sri Lanka"

IN SRI LANKA

REPORT NO.: CDM00392

VERSION : 2.0

POA VALIDATION REPORT

Date of first issue:	Project No.:
10/03/2013	CDM00392
Approved by:	Organizational unit:
INANAGA, Hiroshi	Deloitte Tohmatsu Evaluation and Certification Organization
Client:	Client ref.:
1. Korea Environment Corporation 2. Sri Lanka Carbon Fund (Pvt.) Ltd. 3. Koho Trading & Consultancy (Pvt.) Ltd.	

Programme of activity title:		
Programme of Activities for Small Scale Hydropower CDM in Sri Lanka		
Host country:	GHG reducing measure/technology:	Scope:
Sri Lanka	Grid connected Hydropower system generation	1. Energy industries (renewable/ nonrenewable sources)
Size:	Methodology applied:	Estimated annual emission reduction:
CDM PoA SSC	AMS I.D. (Version 17)	-

Report No.	Subject group:
CDM00392	Environment

Work carried out by:
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Work verified by:
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Indexing terms
Climate Change, Kyoto Protocol, Validation, Clean Development Mechanism

Abbreviations

AWLR	Average of Weighted Lending Rate
AWPLR	Average weighted Prime Lending Rate
BM	Build Margin
BOI	Board of Investment of Sri Lanka
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEA	Central Environmental Authority
CEB	Ceylon Electricity Board
CEF	Carbon Emission Factor
CER	Certified Emission Reduction
CL	Clarification Request
CM	Combined Margin
CME	Coordinating Managing Entity
CO_2	Carbon Dioxide
CO_2e	Carbon Dioxide Equivalent
CPA	Component project activity
CPA-DD	Component project activity -Design Document
Deloitte-TECO	Deloitte Tohmatsu Evaluation and Certification Organization
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA	Environmental Impact Assessment
FAR	Forward Action Request
Pre-FSR	Pre-Feasibility Study Report
GHG	Greenhouse Gas(ses)
GSC	Global Stakeholder Consultation
GWP	Global Warming Potential
IPCC	Intergovernmental Panel on Climate Change
IEER	Initial Environmental Examination Report
IRR	Internal Rate of Return
KECO	Korea Environment Corporation
KOHO	Koho Trading & Consultancy (Private) Limited

LDCs	Least Developed Country
LoA	Letter of Approval
LoI	Letter of Intent
MP	Monitoring Plan
NCRE	Nonconventional Renewable Energy
NGO	Nongovernmental Organization
ODA	Official Development Assistance
OM	Operational Margin
PO	Project Owner
POA	Programme of Activities
PoA-DD	Programme of Activities – Design Document
PP	Project Participants
PUCSL	Public Utilities Commission of Sri Lanka
SPPA	Standard Power Purchase Agreement
SEA	Sustainable Energy Authority
SLCF	Sri Lanka Carbon Fund
SUZ	Special Underdeveloped Zone
UNFCCC	United Nations Framework Convention on Climate Change
VVS	CDM Validation and Verification Standard

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History of this document

Version	Date	Nature of revision
0.1	15/03/2013	Initial preparation
1.0	12/07/2013	Draft Revision
2.0	06/08/2013	Final report after technical review

1 EXECUTIVE SUMMARY

Deloitte-TECO has performed a validation of the "Programme of Activities for Small Scale Hydropower CDM in Sri Lanka." The validation was performed on the basis of UNFCCC criteria for the CDM and host party criteria, as well as the criteria required for consistent project operations, monitoring, and reporting.

The review of the PoA-DD, CPA-DD, the evidential documents, and the subsequent follow-up interviews have provided Deloitte-TECO with sufficient evidence to determine the fulfillment of the stated criteria.

This proposed project correctly applies AMS I.D., *"Grid connected renewable electricity generation" (Version 17, EB61)*, and other relevant tools.

During the desk review and follow-up interviews of the on-site assessment, a number of outstanding issues were identified as CLs and CARs and were eventually closed in preparing for the submission of this validation report to the CDM EB.

The following major CARs were identified:

· The initial CDM Operation Manual (prepared on 21/01/2013, Version 0) is not produced based on the actual situation for this proposed PoA. CDM Operation Manual is not consistent with the PoA-DD and CPA-DD and not satisfied relevant requirements, such as PS, "Demonstration of additionality, development of eligibility criteria, and application of multiple methodlogoies for programmes of activities" (EB 70, Annex 5). (CAR 1)
· The start date of PoA was not satisfied the requirement of para. 105 of CDM PS. (CAR 2)
· DOE confirmed that "Cap_{BL}" and "A_{BL}", which are required to be monitored for ER calculation, are not stated in the Section VII. 3-4. of "CDM Operation Manual". (CAR 3)
· Based on the CDM operation manual, the CME established four Annexure for CPA inclusion. However, DOE could not confirm the Annexure II, III and IV during the on-site assessment. Especially, eligibility criteria in the Annexure III are not satisfied the actual situation for this proposed PoA. (CAR 4)

The four CARs and seven CLs were identified from the on-site assessment.

Details of the outstanding issues, including how corrective actions were implemented with relevant evidence, were dealt with in the following part of this report and in Appendix A.
The identified CARs and CLs identified were corrected and closed.

In conclusion, it was demonstrated that this proposed project "Programme of Activities for Small Scale Hydropower CDM in Sri Lanka" as described in the revised PoA-DD (Version 03, completed on 6 August 2013) meets all relevant UNFCCC requirements for the CDM and all relevant criteria of the host country criteria, and correctly applies the baseline and monitoring methodology AMS I.D. (Version 17, EB 61).

2 INTRODUCTION

2.1 Objective of CDM validation

Korea Environment Corporation (KECO) has commissioned Deloitte-TECO to validate the "Programme of Activities for Small Scale Hydropower CDM in Sri Lanka". The purpose of a validation is to conduct an independent third-party assessment on the PoA. In particular, the PoA's baseline, the MP, and the PoA's compliance with relevant UNFCCC and host country criteria are validated in order to confirm that the PoA design, as documented, is sound and reasonable and meets the stated requirements and identified criteria. Validation is a requirement for all CDM PoA and is seen as necessary to provide assurance to stakeholders on the quality of the PoA and its intended generation of CERs. The UNFCCC criteria refer to the Kyoto Protocol criteria and the CDM rules and modalities as agreed in the Bonn Agreement and the Marrakesh Accords.

2.2 Scope

The validation scope is defined as an independent and objective review of the PoA-DD, the PoA's baseline study, the MP, and other relevant documents. The information in these documents is reviewed against the Kyoto Protocol requirements, UNFCCC rules, and associated interpretations. Deloitte-TECO has, based on the recommendations in the Validation and Verification Standard (VVS), employed a risk-based approach in the validation process, focusing on the identification of significant risks to the PoA implementation and the generation of CERs.

While validation is a third-party exercise that is completely distinct from consulting, stated requests for clarifications and/or corrective actions may provide input for improvement of the PoA design. The validation process applied the approved consolidated baseline and monitoring methodology AMS I.D. "Grid connected renewable electricity generation" (Version 17, EB 61) monitoring methodology and included a review of the following documents:

- PoA-DD
- Supporting documents made available to the validators
- Information collected through performing interviews and during the on-site assessment

3 VALIDATION APPROACH

In order to ensure transparency, a validation protocol was customized for the PoA, according to the VVS (Version 03.0, EB 70). The protocol that was prepared according to the VVS shows, in a transparent manner, criteria (requirements), means of verification, and the results from validating the identified criteria. The validation protocol serves the following purposes:

- It organizes, details, and clarifies the requirements a CDM PoA is expected to meet
- It ensures a transparent validation process where the validator(s) will document how a particular requirement has been validated and the result of the validation

The validation protocol consists of two tables. The completed validation protocol is enclosed in Appendix A to this report.

Figure 1 Validation protocol tables

Validation Protocol Table A1: Validation Checklist based on VVS (ver03.0)						
ID	***Checklist Question***	***Reference***	***Means of verification (MoV)***	***Draft Conclusion***	***Comment***	***Final Conclusion***
requirement No. of CDM VVS	*The various requirements in Table 1 are linked to checklist questions the project should meet. The checklist is organized in seven different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.*	*Gives reference to documents where the answer to the checklist question or item is found.*	*Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.*	*The conclusion of both the document review and the on-site assessment is stated in the section. This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification (CL)** is used when the validation team has identified a need for further clarification.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question after the on-site assessment of the validation. It is further used to explain the conclusions reached.*	*The conclusion of all of validation process is stated in the section. This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification (CL)** is used when the validation team has identified a need for further clarification.*

Validation Protocol Table A2: Investment Checklist based on EB62 Annex 5, Ver 05				
Category	***Guidance***	***Comment***	***Draft Concl***	***Final Concl***
As shown in Guidance	*Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.*	*The conclusion of both the document review and the on-site assessment is stated in the section. This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification (CL)** is used when the validation team has identified a need for further clarification.*	*The section is used to elaborate and discuss the checklist question and/or the conformance to the question after the on-site assessment of the validation. It is further used to explain the conclusions reached.*	*The conclusion of all of validation process is stated in the section. This is either acceptable based on evidence provided (**OK**), or a **Corrective Action Request (CAR)** due to non-compliance with the checklist question (See below). **Clarification (CL)** is used when the validation team has identified a need for further clarification.*

Validation Protocol Table A3: Resolution of Corrective Action and Clarification Requests			
Draft report clarifications and corrective action requests	***Ref. to checklist question in table 2***	***Summary of project owner response***	***Validation conclusion***
If the conclusions from the draft Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	*Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification Request is explained.*	*The responses given by the Client or other project participants during the communications with the validation team should be summarized in this section.*	*This section should summarize the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".*

4 VALIDATION METHODS

The validation process consisted of the following three phases:

I A desk review of the PoA design documentation
II Follow-up interviews with the PoA stakeholders
III The resolution of outstanding issues and issuance of the final validation report and opinion.

4.1 Document review, including risk approach

The PoA-DD and CPA-DD were submitted by the client, and additional background documents related to the PoA and CPA <2013-PPB-001-1.3MW> design and baseline were reviewed. A complete list of all documents and evidence reviewed is included in the References section of this report. The PoA-DD and CPA-DD were submitted to the DOE for completeness check on 31 January 2013 before going to the Global Stakeholder Consultation implemented on 5 February 2013.

4.2 Follow-up interviews

During the period of 19 February 2013 to 21 February 2013, Deloitte-TECO conducted interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. Representatives of Sri Lanka Carbon Fund (Pvt.) Ltd., Koho Trading & Consultancy (Pvt.) Ltd., Peak Power beta (Pvt.) Ltd., and the related stakeholders were interviewed. The details of interviewees and main topics of the interviews are summarized below:

Interviewee list

ID	Name	Function	Organization
1	Mahesh Chamara Ariyathilaka	Project Engineer	Sri Lanka Carbon Fund (Pvt.) Ltd.
2	Harshani Ranasinghe	Assistant Finance Manager	Sri Lanka Carbon Fund (Pvt.) Ltd.
3	Jane Hong	Managing Director	Koho Trading & Consultancy (Pvt.) Ltd.
4	Shanthi Goonaratne	General Manager	Peak Power beta (Pvt.) Ltd. and VS Turbo (Pvt.) Ltd.
5	Anuruddhe Jayestkle	Quantity Surveyor	VS Turbo (Pvt.) Ltd. *
6	Vinadh Wicrnemarathe	Manager – Procurement	VS Turbo (Pvt.) Ltd.
7	Aravinda Uduroawela	Coordinator	VS Turbo (Pvt.) Ltd.
8	Dulsara Vidanagama	Coordinator	VS Turbo (Pvt.) Ltd.
9	Premathilaka Lihiniyagala	Farmer	Local Resident
10	Rathnayaka Pothenna	Farmer	Local Resident
11	Nelson Marasiugha	Farmer	Local Resident
12	Airangani lihingasela	Farmer	Local Resident
13	Assagi Ulgala	Monk	Local Resident
14	M.C.J.R. Wijayarathng	Village representative	Local Resident
15	W.A.J. Anurangi	Engineer	Renewable Energy Authority
16	N. Fernando	Senior Specialist	Renewable Energy Authority

17	B.M.S Batagoda	Deputy Secretary	Ministry of Finance and Planning
18	Sapumal Ranwala	Interpreter	

* VS Turbo (Pvt.) Ltd. is a superior body of Peak Power Beta (Pvt.) Ltd. Some managers of V.S Turbo (Pvt.) Ltd. will manage to operate for Peak Power Beta (Pvt.) Ltd. More staffs for Peak Power Beta (Pvt.) will be employed after SPPA conclusion.

The schedule for the 19 February 2013 to 21 February 2013 on-site visits was as follows:

- 19 February 2013: Opening meeting, document review, and interview with the PP
- 20 February 2013: On-site visit, including stakeholders interview
- 21 February 2013: Document review, internal meeting, and closing meeting
- The validator of on-site visit:
  - Team leader: Park Yong Tae
  - Team member: Otani Yuichi

Main topics

19 February 2013
Opening meeting with the PPs and CDM consulting company - The purpose of the validation - Validation methods - Validation schedule - Understand the background of the PoA Document review with the CDM consulting company, Coordinating Managing Entity (CME), and PP - Confirmation on noninvolvement of Official Development Assistance (ODA) - Monitoring and reporting procedures - Additionality - Baseline methodology - Estimated emission reduction and emission factors (EFs) applied
20 February 2013
Interview with local residents (stakeholders) - Confirmation of questionnaire response - The influence by the CPA<2013-PPB-001-1.3MW> - The influence of the CPA<2013-PPB-001-1.3MW> on the local economic development - Stakeholder consultation process - Stakeholder comments
21 February 2013
Document review - Environmental impacts - Legal compliance - Resources, training needs, and procedures for operation and maintenance - Benefits from the CDM registration - Prior to the CDM consideration - Environmental impacts - Monitoring and reporting procedures Closing meeting with the Project Owner (PO) and CDM consulting company - Summary of the CARs and CLs in the Validation Checklist - Actions after the on-site assessment

4.3 Clarification requests and corrective action requests

The objective of this phase of the validation was to resolve the requests for corrective actions and clarification, and any other outstanding issues that needed to be clarified for Deloitte-TECO's positive conclusion on the project design. The CARs and CLs raised by Deloitte-TECO were resolved during subsequent communications between the client and Deloitte-TECO. To guarantee the transparency of the validation process, the concerns raised and responses given are described in the validation protocol in Appendix A.

After the on-site visit, Deloitte-TECO prepared a clarification and CARs list, and final answer from the PP was submitted to Deloitte-TECO. When modifications to the PoA design were necessary to resolve Deloitte-TECO's concerns, the client revised and resubmitted the PoA-DD. After reviewing the revised and resubmitted PoA-DD, Deloitte-TECO issued the final validation report and opinion.

4.4 Internal quality control

The draft and final validation reports were reviewed according to Deloitte-TECO's internal quality control policy. A technical review was performed by a technical reviewer, meeting Deloitte-TECO's qualification criteria for CDM validation.

Engagement Quality Assurance Review System (EQAR)

		Objective	【IN】	【OUT】	Detail
Level	Reviewer	Responsibility	Information	Reports	Comments
1	Quality Control Group*4	1) Validation Review the validation implemented effectively and efficiency from an independent standpoint, in conformity with the step. Validation checklist (Internal review). Review technically the additionality, baseline methodology, and monitoring methodology. 2) Verification Review the reduction of CDM Verification checklist (Internal Review). Review the reduction of (GHG.	1) Validation PDD (Monitoring plan) Audit plan document Validation/Verification report DR DR report VVS 2) Verification Monitoring report, verification report, and related documents	1) Validation Completion of correction requested Confirmation of evidence for VVS Abstract of Audit outcome Witness Review Sheet Validation internal review checklist. Appropriateness of applied methodologies *3 Confirmation of accuracy and reliability of data and equations, Review Sheet 2) Verification Review Sheet Verification internal review checklist	1) Validation/Verification Checkmark Add comments to the abstract Comments to the materiality and uncertainty, consistency of reports, etc. In terms of Request for Review and other requests, it will be implemented by using validation/verification review sheet during technical reviews.
	English	Review and check English	Draft report of	Corrections to the	File the result of

	proofreader	grammar, spelling, and imprecision of expressions.	Validation/Verification/certification	grammatical mistakes, spelling mistakes, and expressions.	English proofreading
2	GHG Team Leader (Engagement Quality Assurance Reviewer)	Review the appropriateness of the process from ordering the CDM project to requesting registration and issuance to EB, based on "Operational Management Procedure CDM (Validation/Verification)"	Statement on procedure Abstract of Audit outcome Witness	Engagement Quality Assurance statement for Operational procedure OMP sheet	Fill concerns in the comment field
3	Judgment Committee	Perform the Engagement Quality Assurance Review for the determination of submission to register CDM project and/or the response to the request for review from CDM EB, in order to judge under objective and fair rules, based on the Steps (1) and (2), in case of request from the GHG team leader/CDM manager	PDD, PoA-DD and CPA-DD (Monitoring plan) Draft report of Validation/Verification/Certification	Minute of Judgment Committee	Add comments to the minute
4	Chief Executive Officer	Express the final opinion, based on (1)(2) and (3),for Validation/Verification/Certification	Engagement Quality Assurance statement for Operational procedure	Expression of opinion (Validation/Verification/certification report)	Need to comment if it is an adverse opinion

＊1 Competency of reviewers shall be equal or higher than an audit team leader.

＊2 An audit team leader, an audit director, and EQAR shall not be served concurrently by the same personnel.

＊3 Title(s) of evidential document for important expressions specifically representing numeric values and conclusions shall be clearly indicated in reports and VVS checklists.

* 4. Technical reviewer shall be designated by agreement of CDM manager and Quality Control Group manager.

5 GLOBAL STAKEHOLDER CONSULTATION

The PoA-DD and CPA-DD were made publically available on the UNFCCC website on 5 February 2013 and invited comments until 6 March 2013 from all parties, stakeholders, and nongovernmental organizations (NGOs).

No comments were received during the period for comments. During the on-site visit, interviews with local stakeholders were conducted without any critical comments identified.

6 VALIDATION FINDINGS

In the following sections, the findings of the validation are stated. The validation findings presented herein include the following items:

1) The findings from the desk review of the original PoA-DD and the findings from follow-up interviews during and after the on-site visit were summarized. The more detailed record of these findings can be found in the Validation Protocol in Appendix A.

2) Where Deloitte-TECO identified issues that needed clarification or that represented a risk to the fulfillment of the PoA objectives, CLs or CARs were issued. The CLs and CARs raised during the validation were described and accounted for in this section, and are further

documented in the Validation Protocol in Appendix A. The validation of the PoA resulted in four CARs and seven CLs.

3) Where CLs or CARs have been issued, the exchanges between the client and Deloitte-TECO to resolve these CLs or CARs are summarized.

4) The conclusions for validation subject are presented.

The final PoA-DD was revised and resubmitted by the PPs, which serves as a basis of the assessment described herein.

6.1 Approval

The DNAs of the respective parties were confirmed via the DNA lists on the UNFCCC website.

Table 1. Details of Letter of Approval (LoA)

Party involved	Republic of Sri Lanka (host party)	Conclusion
Status of the LOA	Issued	Confirmed
Issued by	Ministry of Environment	confirmed
Issue date of the LOA	5 August 2013	confirmed
Proposed project title indicated in the LOA	Programme of Activities for Small Scale Hydropower CDM in Sri Lanka	Confirmed
Authorized CME indicated in the LOA	Sri Lanka Carbon Fund (Pvt.) Ltd.	Confirmed
Is participation voluntary?	Stated in the LoA	Confirmed
Contribution to the sustainable development	Stated in the LoA	Confirmed
Does the LOA refer to a specific version of the validation report?	N/A	N/A

Party involved	Republic of Korea	Conclusion
Status of the LOA	Issued	Confirmed
Issued by	Ministry of Trade, Industry & Energy Ministry of Land Infrastructure and Transport	Confirmed
Issue date of the LOA	7 June 2013	Confirmed
Proposed project title indicated in the LOA	Programme of Activities for Small Scale Hydropower CDM in Sri Lanka	Confirmed
Authorized PPs indicated in the LOA	Korea Environment Corportation (KECO)	Confirmed
Is participation voluntary?	Stated in the LoA	Confirmed
Contribution to the sustainable development	Stated in the LoA	Confirmed
Does the LOA refer to a specific version of the validation report?	Submitted draft Validation Report (Version 01)	Confirmed

6.2 Authorization

Republic of Korea and Sri Lanka are involved in the PoA. The both parties are authorized by to the Kyoto Protocol Ratification date of the Kyoto Protocol

Republic of Korea: 8 November 2002 (confirmed via the website of UNFCCC)
Sri Lanka: 3 September 2002 (confirmed via the website of UNFCCC)

6.3 Contribution to sustainable development

The LoAs were issued by the respective DNAs of the PPs, which authorized voluntary participation in the PoA. The title of the PoA was referred to in the LoAs exactly as it appeared in the PoA-DD and CPA-DD submitted for the registration. The LoA confirmed that the PoA would contribute to the sustainable development of the host party of Sri Lanka and Republic of Korea. The approval was unconditional. Also, it was confirmed that no official development funding was involved in this PoA.

6.4 Modalities of communications

It was confirmed valid and accurate as follows:

Table 2. Identification of the signatory of the Modalities of Communication (MOC) statement

	POs
The name of PPs	Sri Lanka Carbon Fund (Private) Limited (CME) Korea Environment Corporation Koho Trading & Consultancy (Private) Limited
The name and employment status of the authorized personal	Sri Lanka Carbon Fund (Private) Limited (CME) Dr. Suren Batagoda (Managing Director) Mr. Mahesh Chamara Ariyathilaka (Project Engineer) Korea Environment Corporation Ms. Eun Young Kim (Manager) Mr. Won Tae Kim (Manager) Koho Trading & Consultancy (Private) Limited Ms. Myungock Hong (CEO)
The name and employment status of the authorizers	Sri Lanka Carbon Fund (Private) Limited (CME) Dr. Suren Batagoda (Managing Director) Korea Environment Corporation Mr. Park Seung Hwan (CEO) (changed to Mr. Si-Jin Lee at LoA) Koho Trading & Consultancy (Private) Limited Ms. Myungock Hong (CEO)

6.4.1 Modalities of communication statement

It was also confirmed that the MOC statement, which complies with the following relevant forms and requirements on the MOC form (F-CDM-MOC), is received from the authorized personal of the PO (the contractual entity of the validation services) to the DOE via email directly:

Table 3. MoC statement

Check items	Findings	Conclusion

The version of the form (F-CDM-MOC)	Modalities of Communication Statement (Version 02.1)	OK
Nomination of focal point entity/ies	Joint focal point authorities Sri Lanka Carbon Fund (Private) Limited (CME) Korea Environment Corporation Koho Trading & Consultancy (Private) Limited	OK
Authorized signatory	Sri Lanka Carbon Fund (Private) Limited (CME) Dr. Suren Batagoda (Primary) Mr. Mahesh Chamara Ariyathilaka (alternative) Korea Environment Corporation Ms. Eun Young Kim (Primary) Mr. Won Tae Kim (alternative) Koho Trading & Consultancy (Private) Limited Ms. Myungock Hong (Primary)	OK
Annex 1	It was confirmed that the same authorized signatories of all of the PP listed in the PoA-DD have been included in this section.	OK

6.5 Coordinating/managing entity and participants in a PoA

The CME developed and submitted the final version of a documentary evidence of management system, the PoA CDM operational manual "CDM Operation Manual", Version 2, issued on 20 June 2013.

The operational manual consists of 10 items that were determined and demonstrated based on the "Standard for Demonstration of Additionality, Development of Eligibility Criteria, and Application of Multiple Methodologies for Programme of Activities" EB 70, Annex 05.

The DOE confirmed that the CDM operation manual was developed and revised to be satisfied by the requirements of the "Standard for Demonstration of Additionality, Development of Eligibility Criteria, and Application of Multiple Methodologies for Programme of Activities."

Table 4. Comparison among Standard, PoA-DD, and CDM Operational manual

Para 19 of "Standard for Demonstration of Additionality, Development of Eligibility Criteria, and Application of Multiple Methodologies for Programme of Activities."	PoA-DD	CDM Operational manual
(a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;	Section C	Section IV
(b) Records of arrangements for training and capacity development for personnel	Section C	Section VI
(c) A procedure for technical review of inclusion of CPAs	Section B.5	Section V
(d) A procedure to avoid double counting (e.g., to avoid the case of including a new CPA that has already been registered either as a CDM project activity or as a CPA of another PoA);	Section C	Section V
(e) Records and documentation control process for each CPA under the PoA;	Section C	Section VIII
(f) Measures for continuous improvements of the PoA management system;	Section C	Section IX
(g) Any other relevant elements	Section C	Annex I, II, III

(Debundling, Agreement between CME and CPA implementer for inclusion of PoA)		

6.6 PoA design document

(Ref. /1/)

Deloitte-TECO confirmed that the latest CDM SSC-PoA-DD form (Version 02.0) was used in accordance with "***GUIDELINES FOR COMPLETING THE PROGRAMME DESIGN DOCUMENT FORM FOR SMALL-SCALE CDM PROGRAMMES OF ACTIVITIES,*** *Version 02.1)*" Annex 13 of EB 66. No critical instances of noncompliance were found.

6.7 Description of PoA/CPAs

In order to validate the accuracy and completeness of the project description, the validation process consisted of the following phases:

I Assess the CDM-PoA-DD and the CDM-CPA-DD

II Confirm the framework developed for the implementation of the PoA and define a CPA under the PoA

6.7.1 Assessment of CDM-PoA-DD and the CDM-CPA-DD

The information presented in the PoA-DD and CPA-DD was confirmed to be consistent with the actual planning and implementation procedures of the PoA as follows:

- A review of the PoA-DD and CPA-DD
- On-site visit to the place where the relevant CPA <2013-PPB-001-1.3MW> is implemented and interview with the relevant stakeholder and personnel with knowledge of the project in attendance
- A review of the PoA CDM operational manual, "CDM Operation Manual"
- A review of specific requirements of the PoA included the eligibility criteria for inclusion of a CPA in the PoA

As described in the validation protocol, Appendix A, issue of CARs and CLs, include eligibility criteria for the inclusion of a CPA in the PoA, and requirements of the PoA CDM operational manual were corrected and the PoA-DD and CPA-DD were revised based on the CDM PoA requirements. Therefore, Deloitte-TECO confirmed that the PoA description, as included in the latest PoA-DD and CPA-DD, is sufficiently accurate and correct in order to comply with the requirements of the CDM.

6.7.2 The framework developed for the implementation of the PoA, and defining a CPA under the PoA

The CME of the PoA is designated as Sri Lanka Carbon Fund (Pvt.) Ltd. The CPAs under the PoA will be implemented within the host country, Sri Lanka.

The CME, Sri Lanka Carbon Fund (Pvt.) Ltd., developed a PoA "CDM Operational Manual," which consists of nine sections, i.e., definition of the PoA, role and responsibilities of the CME

and CPA implementers, CPA inclusion and management, training and monitoring, Document and Data control and Improvement of the operational manual, and four Annexure documents. In addition to that, the CME developed to manage the PoA with eligibility criteria for inclusion of a CPA in the PoA. The CME prepared additional contracts form between the CME and CPA implementers, such as CPA developing contract, double counting prevention confirmation letter. Deloitte-TECO confirmed by reviewing the relevant documents and performing interview with the CME and the CPA <2013-PPB-001-1.3MW> implementer, Peak Power Beta (Pvt.) Ltd., that the framework and additional documents for the implementation of the PoA was sufficiently developed.

6.7.3 The nature and technical aspects of the programme of activities

The proposed PoA involves grid-connected Hydropower generation activities with installed capacity up to 15 MW in Sri Lanka. The typical CPA will generate electricity using hydropower energy and will be exported to the national grid. The power plant will mainly consist of turbine, generator, electrical switchgear, electric meter, transformer, etc. At this validation stage, a total of seven hydropower projects, as CPA, including CPA <2013-PPB-001-1.3MW>, were planned to be developed. The range of capacities for seven projects is between 1 MW and 4 MW.

In terms of E+/E- policy in Sri Lanka, which is the boundary of the PoA, there is no mandatory policy/regulation that requires any public agency or private company to implement the hydropower generation activity. The proposed PoA is a voluntary action by the CME. Under "Programme of Activities for Small Scale Hydropower CDM in Sri Lanka" (PoA), hydropower generation will be distributed by the SSC-CPA implementer(s) to connect grid.

Details of E-policy in Sri Lanka will be dealt with Section 6.10.

6.8 Application of the selected baseline and monitoring methodology

6.8.1 Applicability of the selected baseline and monitoring methodology to the programme of activity

It was confirmed that all the CPAs under the PoA are small-scale activities (i.e., installed capacity of each CPA is up to 15 MW) and the CPAs are classified as Type I project activities that is classified in the Project Standard. According to the Appendix B of "the simplified modalities and procedures for small-scale CDM project activities" of the UNFCCC, the type and category of the project can be confirmed in accordance with the methodology, AMS I.D. "Grid connected renewable electricity generation" (Version 17, EB 61) and also applied the methodological tool, "Tool to calculate the emissions factor for an electricity system (Version 03, EB 70)".

The applicability of the selected methodology, AMS I.D. "Grid connected renewable electricity generation" (Version 17, EB 61), was confirmed as follows:

Table 5. Applicability of the approved methodology

Table of Applicability of AMS I.D. (Version 17)

Conditions		OK, No, N/A	Remarks
1	This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal, and renewable biomass: (a) Supplying electricity to a national or a regional grid or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement, such as wheeling.	OK	The CPAs comprise hydropower generation units supplying electricity to a national grid, Ceylon Electricity Board (CEB).
2	Illustration of respective situations under which each of the methodology (i.e., AMS I.D., AMS I.F., and AMS I.A.) applies is included in Table 2. *	OK	Refer AMS I.D., Version. 17 Table 2 at Page 16. The CPAs supply electricity to a national/regional grid, CEB.
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).	OK	The CPAs are the installation of a new greenfield power plant. (Greenfield plant)
5	Hydropower plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: · The project activity is implemented in an existing reservoir with no change in the volume of reservoir; · The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m2; · The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m2.	OK	The CPAs under the PoA are hydropower generation project, which has power density more than 4 W/m^2.
5	If the new unit has both renewable and nonrenewable 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 new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15 MW.	OK	The CPAs will be the renewable component and less than 15 MW.
6	Combined heat and power (co-generation) systems are not eligible under this category.	N/A	The CPAs do not include co-generation.
7	In the case of project activities that involve the addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct from the existing units.	N/A	Only the installation of a new greenfield power plant is applicable under the PoA.
8	In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	N/A	Only the installation of a new greenfield power plant is applicable under the PoA.

6.8.2 Deviation from an approved methodology

It is not applicable to this PoA.

6.8.3 Clarification on the applicability of an approved methodology

It is not applicable to this PoA.

6.8.4 Application of multiple methodology

It is not applicable to this PoA.

6.9 Boundary for the PoA in terms of geographical area

DOE confirmed that all CPAs of the PoA will be implemented within the national boundary of Sri Lanka.

Deloitte-TECO confirmed by reviewing the eligibility criteria of this PoA that the identified boundary, the selected sources, and gases as documented in the PoA-DD are developed for the CPA; hence, all sources and GHGs required by the methodology have been included within the PoA boundary of Sri Lanka. Geographical boundary of the CPAs will be checked through information gathered from the physical site inspection, interview, and evidence received. The sources and gases within the boundary have been considered in a clear manner. The gases and sources, which are described in the "PART II: Generic component project activity (CPA)" of PoA-DD, Section B.3, are fully complied in accordance with the boundary for the PoA and the requirements of the applied methodology AMS I.D., Version 17.

6.10 Baseline scenario identification and description

According to AMS I.D. "Grid connected renewable electricity generation" (Version 17, EB 61), it was demonstrated that all the assumptions and data used by the PP are justified appropriately, which are in line with the procedures prescribed in the *"Tool to calculate the emission factor for an electricity system (Version 03)"* on EB 70 of Annex 22. Baseline conditions are as stated in the following table:

Table 6 Baseline identification

Items	Yes/No	Note
Electricity delivered to grid	Yes	CEB, a national power grid
EFs are calculated with the "tool to calculate the emissions factor for an electricity system."	Yes	Data sources by Statistical Digest in Sri Lanka from 2007 to 2011 officially issued by the Sustainable Energy Authority (SEA) of Sri Lanka Refer the official URL of http://www.energy.gov.lk/sub_pgs/elibrary_spe_pub.html
Spatial boundary contains power plants	Yes	On-site inspection
E-policy in Sri Lanka	Yes	Nonconventional Renewable Energy (NCRE) tariff The applied tariff into the PoA is NCRE tariff, which is higher than the historically avoided tariff price in Sri Lanka. Refer the official URL of http://www.ceb.lk/sub/db/oppotunities.html

Regarding E-Policy in Sri Lanka, Sri Lanka has plan to fulfill 20% of its energy demand from New and Renewable Energy by 2020 and 10% by 2016 (The Development Policy Framework of Sri Lanka, November 2010). Deloitte-TECO confirmed that there have been two electricity tariff policies in Sri Lanka: Avoided cost tariff and NCRE tariff. According to the official website of CEB, http://www.ceb.lk/sub/db/oppotunities.html, it is stated that "The government has identified the development of Renewable Energy Projects, as a matter of policy to diversify the

electricity sector from high-cost thermal power generation. Therefore, required incentives and assistance was provided for the renewable energy resource development (Mini Hydro, Bio Mass, Wind, etc.). Further, National Energy Policy 2006 has identified fuel diversify and energy security in electricity generation as a strategic objective, and development of renewable energy projects was identified as a part of this strategy. In view of above, action has been taken to introduce a cost-based, technology-specific, three-tier tariff instead of avoided-cost-based tariff with effect from the year 2007." According to "Clarifications on the consideration of national and/or sectoral policies and circumstances in baseline scenarios (Version 02)" EB 22, Annex 3, para. 7. (b), E-policy need not be taken into account in developing a baseline scenario. However, as mentioned above, the economic benefit from governmental policy in Sri Lanka was already taken into account to the NCRE tariff and the higher tariff lead conservative method of a baseline scenario. DOE also confirmed by reviewing documents and carrying out on-site assessment that the nature and technical aspects were appropriately described in the PoA-DD and the CPA-DD.

6.11 Algorithm and/or formulae used to determine emission reductions

The emission reductions are calculated based on AMS I.D. *(Version 17)* and the approved calculation tool, *"Tool to calculate the emission factor for an electricity system (Version 03.0.0)"*. The project has selected the ex ante option with fixed EFs for both OM and BM calculations.

Deloitte-TECO confirmed the annual emission reduction for this proposed project as follows:

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

Where:

BE_y	Baseline Emissions in year y (tCO2)
$EG_{BL,y}$	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)
$EF_{CO2,grid,y}$	CO2 EF of the grid in year y (tCO2/MWh)

Initially, the CME calculated the EF based on the applied methodology and the latest version of *"Tool to calculate the emission factor for an electricity system (version 03.0.0)"* on EB70. The PP also provided the EF calculation spreadsheet in the early validation stage including GSC. Deloitte-TECO confirmed by reviewing all the relevant data, such as Statistical digest year 2007 to 2011, issued by CEB of Sri Lanka that the revised EF from the GSC was reasonable and acceptable. The re-calculated EF is as follows:

Table 7. EF calculated by the CME

Sources	Calculated EF
EFs calculated by the PP at GSC	0.7538
EFs calculated by the PP after revision	0.7515

However, the PP decided to use the EF issued by SEA of Sri Lankan government for more accuracy and conservative reasons. All the CPAs under the PoA will be connected to the

electricity system of the Sri Lanka National Grid via the regional grid of a substation and selected the simple OM method and ex-ante option with fixed EFs for both the OM and BM calculations. The Sri Lankan government (SEA) provides a clear explanation of the tool for adequate utilization, under the simple OM method and the ex-ante option, with concrete EFs for the defined areas in Sri Lanka. All parameters used in the PDD were checked against the SEA's website data published, and the estimated emission reductions were recalculated and confirmed based on the values.

However, EF prepared by SEA of Sri Lanka was prepared under the Version 2.0 of "Tool to calculate the EF for an electricity system". DOE confirmed that the revision details from Version 2.0 of "Tool to calculate the EF for an electricity system" to Version 3.0. DOE did not find out any revision to affect the calculation EF for grid connection as follows:

From 02.0 - 02.1.0: no revision for EF calculation within one host country
From 02.1.0 - 02.2.0: no revision for EF calculation and revision for projects of LCD
From 02.2.0 - 02.2.1: Fix unit errors for off-grid power plant
From 02.2.1 - 03.0.0: Provide default factors for LDCs, SIDS, and off-grid EG. No revision for EF calculation regarding grid-connected electricity generation.
Also, the EF value by the SEA of Sri Lanka is publically available and less than the EF value calculated by the PP, more conservative method for emission reduction. Therefore, the EF value by the SEA of Sri Lanka is acceptable for the CPA.

Table 8. Emission factor issued by SEA of Sri Lanka government

SEA issued emission factors of Sri Lanka			Calculated CM
Hydropower project	OM	BM	
1st crediting period	0.7044	0.7491	0.7268

The EF of the CPA was calculated in accordance with the latest version of 'Tool to calculate the EF for an electricity system', and each CPA specifies the calculation in the CPA-DD.
In terms of the project emission for hydropower electricity generation, the CPAs result in new reservoirs, the power density shall be the greater than 4 W/m^2, and the project emission is considered if the power density is less than or equal to 10 W/m^2 (if the power density is more than $10W/m^2$, the project emission is not considered). Power density will be confirmed based on each CPA. According to the applied methodology, the leakage is to be considered if the energy generating equipment is transferred from another activity. The CPAs in the PoA is not be applied this case; therefore, no leakage is considered in this PoA.

6.12 Demonstration of additionality of the PoA as a whole

The additionality of the project has been presented on a CPA level. According to VVS, para. 195, the additionality of a PoA needs to be assessed in accordance with the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Programme of Activities (EB 70, Annex 5)".
The proposed "Programme of Activities for Small Scale Hydropower CDM in Sri Lanka" has the CPAs of "Grid Connected Hydropower Generation" less than 15 MW. The additionality of

the PoA as a whole will be validated by applying benchmark analysis, using one-year average of Average of Weighted Lending Rate (AWLR) issued by Central Bank of Sri Lanka at the investment decision, for each CPA. In this validation stage, a total of seven new hydropower plants are planned to be included in the PoA and the range is 1 MW to 4 MW; however, the IRRs have not been identified yet, except CPA <2013-PPB-001-1.3MW>.

According to the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Program of Activities (EB 70, Annex 5)", the proposed PoA that consists of one or more microscale or small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of "Guideline for demonstrating additionality of small-scale project activity", with capacity of more than 5 MW or "Guideline for the demonstrating additionality of microscale project activities" with Special Underdeveloped Zone (SUZ) approval. Initially, the PP would apply "Guideline for the demonstrating additionality of microscale project activities" for the some CPAs, which have total capacity less than 5MW; However, referring form EB's clarification (PRT_007) and "Guideline for demonstrating additionality of microscale project activity, version 05.0, para 8, it was confirmed that the total installed capacity of hydropower plants with less than 5MW was 149 WM, leading to a threshold ratio 4.7%, which is greater than the cutoff threshold of 3%, Therefore, the microscale hydropower plant, as CPAs under the PoAs, cannot be qualified as automatically additional within Sri Lanka. (Refer to F-CDM-PRT, doc id number PRT_007)

However, according to other paragraph of "Guideline on the demonstrating additionality of microscale project activities", para 8. a), some region in Sri Lanka can be defined as SUZ. DOE confirmed that Sri Lanka DNA prepares the recommendation of the Sri Lanka SUZ to UNFCCC EB approval. "Guideline on the demonstrating additionality of microscale project activities" will be applied to any CPA with less than 5MW capacity and the approval by the EB.

6.12.1 Starting date of a PoA/CPA

According to para. 159 of Project Standard (Version 02.1), the start date of a PoA shall be either the date of notification of the intention to seek the CDM status by the CME to the secretariat and the DNA or the date of publication of the PoA-DD for GSC. DOE confirmed that the PP revised the start date of a PoA from 13 September 2012, the date of signing MoU for the promotion of this PoA, to 5 February 2013, which is the date of PoA-DD for GSC. DOE confirmed that the revised start date of the PoA is in accordance with the requirement of Project Standard and other relevant documents.

6.12.2 Prior consideration of the CDM

As the start date of PoA was 5 February 2013, after 2 August 2008, the PP implemented prior consideration notification to the secretariat and the host party DNA. DOE confirmed these notifications to both DNA of Korea and Sri Lanka. Additionally, for this PoA project, the CME determined the start date of the proposed CDM PoA as the date publication of the PoA-DD for GSC, 5 February 2013, based on CDM PS para. 159. Therefore, DOE confirmed that this PoA project does not need any further evidence for prior consideration for CDM.

6.13 Identification of alternatives

As the proposed project is a small-scale project applicable to AMS I.D. (Version 17), it is not applicable to the identification of alternatives.

6.14 Assessment of investment analysis

The CPA used investment analysis in order to provide the assessment to demonstrate additionality based on VVS and the latest version of "Guidelines on the assessment of investment analysis (Version 05)" on EB 62, Annex 5, during the validation period.

As mentioned in Section 6.12, if any CPA is a microscale hydropower project, less than 5MW, is located in the SUZ area of Sri Lanka, and obtains SUZ approval from the EB, the CPA does not need to conduct investment analysis based on "Guideline demonstrating additionality of microscale project activities".

Without SUZ EB approval, the CPAs will conduct the investment analysis to demonstrate additionality. In Sri Lanka local regulation, the Project developer (as CPA implementer) must submit "Pre-FSR" to Sri Lanka SEA in order to receive approval for the project and construction. DOE confirmed by reviewing documentary evidences and performing interview with staffs of SEA that the proposed project's application was submitted in accordance with "Application for Engaging in and Carrying on of an On-grid Renewable Energy Project (Project Type: Hydro). The Pre-FSR shall contain key information, such as the profile of the applicant, site description, project designs, financial analysis, etc. After submission, SEA orders to one of the accredited consultants to check the application. When the consultant determines to approve, the "Certification by the Accredited Consultant" is issued. Upon receiving this certification, SEA issues "Provisional Approval" for the proposed project. Therefore, the Provisional Approval certifies the CPA implementer's Pre-FSR, including the financial parameters and financial analysis, including a sensitivity analysis against key variables. All financial parameters in the CPA-DDs will be confirmed based on the Pre-FSRs after above process and certified by SEA-accredited consultants.

In terms of benchmark, the PP decide to use "Local commercial lending rates" of one-year average of AWLR issued by Central Bank of Sri Lanka as the benchmark at the investment decision for each CPA. Deloitte-TECO confirmed by reviewing the official website of Central Bank of Sri Lanka that all the monthly AWLR data is available and publically acceptable. Deloitte-TECO concluded that the applied benchmark is suitable for the investment analysis for the CPAs.

Moreover, in terms of applied tariff for the PoA, Deloitte-TECO confirmed that the "Avoided cost tariff" was applied from 1996 to 2011 in Sri Lanka; however, the NCRE tariff was introduced from 2008. According to the CEB official website, the "Avoided cost tariff estimation from 1996 to 2011 in Sri Lanka is as follow:

Table 9. Historical avoided tariff 1996 - 2011

Year	Dry Season (Rs./kWh)	Wet Season (Rs./kWh)
1996	2.90	2.90
1997	3.38	2.89
1998	3.51	3.14
1999	3.22	2.74
2000	3.11	2.76
2001	4.20	4.00
2002	5.13	4.19

2003	6.06	5.85
2004	5.70	4.95
2005	6.05	5.30
2006	6.73	5.82
2007	7.64	6.94
2008	9.65	8.94
2009	11.17	10.59
2010	11.94	11.09
2011	11.19	10.23

The CPAs inclusion is/will be applied in the NCRE tariff, which has two patterns of tariff price. According to "Decision on Non-Conventional Renewable Energy Purchase Tariffs 2012–2013" issued by Public Utilities Commission of Sri Lanka (PUCSL), issued on 5 October 2012, there are two approved purchase tariffs for the NCRE: "Three-tiered Tariff (LKR/kWh)" and "Flat Tariff (LKR/kWh)". Both tariffs are applied for 20 years, but "Three-tiered Tariff (LKR/kWh)" has three fixed rates based on operation time; on the other hand, the "Flat Tariff (LKR/kWh)" has only one rate, which was confirmed not to be escalated for any reason over the entire 20-year period. Regarding two opinions, it was stated in the NCRE Tariff that "The selection between the two options would be at the discretion of the developer, at the time of signing the SPPA." The NCRE tariff, which compensates NCRE-based generation plant, will be applied to the all CPAs and applied to the investment analysis. Moreover, according to "Decision on Non-Conventional Renewable Energy Purchase Tariffs 2012 – 2013" issued by PUCSL, the NCRE projects in Sri Lanka are categories depends on its applied technology, such as, hydro, wind, biomass, MSW and waste heat. Especially, hydro power and wind power projects are additionally sub-categorized, i.e. mini-hydro and mini-hydro-local. Mini-hydro-local is defined as a project which uses hydro power equipment manufactured by the local company in Sri Lanka and Mini-hydro is defined as a project which uses hydropower equipment manufactured by an overseas company. Different values, such as electricity tariff, O&M cost rate, are applied between mini-hydro and mini-hydro-local. Mini-hydro-local is applied more advantages, especially, the higher tariff is applied.

6.15 Barrier analysis

It is not applicable to the PoA.

6.16 Common practice analysis

It is not applicable to the PoA that has small-scale CPAs.

6.17 Eligibility criteria for inclusion of a CPA in the PoA

The CME developed the initial eligibility criteria for inclusion of a CPA in the PoA in the initial PoA-DD; however, DOE found that the eligibility criteria for inclusion of a SSC-CPA in the PoA is not consistent with the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Programmes of Activities (Version 02.1), EB 70, Annex 05".

The eligibility criteria are as follows:

Table 10. Eligibility Criteria

No	Eligibility Criteria		Minimum eligibility criteria in EB 70, Annex 5
	Criteria	Description	
1	Voluntary action	The CPA is a voluntary activity, which is not enforced by any mandatory national/local regulation in Sri Lanka.	
2	Geographical boundary	The CPA is performed within the geographical boundary of Sri Lanka	Satisfied para. 16. (a)
3	Approval of CPA by CME	The CPA signs an agreement with CME to involve the CPA into PoA to ensure that CPA implementer is aware of, and agreed to, subscribe the CPA into PoA. The agreement between CME and CPA implementer include the debundling check, double counting, and monitoring issues. (In case that CPA implementer is same with CME, the agreement is not required.)	Satisfied para. 19
4	Debundling check	The CPA is not a debundled component of a large project activity.	Satisfied para 16. (l)
5	Avoid Double counting of CPA	The CPA is not involved in another registered, or under validation as a CDM, project activity or as a CPA under another, or as other GHG, reduction projects related to small hydropower generation	Satisfied para.(b)
6	Technology and Specification	The CPA applies run-of-river power generation technology, and if reservoir, power density of the project is greater than $4W/m^2$. (The CPA should submit the specification of hydropower generation facility/equipment installed for CPA)	Satisfied para. (c)
7	Methodology applicability	The CPA satisfies the applicability conditions for simplified baseline and monitoring methodologies as specified in the AMS I.D. (Version 17)	Satisfied paras. (e) and (i)
8	Funding from Annex I parties	The CPA provides an affirmation that funding from Annex I party, if any, does not result in a diversion of official development assistance.	Satisfied para. (h)
9	Additionality	The CPA meets the requirements pertaining to demonstration of additionality. To determine the additionality, CPA should follow the process in B.5 of PoA-DD, Part II	Satisfied para. (f)
10	CPA start date	The CPA does not commence prior to the start date of validation for PoA (05 February 2013), in accordance with EB 55, Annex 38, and has the documentary evidence to check its start date.	Satisfied para. (d)
11	Local Stakeholder Consultation	The CPA performs local stakeholder consultation before the inclusion in PoA and construction	Satisfied para. (g)
12	Environmental impact analysis	The CPA performs the environmental impacts analysis according to National Environmental Regulation of Sri Lanka.	Satisfied para. (g)
13	Project scale threshold	The capacity of hydropower plant does not exceed 15MW over the entire crediting period as small-scale CDM project activities.	Satisfied para. (k)

* EB 70, Annex 5, para 16 (j) is not applicable to this PoA. (Regarding "Standard for sampling and surveys for CDM project activities and programme of activities.")

Deloitte-TECO assessed the revised eligibility criteria for inclusion of a CPA under the PoA, and will confirm that the eligibility criteria are properly revised in accordance with the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Program of Activities (Version 02.1), EB 70, Annex 5."

6.18 Project duration and crediting period

According to Section B of the CDM SSC-PoA-DD, the project is to last for 28 years, and has selected a crediting period of seven years, which may be renewed two times. DOE confirmed the programme duration and decided that the crediting period was applied in accordance with the CDM requirements.

6.19 Monitoring plan for a PoA/CPA

As this is a small-scale hydropower generation PoA, the approved monitoring methodology AMS I.D. (Version 17) was applied to the PoA. The MP provided detailed information related to the compliance with the methodology and local criterion. During the validation stage, Deloitte-TECO confirmed that the PP has sufficient ability to implement the MP stated in the PoA-DD and CPA-DD.

6.19.1 Operational and management plan

It was confirmed that responsibilities and authorities of the CME and CPA implementers were clearly stated in the PoA-DD, which were consistent with the "CDM Operation Manual" prepared by the CME. Moreover, because of the recordkeeping system for each CPA under the PoA's plan to avoid double accounting, confirmation of debundling will be done under the instruction for operational and management of this proposed PoA.

6.19.2 Compliance of the monitoring plan with the approved methodology

- **Baseline emissions**

  To calculate the baseline emissions, the net electricity supplied to the national grid by the proposed hydropower plant ($EG_{BL,\ y}$) will be measured. The baseline emission will be calculated by multiplying the net electricity generation supplied to the national grid by the EF as defined in CPA-DD.

- **Project emissions**

  According to the applied methodology of AMS I.D. (Version 17) and ACM0002 (Version 13.0.0), power density of the CPAs need to be confirmed. Moreover, CO_2 emissions from on-site consumption of fossil fuels due to the project activity as a CPA under the PoA, if any, will be calculated using the latest version of the 'Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion' and considered in ex post ER calculation of the CPA.

- **Project Leakage**

  According to the applied methodology of AMS I.D., if the energy generating equipment is transferred from another activity for the CPA, leakage is to be considered.

6.19.3 Implementation of the plan

Monitoring structure for the PoA is comprehensively detailed in the PoA-DD and CPA-DD, including description of the responsibility, procedure reference, equipment details, calibration

frequency, monitoring structure, and archiving of the records. By reviewing the provided PoA "CDM operation manual," Deloitte-TECO confirmed that the monitoring arrangements, which were described in the MP within the PoA-DD, are feasible and the means of implementation of the MP is sufficient to ensure the emission reductions achieved by the PoA.

- **Monitoring equipment and calibration**

  The current local regulation of the meters accuracy and the calibration frequency were described in the PoA-DD and CPA-DD. Deloitte-TECO confirmed the "Standardized agreement for purchase of electrical energy" issued by the CEB, which regulated the requirements of monitoring equipment accuracy and calibration frequency. All the CPAs under the PoA will be applied the requirement. DOE confirmed that especially, the CEB required the monitoring equipment accuracy of less than 2.0% and calibration frequency is at least once a year.

6.20 Environmental impacts

DOE confirmed that the Environmental Impact Assessment (EIA) will be carried out at the CPA level, and it was confirmed to be correctly described in the PoA-DD.

6.21 Local stakeholder consultation

DOE confirmed that the local stakeholder consultation will be carried out at the CPA level, and it was confirmed to be correctly described in the PoA-DD.

6.22 Determination of occurrences of debundling under a PoA

Deloitte-TECO confirmed that the CME had established a clear and transparent description of the operational and management arrangements as stated in the PoA-DD, and the debundling checklist described in the PoA-DD was developed in accordance with "Guidelines on Assessment of Debundling for SSC Project Activities," EB 54, Annex 13. Moreover, there is recordkeeping and managing system for each CPA under the PoA. Sri Lanka Carbon Fund (Pvt.) Ltd. will check the records of each CPA before submission to the DOE.

This confirmation was carried out by the CME, Sri Lanka Carbon Fund (Pvt.) Ltd., through checks and information available on the UNFCCC website. Also, as each CPA will have a unique geographical boundary in Sri Lanka; thus, it can be checked whether a CPA under the proposed PoA is already a registered CDM project or CPA in another PoA from the UNFCCC website.

6.23 Corrective action requests and clarification requests

Deloitte-TECO implemented an on-site assessment during 19 February 2013 to 21 February 2013 and issued CARs and CLs. The CARs and CLs are referred in the Validation Checklist in Table A-1 of Annex A.

Table 11 Resolution of CARs for PoA

Draft report clarifications and CARs by the verification team	Summary of PO response	Verification team conclusion
CAR 1 (checklist ID# 9, 105) The initial CDM Operation Manual (prepared on 21/01/2013, Version 0) was not consistent with the the PoA-DD and CPA-DD. Also, it was not satisfied relevant requirements, such as PS, "Demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for programmes of activities" (EB 70, Annex 5).	* In the Procedure III of manual, PP add the contents '2. composition of the PoA' (page 9) * PP revised the Operation structure of PoA to same with that of PoA-DD (Procedure III, 3. Operation Framework of the PoA (page 9)) * EPL means Environmental Protection License and it is required for the already operated project. so, PP deleted the EPL and revised to IEER/EIA. * PP revised the contents '3. Competencies and qualification' of Procedure IV (page 12) * PP revised the start date to 05/Feb/2013 (GSC) (eligibility criteria #10) * PP added 'IEE approval by CEA' for the evidence of eligibility criteria #12. Environmental impact analysis. * According to the article 4.4 of the "standardized agreement for purchase of electricity energy between CEB and company(seller)", CEB has the right to inspect the seller's equipment of the facility to ensure compliance with prudent utility practices and the interconnection guidelines. therefore, the project activity will be checked and inspected by CEB. * According to the article 4.6 (c) of the "standardized agreement for purchase of electricity energy between CEB and company(seller)", the metering equipment shall be tested at least annually, * PP broaden the technology that can be included in this PoA. A project with reservoir also can be included if power density of the reservoir is greater than 4 W/m2 * PP attached the Diploma and Career certificate of Approver and Technical officer of CME. (certificate of CME)	DOE confirmed the revised CDM Operation Manual (Version 2, dated 20 June 2013), which is revised in accordance with the PoA-DD, CPA-DD and other relevant requirements, such as PS, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities." DOE also confirmed all the annexures and the certificates of Approver and Technical officer of CME. This item was closed.
CAR 2 (checklist ID. # 44, 50 and 51) The start date of PoA was not satisfied the requirement of para. 105 of CDM PS.	PP changed the PoA start date to 5 February 2013, the date of PoA GSC. PoA-DD 13 page, Section D.1	DOE confirmed that the revised start date of the PoA is in accordance with the requirement of Project Standard and other relevant documents. The PDD was properly revised. This item was closed.
CAR 3 (checklist ID. # 93) DOE confirmed that "Cap_{BL}" and "A_{BL}" which are required to be monitored for ER calculation, are not stated in the Section VII. 3-4. of "CDM Operation Manual".	- PP added the monitoring parameter "CapBL", "ABL", in the CDM Operation Manual (Section VII. 3-4. of CDM Operation Manual) Appendix 2_ Sri Lanka PoA_CDM Operation Manual v2-1	Monitoring parameters, EGBL,y, Energy Input, Energy Output, CapBL, ABL, and TEGy were confirmed in the PoA-DD and "CDM Operational Manual" Version 2, issued on 20 June 2013. Those parameters are complies with the applied methodology AMS I.D., Version 17.
CAR 4 (checklist ID. # 95) Based on the CDM operation manual, the CME established four Annexure for CPA inclusion. However, DOE could not confirm the Annexure II, III and IV during the on-site assessment. Especially, eligibility criteria in the Annexure III are not satisfied the actual situation for this proposed PoA.	PP provided the contract between CME and CPA - PP added some contents about detail of project activity in the Annex III. (i.e., Company name, Hydropower plant name, Capacity) Appendix 2_ Sri Lanka PoA_CDM Operation Manual v2-1	DOE confirmed the CME-CPA contract between Sri Lanka Carbon Fund (SLCF) and Peak Power Beta (Private) Limited issued on 8 February 2013. DOE confirmed that the revised PoA-DD, CPA-DD, and CDM Operation Manual. Also confirmed the Annexure III, which has the revised eligibility criteria. DOE concluded that the MP was prepared to cover the applied methodology and PoA's eligibility criteria This item was closed.
CL 1 (Checklist ID. # 1) GSC was conducted from 5 February 2013. It is still on-going to be collected the comments.	GSC was finished at 6th March 2013.	GSC was finished at 6th March 2013. There is no comment during the GSC. This item was closed.

CL 2 (Checklist ID. # 2, 3 and 4) LoAs have not been provided at the time of on-site assessment. Please provide LoA of Sri Lanka and South Korea when those are available.	PoA approved by Republic of Korea at 7th June 2013 Korea LoA PoA approved by Sri Lanka DNA at 5 August 2013. LoA-Sri Lanka	DOE confirmed the LoA of South Korea. No. 2013-01, issued on 7 June 2013. DOE confirmed the LoA of Sri Lanka, which has stated Sri Lanka Carbon Fund (Pvt.) as CME of the Programme of Activities for Small Scale hydropower, CDM in Sri Lanka as PoA, issued on 5 August 2013. This item was closed.
CL 3 (Checklist ID. # 5, 6, 7, 8 and 10) MoC has not been prepared during the on-site assessment. It is necessary to confirm it whenever it is ready. Please submit MoC and MoC confirmation letter.	PP submit MOC and Confirmation Letter (KECO) (PP added Mr. Batagoda and Ms. Kim Eunyoung to Appendix 1 of PoA-DD and revised the e-mail address of Mr. Mahesh in Appendix 1 of PoA-DD) MOC MOC Confirmation letter	DOE confirmed the revised PoA-DD in which the relevant contact persons in the MoC were added. The PoA-DD revised Mr. Mahesh's email address. MoC confirmation letters for contact persons were supplied. DOE had interviews with contact persons of SRCF and Koho Trading & Consultancy during the on-site validation. DOE concluded that the PP and CME corporate and personal details in the MoC are accurate. This item was closed.
CL 4 (Checklist ID. #12, 13 and 40) Eligibility criteria by CME is under review by DOE (check with manual)	PoA-DD, CPA-DD and CDM operation manual were revised.	DOE confirmed the revised PoA-DD, CPA-DD, and CDM Operation Manual. DOE concluded that the CPA < 2013-PPB-001-1.3MW> has complied with the revised eligibility criteria in the PoA-DD and CDM operation manual. This item was closed.
CL 5 (Checklist ID. #14, 18 and 26) The PPs need to provide any document that indicates address of SFCK, KOHO, and Peak Power. Also, the CME needs to re-confirm the "Geographic Reference based on GPS" in the CPA-DD.	CME and Project Participant (KECO, KOHO and CPA implementer-Peak Power Beta) provide their registration licenses and CME submit SLCF-KECO-Koho MoU document as evidence. PP checked the Geographic reference in the CPA-DD and IEER, and confirm that '7°7′55′′N' is a right one. Picture of project site	DOE confirmed the business licenses (with address) and also confirmed IEER, Pre-FSR and pictures of project site for geographical coordination for project site. . This item was closed.
CL 6 (Checklist ID. #30) The CME provided two EF values, EF calculated by CME and by SEA of Sri Lanka. The EF calculation sheet, by the SEA of Sri Lanka, was prepared under the Version 2.0 of "Tool to calculate the emission factor for an electricity system." It is under review by DOE regarding the difference between Version 2 and Version 3 of "Tool to calculate the emission factor for an electricity system." The suitability of EF value by SEA needs to be confirmed.	Emission Factor: 0.7268 tCO2/MWh - The value by SEA **. At this, SEA is the Sri Lanka Government organization to manage renewable energy project. SEA annually calculate emission factor and make public the result value. So, PP applies the value calculated by SEA.	DOE confirmed the revised EF calculation sheet by the PP and EF calculation sheet by SEA of Sri Lanka. DOE confirmed that the revision details from Version 2.0 of "Tool to calculate the emission factor for an electricity system" to Version 3.0 and did not find out any revision to affect the calculation EF for grid-connected hydropower project. From 02.0 - 02.1.0: No revision for EF calculation within one host country From 02.1.0 - 02.2.0: No revision for EF calculation and revision for projects of LDCs From 02.2.0 - 02.2.1: Fix unit errors for off-grid power plant From 02.2.1 - 03.0.0: Provide default factors for LDCs, SIDS, and off-grid EG. No revision for EF calculation regarding grid-connected electricity generation. Also, the EF value by the SEA of Sri Lanka is publically available and less than the EF value calculated by the PP, more conservative method for the emission reduction calculation. Therefore, the EF value by the SEA of Sri Lanka is acceptable for the CPA. This item was closed.
CL 7 (Checklist ID. # 34 and 35 Please provide the list of E-policy in Sri Lanka. E-policies (avoided tariff, NCRE, etc.) in Sri Lanka are need to be reviewed by DOE.	PP made a description about Sri Lanka E- policy (renewable energy promotion policy) (PoA-DD, page 3) ---------- 1. The Policy & Strategies issued on May 11, 2008 (Gazette No. 1553/10 of June 10, 2008) is the latest. Despite of what mentioned in page 3A of the Policy, it is not reviewed and revised. 2. The NCRE Tariff announced by PUCSL is built-in with	DOE confirmed E-Policy regarding tariff system in Sri Lanka. Avoided cost tariff estimation from 1996 to 2011 in Sri Lanka from the official website of CEB, www.ceb.lk/sub/db/op_ncretariff.html, and the approved tariff (NCRE tariff) of 2013, which was applied into the IRR analysis, was also confirmed by "Decision on Non-Conventional Renewable Energy Purchase

	certain amount of incentive portion. Sri Lanka provides 'Cost-based and technology-specific tariff' scheme and option to select a three-tier tariff or a flat tariff for the consideration of investment burden of the developers which is a kind of incentives. The NCRE tariff in Sri Lanka is/will not showing breakdown of actual tariff portion and incentive portion to the public as it might/can be used for wrongly and create political issue. However, there is an understanding between governing bodies, CEB who are responsible for payment of tariff and SLSEA who are responsible for promotion of NCRE, that the difference between actual cost of generation and NCRE tariff will be subsidized by SLSEA fund (probably from Energy Fund, funded by the Treasury). - (source: discussion with SLSEA officer) *[quote] 12 Mechanism for Payment of Tariff* *CEB, as the purchaser of energy will continue to effect payment for electricity purchased from the SPPs. The final tariff paid to the SPPs will involve two sources of funds; the CEB and the SEA. [Unquote]* *From Purchase of Electricity to the National Grid under Small Power Purchase Agreements (SPPA) Explanatory notes to the Press Release dated 18th March 2008 - attached.* The tariff applied to the IRR analysis is the latest NCRE tariff and according to the above understanding a certain portion of incentive is built-into the tariff without showing the actual portion.	Tariffs 2012-2013." DOE confirmed that the NCRE tariff, applied into the CPA, is the officially approved tariff by the Sri Lanka government for the hydro project less than 10MW in Sri Lanka. The NCRE tariff is higher than any year of avoided cost tariff estimation. In addition to that, the NCRE tariff has a portion of incentive that is built-in based on the relevant documentary evidences. Additionally, it was stated that the NCRE tariff will not be escalated for any reason over the entire 20-year period, which is the same as operational period for the CPA. DOE concluded that the E-Policy has been applied into the NCRE projects in the Sri Lanka included the CPAs under the PoA and the NCRE tariff is included a certain portion of incentives. This item was closed.

7 VALIDATION OPINION

Deloitte-TECO has performed a validation of the Programme of Activities for Small Scale Hydropower CDM in Sri Lanka. The validation was performed on the basis of the UNFCCC criteria and host country criteria, as well as the criteria given to provide for consistent project operations, monitoring, and reporting. The validation process composed of a desk review and risk analysis, an on-site visit, follow-up assessment, and finalized conclusion based on the evidence collected during the validation. A profile of the CDM team members is shown in Section "8.1 Team." Further information on quality controls within the team and about the validation process is shown in Section "4.4 Internal Quality Control." Public comments were invited through a consultation process for global stakeholders. As no comments were received, no modifications were made.

The validation process found no information indicating that the project receives any public funding that could result in a diversion of ODA.

The review of the PoA-DD (Version 01, 4 February 2013) and the subsequent follow-up interviews have provided Deloitte-TECO with sufficient evidence to determine the fulfillment of stated criteria.

In our opinion, the PoA described in the PoA-DD (Version 03, 6 August 2013) meets all relevant UNFCCC requirements for the CDM and all relevant host country criteria. Deloitte-TECO has also reviewed a LoA from the host party confirming that the PoA assists in achieving sustainable development. Hence, the PoA will be recommended by Deloitte-TECO for registration with the UNFCCC.

By displacing fossil fuel-based electricity with electricity generated from a renewable source, the project results in reductions of CO_2 emissions that are real, measurable, and give long-term benefits to the mitigation of climate change. An analysis of the investment barriers demonstrates that the proposed PoA is not a likely baseline scenario. Emission reductions attributable to the project are hence additional to any that would occur in the absence of the PoA. Given that the project is implemented as designed, the PoA is likely to achieve the estimated amount of emission reductions.

6 August 2013

Hiroshi Inanaga

Chief Executive Officer

Deloitte Tohmatsu Evaluation and Certification Organization

Tokyo, Japan

8 VALIDATION TEAM

8.1 Team

Name	Organization	Role	Auditor Status	CDM Audit Type (Validation/Verification)	Competences						Task/Role			
					Host Country Experience	Host Country Language	Country Regulatory Aspect	Environmental Aspect	Financial Aspect	Technical Area	Document Review	Site Visit/Interview	Report Writing	Supervision
PARK, Yong Tae	Deloitte-TECO	Team Leader	Lead Auditor	Val/ Ver	-	-	-	Y	-	Y	Y	Y	Y	Y
OTANI, Yuichi	Deloitte-TECO	Team Member	Lead Auditor	Val/ Ver	-	-	-	Y	-	Y	Y	Y	Y	-
SHI, Xueting	Deloitte-TECO	Team Member	Lead Auditor	Val/ Ver				Y	Y	Y	Y	-	-	-
SAPUMAL Ranwala	-	Interpreter	-	-	Y	Y	Y	-	-	-	-	-	-	-

8.2 Reviewer

Name	Organization	Role	Host Country Experience	Host Country Language	Country Regulatory Aspect	Environmental Aspect	Financial Aspect	Technical Area
ISHIGAI, Chikara	Deloitte-TECO	Technical reviewer	-	-	-	Y	-	Y
INANAGA, Hiroshi	Deloitte-TECO	Engagement Quality Assurance, Audit Director	-	-	-	Y	-	Y
ICHIKAWA, Masahiko	CDM Judging Committee	Judging Committee Chair	-	-	-	-	-	-
INANAGA, Hiroshi	Deloitte-TECO	Chief Executive Officer	-	-	-	Y	-	Y

9 REFERENCES

No.	Title
1	PoA-DD, CPA-DD (GSC)
2	PoA-DD, CPA-DD (Final)
3	Coordinating and Managing entity administration manual (guideline): CDM Operation Manual Ver. 2
4	Pre- FSR (initial and final) and approval letter
5	Pre-FSR approval
6	Pre-FSR author certificate
7	Pre-FSR for seven planned hydropower projects under the PoA
8	IRR analysis spreadsheet
9	LoA – Korea
10	LoA- Sri Lanka
11	MoC and MoC confirmation letters by PPs
12	Business license of the project entity (KECO, SLFC, KOHO, CPA<2013-PPB-001-1.3MW)
13	Prior consideration notification to DNAs of Korea and Sri Lanka
14	MoU for the promotion of this PoA between KECO, KOHO and SLCF (Starting date of PoA)
15	National Energy Policy & Strategies of Sri Lanka, Gazette No. 1553/10 of June 10, 2008
16	Standardized Agreement for purchase of electrical energy between the CEB and PO (standardized form)
17	"Decision on Non-Conventional Renewable Energy Purchase Tariffs 2012-2013" issued on 05 October 2012 by Public Utilities Commission of Sri Lanka
18	Power sector in Sri Lanka: CEB, "Long Term Generation Plane 2009-2022", December 2008/ Chapter 1 – Introduction/ Page 1-5
19	"Guidelines on the demonstration of additionality of small-scale project activities (EB 68, Annex 27, Version 09.0).
20	"Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 02.1 (EB 70, Annex 5)
21	AMS I.D., Grid connected renewable electricity generation (Version 17)
22	"Guidelines on assessment of debundling for SSC project activities (Version 3.0, Annex 13, EB 54)
23	"Procedures for Registration of a Programme of Activities as a Single CDM Project Activity and Issuance of Certified Emission Reductions for a Programme of Activities, Version 04.1"
24	Attachment A to Appendix B of the Simplified Modalities and Procedures Version 08, EB 63 Annex-24, 2011-09-29

25	"Guidelines on the assessment of investment analysis, Version 05, Annex 5 of EB 62"
26	Tool to calculate the emission factor for an electrical system (Ver 03.0.0, EB 70, Annex 22)
27	Tool for the demonstration and assessment of additionality (Ver 07.0.0, EB 70, Annex 8)
28	Tool to calculate project or leakage CO2 emission from fossil fuel combustion (Ver 02, EB 41, Annex 11)
29	Approval from Central Environmental Authority(CEA) (18/Nov/2011)
30	Provisional Approval from Sustainable Energy Authority(SEA) (21/May/2012)
31	Letter of Intent(LOI) from Ceylon Electricity Board(CEB) (28/Jun/2012)
32	Energy Permit from Sustainable Energy Authority(SEA) (12/Jul/2012)
33	No objection letter from Public Utility Commission (20/Jul/2012)
34	Initial Environmental Assessment (IEA) Report (Documentary evidence of Geographical coordinates of CPA)
35	IEER approval letter
36	Pictures of CPA<2013-PPB-001-1.3MW> site
37	Maps of place in which the CPA<2013-PPB-001-1.3MW> hydropower plant is located
38	Power system diagram of CPA<2013-PPB-001-1.3MW> hydropower plant
39	Documentary evidence for technical features of the CPA plant
40	Construction Map of CPA<2013-PPB-001-1.3MW>
41	Specification of electricity generation equipment (Specification)
42	1 year Average Weighted Prime Lending Rate (AWPLR) published by the Central Bank of Sri Lanka
43	Economic Service Charge (Amendment) Act, No. 11 of 2012 (Sri Lanka)
44	National Building Tax Act, No. 9 of 2009 [Incorporating Amendments up to 31st March 2011]
45	Project cost breakdown sheet
46	Application for Engaging in and carrying on of an on-grid renewable energy project (form)
47	Current trend of devaluation of Sri Lankan rupee and inflation rate
48	Ports and Airports Development Levy Act, No. 18 of 2011 [certified on 31 March 2011]
49	E- Policy in Sri Lanka (issued by Ceylon Electricity Board)
50	Avoided Cost Tariff estimation from 1996 to 2011 in Sri Lanka (issued by CEB)
51	Electricity Generation License form (issued by PUCSL)
52	Gross electricity generation in the Sri Lanka during past 5 years (year 2007 - 2011)
53	Statistics digest of Electric Power in Sri Lanka for Emission factor calculation
54	Caloric value sourced from Statics of Electric Power in Sri Lanka 2009-2011
55	Annual Energy Generation by Most Recent Five Power Plants in Sri Lanka (CEB Sales and Generation Data Book 2011)
56	Annual Energy Generation by Most Recent Power Plants which compromise 20% of Total Generation

57	Engineering Recommendation G 59/1, of the Electricity Association of 20, Millbank, England
58	EF calculation spreadsheet by SEA
59	Records of stakeholder meeting (invitation and meeting)
60	Confirmation letter of no other small hydropower project belongs to CPA implementer, issued by SEA on 15 May 2013
61	Letter of Intent for Project Participation form Annexure I. (signed by CPA implementer)
62	CME-CPA contract, Annexure II (signed)
63	Confirmation of eligibility criteria check, Annexure III (conducted by CME)
64	Certificate of Double Counting Check Annexure IV (signed by CPA implementer)
65	Confirmation letter for SPPA signing delay, issued by CPA implementer on 7 June 2013
66	F-CDM-TRT-REC_007, regarding applying “Guidelines for additionality of microscale project activities” with EB clarification
67	Letter from land commissioner general's Department
68	Small Hydropower Project Development Process by CPA PP
69	Relationship for CPA implementers and VST Group

APPENDIX A: VALIDATION PROTOCOL

Table A-1 Requirements Checklist

ID No.	Validation Requirements	Means of Validation	DOE comment after on-site visits (and/or summary of additional requests)	PP response to request for CAR/CL from DOE (Please add comments and/or questions against DOE comments after interview)	Draft Concl.	Final Concl.
	VIII. General validation Requirements					
	7.5 Global stakeholder consultation					
1	34. The DOE shall acknowledge receipt of and take into account all comments on the PDD of the proposed project activity submitted in accordance with the Project cycle procedure. 35. The DOE shall take into account all the comments received during the validation of the proposed project activity. 36. If comments indicate that the proposed project activity does not comply with the CDM requirements and are not substantiated, then the DOE shall request further clarification from the entity providing the comment. However, the DOE is not required to enter into a dialogue with Parties, stakeholders or NGOs, that comment on the CDM requirements. If no additional information or substantiation is provided in response to a request for clarification, the DOE shall proceed to assess the comments as originally provided.		GSC was conducted from 5 February 2013. It is still ongoing to be collected the comments. GSC was finished at 6th March 2013. There is no comment during the GSC.		CL	OK
	7.6. Approval					

2	38. The DOE shall determine whether the designated national authority (DNA) of each Party indicated as being involved in the proposed CDM project activity in the PDD has provided a written letter of approval.	39. The DOE shall determine whether each letter confirms that: (a) The Party is a Party to the Kyoto Protocol; (b) Participation is voluntary; (c) In the case of the host Party, the proposed project activity contributes to the sustainable development of the country; (d) It refers to the precise proposed project activity title in the PDD being submitted for registration. 40. The DOE shall determine whether the letter(s) of approval is unconditional with respect to 39 (a) to (d) above. 41. The DOE shall determine whether the letter(s) of approval has been issued by the respective Parties DNA and is valid for the proposed project activity under validation. 42. If the DOE doubts the authenticity of the letter of approval, the DOE shall verify with the DNA that the letter of approval is authentic.	·LoAs have not been provided at the time of on-site assessment.(Please provided LoA of Sri Lanka and South Korea when they are available.) · Draft Validation Report needs to be prepared for application for LoA of Korea. ↓ · The LoAs of South Korea and Sri Lanka need to be provided. ↓ DOE confirmed the LoA of South Korea. No. 2013-01, issued on 7 June 2013. LoA of Sri Lanka: Doc. No. : 04/04/05/921, issued date: 5 August.2013 · DOE confirmed the LoA of Sri Lanka, which has stated Sri Lanka Carbon Fund (Pvt.) as CME of the Programme of Activities for Small Scale hydropower, CDM in Sri Lanka as PoA. Sri Lanka has acceded the Kyoto Protocol in September 2002, the project contributes to sustainable development in the host country of Sri Lanka and voluntary participation in the proposed CDM activity.	PoA approved by Republic of Korea at 7th June 2013 #2_korea LoA PoA approved by Sri Lanka DNA at 5 August 2013. #9_ LoA-sri lanka	CL	OK
	7.7. Authorization					
3	45. The DOE shall determine whether each project participant has been authorized by at least one Party involved in a letter of approval.	46. The DOE shall confirm that the project participants are listed in tabular form in the PDD and that this information is consistent with the information provided in the section that contains the contact information for project participants. 47. The DOE shall confirm that no entities other than those authorized as project participants are included in these sections of the PDD. 48. The DOE shall confirm that the approval of participation has been issued from the relevant DNA and if in doubt shall verify with the DNA that the approval of participation is valid for the proposed CDM project participants.	It was confirmed by interview with the PP that there is no need to submit any authorization letter to DNA for LoA acquisition in Sri Lanka. Refer to ID #2 ↓ DOE confirmed the LoA of South Korea. No. 2013-01, issued on 7 June 2013. LoA of Sri Lanka: Doc. No. : 04/04/05/921, issued date: 5 August.2013	PoA approved by Republic of Korea at 7th June 2013 #2_korea LoA PoA approved by Sri Lanka DNA at 5 August 2013. #9_ LoA-sri lanka	CL	OK
	7.8. Contribution to sustainable development					

4	50. The DOE shall confirm that the DNA has considered whether the proposed CDM project activity assists the host Party in achieving sustainable development.	51. The DOE shall determine whether the letter of approval by the DNA of the host Party confirms the contribution of the proposed CDM project activity to the sustainable development of the host Party.	· Refer ID. #2, 3 ↓ DOE confirmed the LoA of Korea, in which it includes that this project contributes to sustainable development in both countries.	Refer ID. #2, 3	CL	OK
	7.9. Modalities of communications					
	1 General					
5	53. The DOE shall validate the corporate identity of all project participants and focal points included in the Modalities of Communication (MoC) statement, as well as the personal identities, including specimen signatures and employment status, of their authorized signatories.	54. The DOE shall validate paragraph 53 above through: (a) Directly checking evidence for corporate, personal identity and other relevant documentation; (b) Notarized documentation; or (c) Written confirmation from the project participant or the coordinating/managing entity that submits to it the MoC statement that all corporate and personal details, including specimen signatures, are valid and accurate.	MoC has not been prepared during the on-site assessment. It is necessary to confirm it whenever it is ready. Please submit MoC and MoC confirmation letter ↓ DOE confirmed the provided MoC. MoC confirmation letter, which was issued by the KECO, was confirmed and accepted. - Mr. Batagoda (SRCF) is not in the Appendix 1 of PoA-DD. - Email address of Mr. Mahesh is not consistent with PoA-DD. - Ms. Kim Eun Young (KECO) is not in the Appendix 1 of PoA-DD. MoC confirmation letter by CME; SRCF needs to be provided. ↓ DOE confirmed the revised PoA-DD in which the relevant contact persons in the MoC were added. The PoA-DD revised Mr. Mahesh's email address. MoC confirmation letters for contact persons were supplied. DOE had interviews with contact persons of SRCF and Koho Trading & Consultancy during the on-site validation. DOE concluded that the PP and CME corporate and personal details in the MoC are accurate.	PP submit MOC and Confirmation Letter (KECO) (PP added Mr. Batagoda and Ms. Kim Eunyoung to Appendix 1 of PoA-DD and revised the e-mail address of Mr. Mahesh in Appendix 1 of PoA-DD) #5_MOC #5-1_MOC Confirmation letter	CL	OK

6		55. When the DOE validates identity by applying paragraph 54 (c) above, the DOE shall ensure that the MoC statement is received from a project participant with whom the DOE has a contractual relationship. For CDM PoAs, the DOE shall ensure that the MoC statement is received from the coordinating/managing entity.	Refer ID#5 MoC confirmation letter by CME; SRCF needs to be provided. ↓ MoC confirmation letter by KECO was confirmed. Issued on 2 May 2013, signed by chief executive officer of KECO. DOE concluded that the PP and CME corporate and personal details in the MoC are accurate.	PP submit MOC and Confirmation Letter (KECO)	CL	OK
7		56. When the DOE validates identity by applying paragraph 54 (c) above, the DOE shall ensure that the official who submits the MoC statement to the DOE and the official who signed the written confirmation (if a different person) is/are duly authorized to do so on behalf of the respective project participant or coordinating/managing entity.	Refer ID#5 MoC confirmation letter by CME; SRCF needs to be provided. ↓ MoC confirmation letter by KECO was confirmed. Issued on 2 May 2013, signed by chief executive officer of KECO. DOE concluded that the PP and CME corporate and personal details in the MoC are accurate.	PP submit MOC and Confirmation Letter (KECO)	CL	OK
8		57. If the DOE is unable to validate the requirements by applying paragraph 54 (a), (b) or (c) above then the DOE may perform further validation activities in order to confirm that the corporate and personal details, employment status and specimen signatures included in the MoC statement are valid and accurate and comply with the requirements of this section.	Refer ID#5 DOE concluded that the PP and CME corporate and personal details in the MoC are accurate.	PP submit MOC and Confirmation Letter (KECO)	CL	OK
	8.4.1. Coordinating/managing entity and participants in a PoA					
9	186. The DOE shall assess the management system described in the PoA design document (CDM-PoA-DD) in accordance with the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for program of activities .		The initial CDM Operation Manual (prepared on 21/01/2013, Version 0) was not consistent with the the PoA-DD and CPA-DD. Also, it was not satisfied relevant requirements, such as PS, "Demonstration of additionality, development of eligibility criteria, and application of multiple methodlogoies for programmes of activities" (EB 70, Annex 5).. - No part for technologies and facilities in the CDM Operation Manual. - Page 9, structure for operating PoA is different from that of PoA-DD - Page 11, no definition of EPL? - Page 12, there are no defined competencies reasonable for CME in terms of academic qualification and duration of work experience in Sri	* In the Procedure III of manual, PP add the contents '2. composition of the PoA' (page 9) * PP revised the Operation structure of PoA to same with that of PoA-DD (Procedure III, 3. Operation Framework of the PoA (page 9)) * EPL means Environmental Protection License and it is required for the already operated project. so, PP deleted the EPL and revised to IEER/EIA. * PP revised the contents '3. Competencies and qualification' of	CAR	OK

			Lanka. - Page 13-15, please revise eligibility criteria for CPA inclusion. (Check with those of PoA-DD). No. 11, what is 01 December 2012; it needs to be revised to 5 February 2013. - No. 14, is evidence enough with only form not approval? - Page 24, it stated that correction action and prevention action (must be corrective and preventive action), but how the CME finds the nonconforming item, from internal audit or something else? - Page 25, 6-4 calibration, please state national regulation in Sri Lanka, and please make sure calibration is conducted at least once in three years. Does it mean that calibration is implemented based on manufacturer's specification? - Page 31, 4-4. Correct CAL ⇒CAR - Please confirm whether the CPA of this PoA is only defined "No reservoir bigger than 4 W/m^2"? What if a project has reservoir with power density more than $4W/m^2$ based on the applied methodology? ↓ DOE confirmed the revised CDM Operation Manual (10 April 2013). - Please provide "Certificate" of approver and technical officer of CME. - Please provide the specification of hydropower generation facility/equipment installed when available, under eligibility criteria No. 6 - DOE reviewed the "standardized agreement for purchase of electricity energy between CEB and company(seller)" and confirmed the related parts of CDM Operation Manual, esp., monitoring, calibration, meter accuracy, etc., were properly referred by the agreement. DOE decided that management system described in the part of PoA-DD and the CDM Operation Manual (Version 2) were consistent with the Para.19 (a) to (g) "Standard for demonstration of additionality, development of eligibility criteria, and application of multiple methodologies for program of activities" ↓ DOE confirmed the revised CDM Operation Manual	Procedure IV (page 12) * PP revised the start date to 05/Feb/2013 (GSC) (eligibility criteria #10) * PP added 'IEE approval by CEA' for the evidence of eligibility criteria #12. Environmental impact analysis. * According to the article 4.4 of the "standardized agreement for purchase of electricity energy between CEB and company(seller)", CEB has the right to inspect the seller's equipment of the facility to ensure compliance with prudent utility practices and the interconnection guidelines. therefore, the project activity will be checked and inspected by CEB. * According to the article 4.6 (c) of the "standardized agreement for purchase of electricity energy between CEB and company(seller)", the metering equipment shall be tested at least annually, * PP broaden the technology that can be included in this PoA. A project with reservoir also can be included if power density of the reservoir is greater than 4 W/m2 * PP attached the Diploma and Career certificate of Approver and Technical officer of CME. (#9_certificate of CME)		

			(Version 2, dated 20 June 2013), which is revised in accordance with the PoA-DD, CPA-DD, and other relevant requirements, such as PS, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities." DOE also confirmed the certificates of approver and technical officer of CME.			
	7.9.2 Modalities of communication statement					
10	59. The DOE shall validate that the MoC statement has been correctly completed and duly authorized.	60. The DOE shall check that: (a) The latest version of the form "Modalities of Communication statement" (F-CDM-MOC) has been used; (b) The information required as per the F-CDM-MOC, including its annex 1, is correctly completed; (c) The project participants authorized signatories signing the F-CDM-MOC correspond to the project participants authorized signatories included in F-CDM-MOC, annex 1.	Refer ID#5	Refer ID#5	CL	OK
	7.9.2.3. Project design Document					
11	62. The DOE shall determine whether the PDD was completed using the latest version of the PDD form appropriate to the type of project activity.		· It was confirmed that the latest version of PDD forms were used. (Version 02.0)		OK	OK
	8.4.2. CPA design document					
12	187. The DOE shall assess any proposed CPA that a coordinating/managing entity wishes to include in the PoA, to determine whether it complies with the eligibility criteria specified in the CDM-PoA-DD. The means of validation to determine compliance with this requirement will be specific to the PoA.		Eligibility criteria by CME is under review by DOE (check with manual) ↓ DOE confirmed the revised PoA-DD, CPA-DD, and CDM Operation Manual. DOE concluded that the CPA < 2013-PPB-001-1.3MW> has complied with the revised eligibility criteria in the PoA-DD.	Refer ID.# 9 and revised PoA-DD, CPA-DD and CDM operation manual.	CL	OK
13	188. The DOE should consider a desk review of the documentation sufficient to determine compliance in certain instances and also consider follow-up interviews and/or site visits necessary for other types of PoA.		Eligibility criteria by CME is under validation by DOE (check with manual) DOE conducted an on-site inspection during the validation period also performing interview with the CME, CPA implementer, and stakeholders in the project site. DOE concluded that the CPA is in accordance with the type of PoA and satisfied the	Refer ID.# 9 and revised PoA-DD, CPA-DD and CDM operation manual.	CL	OK

			eligibility criteria.			
	7.11. Description of project activity					
14	64. The DOE shall determine whether the description of the proposed project activity in the PDD is accurate, complete, and provides an understanding of the proposed CDM project activity.	65. Unless other means are specified in the methodology, the DOE shall conduct a physical site inspection for the following proposed project activities in existing facilities or utilizing existing equipments: (a) Large-scale projects; (b) Non-bundled small-scale projects with emission reductions exceeding 15,000 tonnes per year; (c) Bundled small-scale projects, each with emission reductions not exceeding 15,000 tonnes per year; in such cases the number of physical site visits may, however, be based on sampling, if the sampling size is justified through statistical analysis.	· Related documents will be checked specifically during the on-site assessment - The PO needs to provide the pictures of Ganthuna Project site. - The CME needs to re-confirm the "Geographic Reference based on GPS" in the CPA-DD. Geographical latitude of Weir is stated 7°7′55′′N in the CPA-DD, but is stated 7°7′ 57" N in the IEER (page 12). ↓ DOE checked project construction schedule, notification for signing SPPA delay from the PO, Peak Power Beta (Private) Limited, issued on 7 June 2013. It is stated "the cause of delay in signing SPPA with CEB and the case is not only for Peak Power Beta (Pvt.) Limited but also for every candidate projects" and "the project will start within 8 weeks from the date of SPPA as it requires about 1.5 months to finalize bank loan which had been approved pending SPPA." DOE also confirmed the pictures of Ganthuna project site; construction has not been started in this point.	- PP attached the picture of Ganthuna project site (forebay tank, power house and weir site) - PP checked the Geographic reference in the CPA-DD and IEER, and confirm that '7°7′55′′N' is a right one. #14_Picture of project site (Ganthuna)	CL	OK
15		66. For other individual proposed small-scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year, the DOE should conduct a physical site visit as appropriate. For proposed CDM project activities for which the DOE does not undertake a physical site inspection this shall be justified. The DOE may apply a sampling approach in accordance with the "Standard for sampling and surveys for CDM project activities and program of activities".	· It is not applicable to this PoA and CPA		N/A	N/A

16		67. For all other proposed CDM project activities not referred to in paragraphs 65-66 , the DOE shall undertake the validation of project description by reviewing available designs and feasibility studies and should conduct comparison analysis with equivalent projects, as appropriate.	· It is not applicable to this PoA and CPA		N/A	N/A
17		68. If the proposed CDM project activity involves the alteration of an existing installation or process, the DOE shall ensure that the project description states the differences resulting from the project activity compared to the pre-project situation.	It is not applicable to this PoA. It was confirmed by interview and reviewing the documentary evidence, such as FSR that the new hydropower generation project will be involved in the PoA.		N/A	N/A
	8.4.3. Description of a PoA/CPAs					
18	189. The DOE shall assess the CDM-PoA-DD and the PoA-specific CDM-CPA-DD that is submitted by the coordinating/managing entity and shall confirm the framework developed for the implementation of the PoA, and defining a CPA under the PoA.		The registration licenses were confirmed as follows: SFCF: Founded on 09/04/2008 with the registration number of PV63781 issued by Registrar of Companies KOHO: Founded on 31/12/2008 with the registration number of PV10632 issued by Registrar of Companies Peak Power Beta (Pvt) LTD: Founded on 06/04/2010 with the registration number of PV71927 issued by Registrar of Companies MoU signed by KECO, SLCF, and KOHO was confirmed, was signed on 13 September 2012. Registered address was not confirmed in the above-mentioned documents. The PPs need to provide any document that indicates address of SFCK, KOHO, and Peak Power. ↓ DOE confirmed the documentary evidences with PP's addresses. The DOE confirmed the PoA-DD in which it includes the framework for the implementation of the PoA. The DOE also confirmed that the CME had prepared and developed a management system of the PoA CDM Operation Manual. The CDM Operational Manual covers the "Organization of the PoA," "Roles and Responsibilities," "CPA Inclusion and Management," "Training," "Monitoring," "Document and Data Control," and "Improvements of the Operation Manual." The eligibility criteria for a CPA	- CME and Project Participant (KECO, KOHO and CPA implementer-Peak Power Beta) provide their registration licenses and CME submit SLCF-KECO-Koho MoU document as evidence. - PP revised CDM operational manual in accordance with Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoA (EB68, Annex 27)	CL	OK

			was also developed and described in the PoA-DD.			
	7.12. Application of the selected baseline and monitoring methodology					
	7.12. 1. General requirements					
19	70. The DOE shall determine whether the baseline and monitoring methodologies selected by the project participants are the valid versions of those approved by the Board. 71. The DOE shall apply specific guidance and/or clarifications provided by the Board with respect to the approved methodology and any applicable tools. 72. The DOE shall determine whether the selected methodology applies to the project activity and was correctly applied with respect to the following: (a) Project boundary; (b) Baseline identification; (c) Algorithms and/or formulae used to determine emission reductions; (d) Additionality; (e) Monitoring methodology.		· It was confirmed that AMS I.D. Version 17 is correctly used.		OK	OK
	7.12. 2. Applicability of the selected baseline and monitoring methodology to the project activity					
20	73. The DOE shall validate that the selected baseline and monitoring methodology is applicable to the project activity and that the selected version is valid at the time of submission of the proposed project activity for registration.	74. The DOE shall determine whether the methodology is correctly quoted and applied by comparing it with the actual text of the applicable version of the methodology. 75. If the PDD of a proposed project activity is based on a previous version of a methodology and was published for global stakeholder consultation but was not submitted for registration within the grace period, the DOE shall request the project participants to provide a revised PDD in accordance with the Project cycle procedure.	· It was confirmed that the latest version of methodology and methodological tools were correctly used.		OK	OK

21		76. The DOE shall determine whether the project activity meets each of the applicability conditions of the approved methodology or any tool or other methodology component referred to therein. This shall be done by validating the documentation referred to in the PDD and by verifying that the documentation content is correctly quoted and interpreted in the PDD. If the DOE, based on local and sectoral knowledge, is aware that comparable information is available from credible sources other than that used in the PDD, then the DOE shall cross-check the PDD against other sources to confirm that the project activity meets the applicability conditions of the methodology.	· It was confirmed that the latest version of methodology and methodological tools were correctly used.		OK	OK
	8.4. 4. Application of multiple methodologies for PoA					
22	190. The DOE shall assess the application of multiple methodologies in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for program of activities ".		It is not applicable to this PoA. Only AMS I.D. Version 17 is applied.		N/A	N/A
	7.12. 3. Deviation from an approved methodology					
23	78. If project participants requested a deviation before the publication of the PDD when applying an approved methodology to a proposed project activity, or if a DOE finds at validation that project participants deviated from an approved methodology and the DOE considers that the deviation was due to a project-specific issue implying that a revision of the methodology would not be required to address the issue, it may seek guidance on the acceptability of the deviation from the Board prior to requesting registration of the proposed project activity.		It is not applicable to this PoA. Only AMS I.D. Version 17 is applied.		N/A	N/A

24	79. The DOE shall submit to the Board an assessment of the case including demonstration that the deviation does not require revision of an approved methodology, and shall include a description of the impact of the deviation on the emission reductions from the project activity. 80. Alternatively, if the DOE considers that a revision of the methodology would be required to address the project situation then the DOE shall request the project participants to submit a request for revision in accordance with the Project cycle procedure.		It is not applicable to this PoA. Only AMS I.D. Version 17 is applied.		N/A	N/A
	7.12. 4. Clarification on the applicability of an approved methodology					
25	81. If the DOE cannot make a determination regarding the applicability of the selected methodology to the proposed project activity, then the DOE shall request clarification of the methodology. The DOE shall conduct an assessment to ensure that the request is not submitted with the intention of revising an approved methodology to expand its applicability.		It is not applicable to this PoA. Only AMS I.D. Version 17 is applied.		N/A	N/A
	7.12. 5. Project boundary					
26	82. The DOE shall determine whether all main GHG emission sources, the physical delineation of the proposed project activity and other relevant project and baseline emission sources covered in the methodology are included within the project boundary for the purpose of calculating project and baseline emissions for the proposed project activity.	83. The DOE shall confirm the project boundary based on documented evidence and shall corroborate it by a site visit where required. 84. If the methodology allows project participants to choose whether a source or gas is to be included within the project boundary, the DOE shall determine whether the project participants have justified that choice. The DOE shall determine whether the justification provided is reasonable, based on an assessment of supporting documented evidence provided by the project participants and corroborated by observations if required.	DOE confirmed the geographic reference based on the GPS in the pre-FSR, IEER, which are in accordance with that of the CPA-DD. DOE also confirmed that the boundary includes the site and the grid in Sri Lanka. Refer ID. 14 "Pre-Feasibility Study Report for the development of 7 Hydropower Projects under Peak Power Holdings (prepared by VS Hydro (Pvt.) Ltd" on 28 January 2011 indicates that the planned CPAs will be located in Sri Lanka. DOE also confirmed that the geographical boundary was in accordance with the PoA-DD and CPA-DD.	Refer ID. 14	CL	OK

27		85. For the project activities that have both A/R and non-A/R components, in order to avoid double counting of emission sources, the DOE shall confirm that the emissions associated with the A/R activity will be accounted for and documented by the A/R project activity.	· It is not applicable to this PoA		N/A	N/A
	8.4. 5. Boundary for the PoA in terms of geographical area					
28	191. The DOE shall assess the boundary of the PoA within which all CPAs included in the PoA will be implemented.		DOE confirmed that the boundary of the CPAs of PoA is implemented within Sri Lanka.		OK	OK
29	192. The DOE shall determine whether, in establishing the boundary of the PoA, the project participants have taken into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary.		It was confirmed by the interview that there are no such policies in Sri Lanka.		OK	OK
	7.12. 6. Baseline scenario identification and description					
30	88. The DOE shall determine whether the baseline identified for the proposed project activity is the scenario that reasonably represents the anthropogenic emissions by sources of GHGs that would occur in the absence of the proposed project activity.	89. The DOE shall determine whether any procedure contained in the methodology to identify the most reasonable baseline scenario has been correctly applied. If the selected methodology requires the use of tools (such as the "Tool for the demonstration and assessment of additionality" and the "Combined tool to identify the baseline scenario and demonstrate additionality") to establish the baseline scenario, the DOE shall consult the methodology on the application of these tools. In such cases, the specific guidance in the methodology shall supersede the corresponding requirements of the tool.	· DOE confirmed the description of the baseline scenario, which is in accordance with the AMS I.D. Version 17. ↓ The CME provided two EF values, calculated by the CME, and by SEA of Sri Lanka. The EF calculation sheet, by the SEA of Sri Lanka, was prepared under the Version 2.0 of "Tool to calculate the emission factor for an electricity system." It is under review by DOE regarding the difference between Version 2 and Version 3 of "Tool to calculate the emission factor for an electricity system"(refer ID # 34) DOE confirmed the description of the baseline scenario in the PoA-DD that is the electricity delivered to the grid by the PoA, including CPAs. For $EG_{BL,y}$, 4,374,700 kWh was confirmed by the calculation based on the approved FSR, issued in November 2012 and approved by the accredited consultant by SEA. Of the parameters that decided the $EG_{BL,y}$, the plant load factor was revised from 35%, the initial CPA-DD for GSC, to 39% based on the decision on Non-Conventional Renewable Energy Tariffs 2012 - 2013, issued by PUCSL, issued on 5 October 2012.	About Calculation of emission reduction: (1) Installed capacity: 1.3MW - refer to 'Pre-FSR' (2) Plant Load Factor: 39% - refer to 'Decision on Non-Conventional Renewable Energy Tariff 2012-2013, issued by Public Utilities Commission of Sri Lanka (3) Emission Factor: 0.7268 tCO2/MWh - The value by SEA **. at this, SEA is the Sri Lanka Government organization to manage renewable energy project. SEA annually calculate emission factor and make public the result value. So, PP apply the value calculated by SEA.	CL	OK

			↓ DOE confirmed the revision details from Version 2.0 of "Tool to calculate the emission factor for an electricity system" to Version 3.0. DOE did not find out any revision that will affect the calculation EF for grid connection. - From 02.0 - 02.1.0: No revision for EF calculation within one host country - From 02.1.0 - 02.2.0: No revision for EF calculation and revision for projects of LCD - From 02.2.0 - 02.2.1: Fix unit errors for off-grid power plant - From 02.2.1 - 03.0.0: Provide default factors for LDCs, SIDS, and off-grid EG. No revision for EF calculation regarding grid-connected electricity generation. Also, the EF value by the SEA of Sri Lanka is publically available and less than the EF value calculated by the PP, more conservative method for emission reduction. Therefore, the EF value by the SEA of Sri Lanka is acceptable for the CPA.			
31		90. If the methodology requires several alternative scenarios to be considered in the identification of the most plausible baseline scenario, the DOE shall, based on financial expertise and local and sectoral knowledge, determine whether all scenarios that are considered by the project participants and any scenarios that are supplementary to those required by the methodology, are realistic and credible in the context of the proposed project activity and that no alternative scenario has been excluded.	· It is not applicable to this PoA and CPA		N/A	N/A
32		91. The DOE shall determine whether the most plausible baseline scenario identified is reasonable by validating the assumptions, calculations and rationales used in the PDD. It shall determine whether documents and sources referred to in the PDD are correctly quoted and interpreted. The DOE shall cross-check the information provided in the PDD with other verifiable and credible sources, such as local expert opinion, if available.	· It is not applicable to this PoA and CPA		N/A	N/A

33		92. The DOE shall determine whether the PDD provides a description of the identified baseline scenario, including a description of the technology that would be employed and/or the activities that would take place in the absence of the proposed project activity.	· DOE confirmed the description of the baseline scenario, which is in accordance with the AMS I.D. Version 17.		OK	OK
34		93. The DOE shall determine whether, drawing on its knowledge of the sector and/or advice from local experts, that all applicable CDM requirements have been taken into account in the identification of the baseline scenario for the proposed project activity, as well as relevant national and/or sectoral policies and circumstances, such as sectoral reform initiatives, local fuel availability, power sector expansion plans, and the economic situation in the project sector. Two (2) types of national and/or sectoral policies have to be taken into account: (a) National and/or sectoral policies or regulations that give comparative advantages to more emissions-intensive technologies or fuels over less emissions-intensive technologies or fuels, otherwise known as policies that increase GHG emissions, and are called type E+. For this type of national and/or sectoral policies or regulations, only those that have been implemented before adoption of the Kyoto Protocol by the COP (decision 1/CP.3, 11 December 1997) shall be taken into account when identifying a baseline scenario. If such national and/or sectoral policies were implemented since the adoption of the Kyoto Protocol, the baseline scenario shall refer to a hypothetical situation without the national and/or sectoral policies or regulations being in place;	In Sri Lanka "Small (=mini) hydro = 10 MW" (less than 10MW, fixed tariff, standard PPA, etc. -> more convenient to develop)." CEB issued "regulations" regarding the classification of electricity production, which will be submitted to DOE. "New National Energy Strategy" issued in 2008 (E-policy). ①Before 2008: ONLY Avoided tariff ②2008-2011 (or 2012): Both tariffs used ③Since 2011 or 2012: ONLY NCRE tariff: The price of NCRE tariff is higher than the Avoided tariff. "Decision on Non-Conventional Renewable Energy Purchase Tariffs 2012-2013 (issued on 05 October 2012) by Public Utilities Commission of Sri Lanka" will be submitted to DOE. E-policies (avoided tariff, NCRE, etc.) in Sri Lanka need to be reviewed by DOE. Questions from Reference #13. "National Energy Policy & Strategies of Sri Lanka." 1. The provided document, issued on 11 May 2008, is the latest? (It was stated that the document will be reviewed and revised after a period of three years, Page 3A.) 2. It was stated in Section 3.4 * Necessary incentives will be provided, and access to green funding including CDM will be facilitated to develop NCRE resources to ensure their contribution to the energy supply in special situations, even if their economic viability is marginal. Question is that - whether any incentive was/will be provided to this PoA - if yes, what kind, fund or else? (details), "Energy Fund" from the document, Section 4.4 - if fund, was it applied to the IRR analysis? - if no incentives, demonstrate why? DOE confirmed the "Purchase of Electricity to the	PP made a description about sri lanka E-policy (renewable energy promotion policy) (PoA-DD, page 3) ---------- 1. The Policy & Strategies issued on May 11, 2008 (Gazette No. 1553/10 of June 10, 2008) is the latest. Despite of what mentioned in page 3A of the Policy, it is not reviewed and revised. 2. The NCRE Tariff announced by PUCSL is built-in with certain amount of incentive portion. Sri Lanka provides 'Cost-based and technology-specific tariff' scheme and option to select a three-tier tariff or a flat tariff for the consideration of investment burden of the developers which is a kind of incentives. The NCRE tariff in Sri Lanka is/will not showing breakdown of actual tariff portion and incentive portion to the public as it might/can be used for wrongly and create political issue. However, there is an understanding between governing bodies, CEB who are responsible for payment of tariff and SLSEA who are responsible for promotion of NCRE, that the difference between actual cost of generation and NCRE tariff will be subsidized by SLSEA fund (probably from Energy Fund, funded by the Treasury). - (source: discussion with SLSEA officer) *[quote] 12 Mechanism for Payment of Tariff CEB, as the purchaser of energy will continue to effect payment for electricity purchased from the SPPs. The final tariff paid to the SPPs will involve two sources of funds; the CEB and the SEA. [Unquote] From Purchase of Electricity to the National*	CL	OK

			National Grid under Small Power Purchase Agreements (SPPA) Explanatory notes to the Press Release dated 18th March 2008." According to para 1.5, principles of tariff structure of (b) renewable energy, which is a natural resource, belong to the state. Developers are provided with a high tariff to cover their expenses and to earn reasonable profits for an adequately long period (in this case, the first 15 years). Thereafter, the benefit of the resource should flow to the electricity customers, while continuing providing an operating fee to the SPPs and full recovery of maintenance costs (in this case, from year 16 to 20, and beyond). Therefore, DOE decided that there is E-Policy in Sri Lanka and the policy is applied to the hydropower project. However, the incentive from the E- Policy was included into the applied electricity tariff (NCRE tariff in 2012) in the CPA<2013-PPB-001-1.3MW> Ganthuna Small Hydropower project. It is a conservative method for IRR calculation for the Ganthuna Small Hydropower project, CPA<2013-PPB-001-1.3MW>. Please provide the list of E-policy in Sri Lanka. ↓ DOE confirmed E-Policy regarding tariff system in Sri Lanka. Avoided cost tariff estimation from 1996 to 2011 in Sri Lanka from the official website of CEB, www.ceb.lk/sub/db/op_ncretariff.html, and the approved tariff (NCRE tariff) of 2013, which was applied into the IRR analysis, was also confirmed by "Decision on Non-Conventional Renewable Energy Purchase Tariffs 2012-2013." DOE decided that the NCRE tariff, applied into the CPA, is the officially approved tariff by the Sri Lanka government for the hydro project less than 10MW in Sri Lanka. The NCRE tariff is higher than any year of avoided cost tariff estimation. In addition to that, the NCRE tariff has a portion of incentive that is built-in based on the relevant documentary evidences. It was stated that the NCRE tariff will not be escalated for any reason over the entire 20-year period, which is the same as operational period for the CPA.	*Grid under Small Power Purchase Agreements (SPPA) Explanatory notes to the Press Release dated 18th March 2008 - attached.* The tariff applied to the IRR analysis is the latest NCRE tariff and according to the above understanding a certain portion of incentive is built-into the tariff without showing the actual portion. #ID 34. [refer] explanatory_note_march_2008		

35		(b) National and/or sectoral policies or regulations that give comparative advantages to less emissions-intensive technologies over more emissions-intensive technologies (e.g. public subsidies to promote the diffusion of renewable energy or to finance energy efficiency programs), otherwise known as policies that decrease GHG emissions, are called type E-. For this type of national and/or sectoral policies or regulations, those that have been implemented since the adoption by the COP of the CDM M&P (decision 17/CP.7, 11 November 2001) need not be taken into account in identifying a baseline scenario (i.e. the baseline scenario could refer to a hypothetical situation without the national and/or sectoral policies or regulations being in place).	Refer to ID#34	Refer to ID#34	CL	OK
	7.12. 7. Algorithms and/or formulae used to determine emission reductions					
36	96. The DOE shall determine whether the steps taken and the equations and parameters applied in the PDD to calculate project emissions, baseline emissions, leakage and emission reductions comply with the requirements of the selected methodology including applicable tool(s).	97. Where the methodology allows for selection between options for equations or parameters, the DOE shall determine whether adequate justification has been provided (based on the choice of the baseline scenario, context of the proposed project activity and other evidence provided) and that the correct equations and parameters have been used, in accordance with the methodology selected8 including applicable tool(s).	DOE confirmed that the algorithms and formulae used to determine emission reductions in the PoA-DD and CPA-DD were referred in accordance with applied methodology, AMS I.D. (Version 17), and methodological tool of "tool to calculate the emission factor for an electricity system (Version 03.0). (Please submit EF calculation spreadsheet and documentary evidences). DOE confirmed that the parameters' values in the EF calculation spreadsheet were not consistent with values of the documentary evidences, such as Gross generation values from Statistical digest 2007 - 2011 ↓ For low-cost must-run calculation, the value of total thermal power generation and total low-cost must-run power generation could not be confirmed from statistical digest. In the Page 24 and Page 27, the annual total generation for 2011 is 11,528 in Page 24, 11,353 in Page 27. The two values have different source, Statistical Digest 2011 and Sales and Generation Data Book 2011. Project emission (Page 28 of PoA-DD). Please clarify the condition of CPA if all CPAs have no reservoir or not. ↓	*. In terms of Project Design, PP broaden the hydro technology that can be involve in this PoA therfore, CPA with reservoir also can be included in this PoA - changed items: PDD applicability, Eligibility Criteria, Project Emission calculation, monitoring parameter. PoA-DD - 8page (tabe b.3) - 14page (table b.1) - 26/30 page (PEy) - 28/32 page (hydropower monitoring parameter) ---------- PP submit revised EF calculation sheet and relevant evidence at 1st April, 2013 and submit revised PoA-DD (section B.6.1 and Appendix 4) ---------- Sri Lanka government, Sustainable Energy Authority (SEA), calculated the emission factor and make a public the value. it is the official information, so, PP apply it to this project (PoA and Ganthuna CPA).	CAR	OK

			DOE confirmed that the applicability of CPAs was properly revised regarding reservoir (project emission calculation). It was stated that CPA can have new single or multiple reservoirs and can use existing reservoir, which is in accordance with the applied methodology. For low-cost must-run calculation, the value of total thermal power generation and total low-cost must-run power generation could not be confirmed from provided statistical digest. In the Page 24 and Page 27, the annual total generation for 2011 is 11,528 in Page 24, 11,353 in Page 27. The two values have different source, Statistical Digest 2011 and Sales and Generation Data Book 2011. DOE confirmed the revised EF calculation sheet, by the PP (please refer DOE comments), and EF calculation sheet, by SEA of Sri Lanka. EF calculation sheet, by the SEA of Sri Lanka, was prepared based the Version 2.0 of "Tool to calculate the emission factor for an electricity system." It is under review by DOE regarding the difference between Version 2 and Version 3 of "Tool to calculate the emission factor for an electricity system" ↓ DOE confirmed the revision details from Version 2.0 of "Tool to calculate the emission factor for an electricity system" to Version 3.0. DOE did not find out any revision that will affect the calculation EF for grid-connected hydropower project. -From 02.0 - 02.1.0: No revision for EF calculation within one host country - From 02.1.0 - 02.2.0: No revision for EF calculation and revision for projects of LDCs - From 02.2.0 - 02.2.1: Fix unit errors for off-grid power plant - From 02.2.1 - 03.0.0: Provide default factors for LDCs, SIDS, and off-grid EG. No revision for EF calculation regarding grid-connected electricity generation. Also, the EF value by the SEA is publically available and less than the EF value calculated by the PP, more conservative method for the emission reduction calculation. Therefore, the EF value by the SEA of Sri			

			Lanka is acceptable for the CPA.			
37		98. The DOE shall verify the justification given in the PDD for the choice of data and parameters used in the equations. If data and parameters will not be monitored throughout the crediting period of the proposed project activity but have already been determined and will remain fixed throughout the crediting period, the DOE shall determine whether all data sources and assumptions are appropriate and calculations are correct as applicable to the proposed project activity, and will result in an accurate or otherwise conservative estimate of the emission reductions. If data and parameters will be monitored or estimated on implementation and hence become available only after validation of the project activity, the DOE shall determine whether the estimates provided in the PDD for these data and parameters are reasonable.	Refer to ID#36 (Data of STEP4 was compiled by the letter from SEA. Please submit it to DOE.) (Please submit the EF calculation sheet with Version 03 of Tool to calculate the EF for an electricity system. It was based on Version 02.) ↓ DOE confirmed the EF value from the SEA of Sri Lanka website. http://www.energy.gov.lk/sub_pgs/elibrary_spe_pub.html	PP submit revised EF calculation sheet and relevant evidence at 1st April, 2013 and submit revised PoA-DD (section B.6.1 and Appendix 4) --- Sri Lanka government, Sustainable Energy Authority (SEA), calculated the emission factor and make a public the value. it is the official information, so, PP apply it to this project (PoA and Ganthuna CPA).	CAR	OK
	7.12. 8. Additionality of a project activity					
38	101. The DOE shall determine whether the proposed project activity is additional as demonstrated in the PDD.	102. The DOE shall assess and verify the reliability and credibility of all data, rationales, assumptions, justifications and documentation provided by project participants to support the demonstration of additionality. This requires the DOE to critically assess the evidence presented, using local knowledge and sectoral and financial expertise.	In Sri Lanka, the PPs must submit "Pre-Feasibility Study Report" to Sri Lanka SEA in order to receive approval for the project and construction. DOE confirmed that the proposed project's application was submitted in accordance with "Application for Engaging in and Carrying on of an On-grid Renewable Energy Project (Project Type: Type I, Hydro)". According to the application form, the Pre-FSR shall contain Profile of the Applicant, Site Description, Preliminary Plant Design, Environmental Consideration, Project Costs, Financial Analysis, and Project Development Plan. After submission, SEA orders one of accredited consultants to check the application. If the consultant determines that the applied project is approved by the third-party consultant, the "Certification by the Accredited Consultant" is issued. Upon receiving this certification, SEA issues "Provisional Approval" for the proposed project. Therefore, the Provisional Approval certifies the proposed projects' Pre-FSR, including the financial parameters, and financial analysis, including a sensitivity analysis against key variables. Regarding the proposed PoA project, all the process	PP attached the certification of the accredited consultant. And PP revised the IRR sheet and correct with parameter. --- Pre-FSR was reviewed and certified by 3rd party consultant to get the SEA approval. and the consultant recommended changing capacity to 1.3MW. So, CPA implementer revised Pre-FSR with capacity of 1.3MW (issued on 2 November 2012) and the revised one was reviewed again by the 3rd party consultant to validate the appropriateness of revised data (capacity, financial data) and consultant certified it. (refer to the evidence #38_ Certified Pre-FSR (20121102)) Sri Lanka government (Public Utilities Commission) introduce the NCRE tariff policy to promote renewable energy power project and notify the tariff cost and relative parameter (O&M cost, O&M cost escalable rate, Plant load factor, and so on). so CPA implementer revised IRR analysis parameter based on this data.	CAR	OK

			has been done; however, the certification of the accredited consultant was not confirmed at on-site visit. (Please submit the certification of the accredited consultant.) Several factors and values used in the IRR analysis spreadsheet are not in consistent with those of relevant documentary evidences, such as NCRE Purchase tariff 2012-2013, issued by PUCSL . ↓ · DOE confirmed that there are two versions of Pre-FSR, issued in January 2011 for SEA certificate and issued on 2 November 2012 for the revised Pre-FSR with capacity of 1.3MW and used for the CPA-DD additionality and investment analysis. DOE confirmed that the original Pre-FSR, issued in January 2011, with capacity of 1.5MW, was submitted to SEA and approved with condition of changing capacity to 1.3MW. DOE confirmed the approval certificate of the Pre-FSR of 1.5MW and LoI to purchase electricity energy issued by CEB and permit for engaging in and carrying on of an on-grid renewable energy project, by SEA. However, the financial data of Pre-FSR, issued on 2 November 2012 with capacity of 1.3MW, was changed from the original version. Additionally, the revised Pre-FSR was not reviewed by a third party. Additionality of the project is under review. ↓ DOE confirmed that the revised Pre-FSR with the capacity of 1.3MW and the new financial analysis, issued on 2 November 2012, were reviewed by a third-party local expert, who is an accredited consultant by the SEA. (The consultant is for on-grid renewable energy project area) DOE also confirmed the revised IRR analysis spreadsheet based on the approved Pre-FSR, NCRE tariff, and the relevant documentary evidences.			

39		103. If required by the applicable approved methodology, the DOE shall consider tools and guidelines provided by the Board to demonstrate the additionality of proposed project activities. The DOE shall also consider specific complementary or alternative requirements included in the methodology for demonstrating the additionality of the proposed project activity.	Refer ID. # 38	Refer ID. # 38	CAR	OK
	8.4.8. Demonstration of additionality of the PoA as a whole					
40	195. The DOE shall assess the additionality of a PoA in accordance with the Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for program of activities .		Deloitte-TECO confirmed that the PoA consists of small-scale projects as CPAs. The additionality is demonstrated at the CPA level using eligibility criteria derived by "Guidelines on the demonstration of additionality of small-scale project activities (EB 68, Annex 27, Version 09.0). The proposed "Programme of Activities for Small Scale Hydropower CDM in Sri Lanka" has the CPAs of Grid Connected Hydro Power Generation less than 15 MW. The additionality of the PoA as a whole will be validated with applying benchmark analysis, using one-year average of AWLR issued by Central Bank of Sri Lanka at the investment decision, for each CPA. In this validation stage, total seven new hydropower plants are planned to be included in the PoA, the range is 1MW to 4MW; however, the IRRs have not been identified yet, except CPA <2013-PPB-001-1.3MW>. According to the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Program of Activities (EB 70, Annex 5)," the proposed PoA that consists of one or more microscale or small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of "Guideline for demonstrating additionality of small-scale project activity," with capacity of more than 5MW or "Guideline on the demonstrating additionality of micro-scale project activities" with Special Underdeveloped Zone (SUZ) approval. ↓ In "10 Additionality" of Table B.1 in the PoA-DD indicated the Section "E.5.2" of PoA-DD. However, there is no section in the PoA-DD.	PP revised the table of eligibility criteria entirely.	CL	OK

			(Please revise Table B.1.) ↓ DOE confirmed the revised eligibility criteria in the PoA-DD, CPA-DD and CDM operation manual.			
	8.1. 3. Additionality					
41	158. The DOE shall determine whether the proposed SSC project activity is additional in accordance with CDM requirements applicable for small-scale project activities.	159. The DOE shall refer to the specific requirements on demonstration of additionality for small-scale project activities and the "Non-binding best practice examples to demonstrate additionality for SSC project activities"	DOE confirmed that the CPA<2013-PPB-001-1.3MW> is applied to eligibility criteria derived from all the relevant requirements of "Guideline for demonstrating additionality of small-scale project activity." Investment analysis was conducted based on benchmark approach. Refer to ID#54-90. DOE confirmed that the CPA<<2013-PPB-001-1.3MW> has additionality based on investment analysis.	Refer to ID#54-90.	CL	OK
42		160. In the case of Type I project activities up to 5 MW that employ renewable energy as their primary technology, Type II energy efficiency project activities that aim to achieve energy savings at a scale of no more than 20 GWh per year, and Type III project activities that aim to achieve emissions reductions at a scale of no more than 20 ktCO2e per year, the DOE shall assess the relevant criteria to establish the automatic additionality for these projects.	According to the "Standard for Demonstration of Additionality, Development of Eligibility Criteria and Application of Multiple Methodologies for Program of Activities (EB 70, Annex 5)," the proposed PoA that consists of one or more microscale or small-scale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of "Guideline for demonstrating additionality of small-scale project activity," with capacity of more than 5MW or "Guideline on the demonstrating additionality of micro-scale project activities" with Special Underdeveloped Zone (SUZ) approval. Initially, the PP would apply "Guideline on the demonstrating additionality of microscale project activities" for the CPAs less than 5MW capacity; however, the EB recommended that the total installed capacity of hydro plants with less than 5MW was 149 WM leading to a threshold ratio 4.7% that is greater than the cutoff threshold of 3%. Therefore, the microscale hydropower plant, as CPAs, cannot be qualified as automatically additional. (Refer F-CDM-PRT doc ID number of PRT_007) However, according to "Guideline on the demonstrating additionality of microscale project activities," para 5. a), some region in Sri Lanka can be defined as SUZ. DOE confirmed that Sri Lanka DNA		OK	OK

			prepared the recommendation of the Sri Lanka SUZ to UNFCCC EB approval. "Guideline on the demonstrating additionality of microscale project activities" will be applied to any CPA with less than 5MW capacity and the approval by the EB.			
	7.12. 9. Assessment of prior consideration of the clean development mechanism					
43	105. The DOE shall determine whether CDM benefits were considered necessary in the decision to undertake the project as a proposed project activity if the starting date of the proposed project activity is prior to the start of validation, which is the date of publication of the PDD for global stakeholder consultation.	106. The DOE shall determine whether the start date of the project activity, reported in the PDD, is the earliest date at which either the implementation or construction or real action of a project activity begins.10 For project activities that require construction, retrofit or other modifications, the date of commissioning cannot be considered the project activity start date. The DOE shall determine whether it is a project activity with a start date: (a) On or after 2 August 2008; or (b) Before 2 August 2008.	· It was confirmed that prior consideration of the CDM is not required for PoAs.		N/A	N/A
44		107. For a project activity with a start date on or after 2 August 2008, for which a PDD has not been published for global stakeholder consultation or a new methodology has not been proposed to the Board before the project activity start date, the DOE shall confirm by referring to the list of prior consideration notifications from the UNFCCC website and communication between the project proponent, the secretariat and the host Party DNA regarding the commencement of a new project activity. If such notification has not been provided by the project participants within 180 days of the project activity start date, the DOE shall determine that the CDM was not seriously considered in the decision to implement the project activity.	-Notifications from the UNFCCC website and communication between the CME, the secretariat, and the host party DNA were not confirmed. The start date of PoA was not satisfied the requirement of para. 105 of CDM PS. ↓ Notification to DNA of Korea and Sri Lanka was confirmed. For this PoA, the CME determined the start date of the proposed CDM PoA as the publication date of the PoA-DD for GSC, 5 February 2013, based on CDM PS para. 105. Therefore, this PoA does not need any further evidence for prior consideration for CDM.	PP submitted the notification to UNFCCC and DNA (sri lanka, korea). they are waiting the reply from UNFCCC, after get a reply, it can be checked at UNFCCC website. PP changed the PoA start date to 5th Feb 2013, the date of PoA GSC PoA-DD 13 page, Section D.1	CAR	OK

45		108. For a project activity with a start date before 2 August 2008, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, the DOE shall assess the project participants prior consideration of the CDM. Specifically, the DOE shall assess whether the project participants: (a) Had an awareness of the CDM prior to the project activity start date, and that the benefits of the CDM were a decisive factor in the decision to proceed with the project. Evidence to support this could include, inter alia, minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participants, to undertake the project as a proposed project activity;	· It was confirmed that prior consideration of the CDM is not required for PoAs.		N/A	N/A
46		(b) Demonstrated that real and continuing actions were taken to secure CDM status for the project in parallel with its implementation. Evidence to support this could include one or more of the following: contracts with consultants for CDM/PDD/methodology services, draft versions of PDDs and underlying documents such as letters of authorization, and if available, letter of intent, emission reduction purchase agreements (ERPA) term sheets, ERPAs or other documentation related to the potential sale of the certified emission reductions (CERs) (including correspondence with multilateral financial institutions or carbon funds), evidence of agreements or negotiations with a DOE for validation services, submission of a new methodology or requests for clarification or revision of existing methodologies to the Board, publication in a newspaper, interviews with the DNA, and earlier correspondence on the project with the DNA or the secretariat.	· It was confirmed that prior consideration of the CDM is not required for PoAs.		N/A	N/A

47		109. Assessment of real and continuing actions shall be conducted by the DOE and should focus on real documented evidence as indicated in paragraph 108(b) above, including an assessment by the DOE of the authenticity of the evidence. The DOE shall assess letters, e-mail exchanges and other documented communications submitted by the project participants to substantiate the above information, and these shall be considered as evidence only after the DOE has assessed the reliability and authenticity of such communications, inter alia through cross-checking (e.g. interviews).	· It was confirmed that prior consideration of the CDM is not required for PoAs.		N/A	N/A
48		110. In validating proposed project activities where: (a) There is less than two years of a gap between the documented evidence, the DOE shall conclude that continuing and real actions were taken to secure CDM status for the project activity; (b) The gap between documented evidence is greater than two years and less than three years, the DOE may determine that continuing and real actions were taken to secure CDM status for the project activity and shall justify any positive or negative validation opinion based on the context of the evidence and information assessed; (c) The gap between documented evidence is greater than three years, the DOE shall conclude that continuing and real actions were not taken to secure CDM status for the project activity.	· It was confirmed that prior consideration of the CDM is not required for PoAs.		N/A	N/A
49		111. If evidence to support the serious prior consideration of the CDM as indicated above is not available, the DOE shall determine that the CDM was not considered in the decision to implement the project activity.	· It was confirmed that prior consideration of the CDM is not required for PoAs.		N/A	N/A
	8.4. 6. Start date of a PoA/CPA					
50	193. The DOE shall confirm that the start date of any CPA is on or after the start date of the PoA.		It was confirmed that the MoU was signed on 13/09/2012 by three parties, KECO and SFCL as "party" and KOHO as "sub-party." However, the start date of PoA is not in accordance with the requirements of PS. According to para. 159 of Project Standard (Version 02.1), the start date of a PoA shall either be the date of notification of the intention to seek the CDM status	PP changed the PoA start date to 5th Feb 2013, the date of PoA GSC PoA-DD 13 page, Section D.1	CAR	OK

			by the CME to the secretariat and the DNA or the date of publication of the PoA-DD for GSC. DOE confirmed that the PP revised the start date of a PoA from 13 September 2012, the date of signing MoU for the promotion of this PoA, to 5 February 2013, which is the date of PoA-DD for GSC. The start date of PoA was not satisfied the requirement of para. 105 of CDM PS ↓ DOE confirmed that the PoA start date was revised to 5 February 2013 at Section D. D.1 in the PoA-DD.			
	8.4.7. Prior consideration of the CDM					
51	194. The DOE shall assess prior consideration of CDM for PoA applying the provisions of paragraph 107 above mutatis mutandis.		Notification to DNA of Korea and Sri Lanka was confirmed. The start date of PoA was not satisfied the requirement of para. 105 of CDM PS ↓ For this PoA, the CME determined the start date of the proposed CDM PoA as the publication date of the PoA-DD for GSC, 5 February 2013 based on CDM PS para. 105. Therefore, this PoA does not need any further evidence for prior consideration for CDM.	The CME was opened to the public the proposed PoA at 5th February 2013 in the UNFCCC website. So, CME set the start date of the proposed PoA as 5th February 2013. (the date publication of the PoA-DD for GSC) in accordance with UNFCCC CDM project standard	CAR	OK
	7.12. 10. Identification of alternatives					
52	113. Where the baseline scenario is not prescribed in the approved methodology, the DOE shall assess the list of identified credible alternatives to the project activity in the PDD selected to determine the most realistic baseline scenario.	114. The DOE shall assess the list of alternatives given in the PDD and to determine whether: (a) The list of alternatives includes as one of the options that the project activity is undertaken without being registered as a proposed project activity; (b) The list contains all plausible alternatives that the DOE, on the basis of its local and sectoral knowledge, considers to be viable means of supplying the comparable outputs or services that are to be supplied by the proposed project activity; (c) The alternatives comply with all applicable and enforced legislation.	· It is not applicable to this proposed project		N/A	N/A
53		115. Where the baseline scenario is prescribed in the approved methodology, no further analysis is required.	· It is not applicable to this proposed project		N/A	N/A

	7.12. 11. Investment analysis					
54	117. If investment analysis has been used to demonstrate the additionality of the proposed project activity, the DOE shall determine whether the proposed project activity would not be: (a) The most economically or financially attractive alternative; or (b) Economically or financially feasible without the revenue from the sale of CERs.	118. The DOE shall apply the latest version of the "Guidelines on the assessment of investment analysis" as provided by the Board and with other relevant provisions.	DOE confirmed that "Guidelines on the Assessment of investment analysis (Version 05)" was used in the CPA-DD.		OK	OK
55		119. The DOE shall determine whether the project activity is not the most economically or financially attractive alternative, or that it is not economically or financially feasible without CDM:	The suitability of benchmark of the CPA-DD was not properly explained and the relevant documentary evidence/data were not provided. ↓ The PP changed the benchmark decision from the six months average of AWPLR, 13.75%, to one-year average of AWLR, 14.45%. DOE confirmed all the values of 12 months of AWLR and also confirmed the reason of changed benchmark definition from "AWPLR" to "AWLR." AWLR is acceptable as a benchmark for "Local commercial lending rate" that was regulated in the "Guidelines on the Assessment of investment analysis (ver. 05)"; therefore, the benchmark of 14.45% is acceptable for the project. ↓ DOE confirmed that the financial data in the PDD was based on the Pre-FSR (with capacity of 1.3MW), issued on 2 November 2012. The problem is that the financial data in the Pre-FSR (with capacity of 1.5MW), issued on 2 November 2012 is different from that of Pre-FSR, issued in January 2011, which was submitted to the SEA to issue provisional approval. It was confirmed that the certification by the accredited consultant, LoI to purchase electrical energy, and Permit for engaging in and carrying on of an on-grid renewable energy by SEA is to be issued. The project is permitted by Sri Lanka government. DOE confirmed that the values and formulae used in the IRR analysis spreadsheet are correctly referred from the certified Pre-FSR and the local regulations (such as NCRE tariff). Also, the applied benchmark is properly revised based on the one-year AWLR of	PP revised the benchmark of CPA. Since CPA implementer is private company, they apply the one year average of AWLR, that issued by Central Bank of Sri Lanka (14.45%) #7_Ganthuna IRR analysis sheet ---------- First CPA, Ganthuna small hydropower project, was approved by SEA as renewable energy project. To get approval of SEA, project proponent should submit the Pre-FSR included the technical and environmental information. CPA implementer submitted Pre-FSR reviewed and certified by 3rd party consultant for SEA approval. And the consultant recommended changing capacity to 1.3MW. So, PP revised Pre-FSR with capacity of 1.3MW (issued on 2 November 2012) and the revised one was reviewed again by the 3rd party consultant to validate the appropriateness of revised data (capacity, financial data) and consultant certified it. (refer to the evidence #38_ Certified Pre-FSR	CAR	OK

			Central Bank of Sri Lanka. DOE concluded that the IRR of CPA <2013-PPB-001-1.3MW> has not crossed the benchmark.			
56		(a) The proposed project activity would produce no financial or economic benefits other than CDM-related income. The DOE shall determine whether the documented costs associated with the proposed project activity and the alternatives identified demonstrate that there is at least one alternative which is less costly than the proposed project activity; (b) The proposed project activity is less economically or financially attractive than at least one other credible and realistic alternative; (c) The financial returns of the proposed project activity would be insufficient to justify the required investment.	Refer ID. 55	PP revised the benchmark of CPA. Since CPA implementer is private company they apply the 'Lending Rate', not 'Prime Lending Rate' PP apply the one year average of AWLR, that issued by Central Bank of Sri Lanka every week (14.45%) #7_Ganthuna IRR analysis sheet	CL	OK
57		120. To verify the accuracy of financial calculations carried out for any investment analysis, the DOE shall: (a) Determine the suitability of the financial indicator selected by the project participants and conduct a thorough assessment of all parameters and assumptions used in calculating such financial indicators, and determine the accuracy and suitability of these parameters using available evidence and applying its expertise in relevant accounting practices; (b) Cross-check the parameters against third-party or publicly available sources, such as invoices or price indices;	IRR calculation is based on “pre-tax” in the CPA-DD, however, there were taxation related parameters in Table D.5. and IRR spreadsheet. Also, some source of Table D.5. in the CPA-DD are not consistent with the actual title of documentary evidences. Some sources of Table D.5. are not consistent with the actual title of documentary evidences. Period of benchmark analysis need to be clarified. Please submit the certificate of Pre-FSR ↓ IRR analysis spreadsheet is under review by DOE. Please clarify the following points: 1. The "Total project cost" of "Gantuna small hydropower project" issued on January was stated as 304.6 Rs' Million under estimated installed capacity of 1.5MW. However, "Total project cost" of provided IRR analysis is stated as 434.54 Rs' Million. Please clarify the reason why the Total project cost increased with downsizing of capacity. 2. DOE was provided the "Certification by the Accredited consultant" for approval of Pre-FSR, Annex V. However, please additionally provide any further evidence of changing installation capacity	PP deleted needless parameters in Table D.5 and IRR sheet #7_Ganthuna IRR analysis sheet ---------- 1. Pre FSR issued on January was made for the purpose of SEA approval about environmental and sustainable issue, not for project design (financial issue or economical issue). So, the value "304.6 RS'million in the Pre-FSR issued in January is inappropriate for real project cost. additionally, Ganthuna site is the backcountry. So, To construct the power plant and essential equipment for Ganthuna hydropower, they should improve road around project site before construction for access project site safely (for construction, equipment maintain and generation monitoring, etc..). After due consideration about issue like this of the Ganthuna site, Project developer re-estimate the increased project cost practically. (For its evidence, PP submit itemized project cost)	CAR	OK

			from 1,500kW to 1,300kW. In the Annex V, comment of capacity change to 1,300kW was stated, but no reason or comment. ↓ DOE confirmed that the financial data in the PDD was based on the Pre-FSR (with capacity of 1.3MW), issued on 2 November 2012. The problem is that the financial data in the Pre-FSR (with capacity of 1.5MW), issued on 2 November 2011, is different from that of Pre-FSR, issued in January 2011, which was submitted to the SEA to issue provisional approval. It was confirmed that the certification by the accredited consultant, LoI to purchase electrical energy, and Permit for engaging in and carrying on of an on-grid renewable energy by SEA is to be issued. The project is permitted by Sri Lanka government. However, the financial data in the CPA-DD was not reviewed by any of the third party. ↓ The revised Pre-FSR with 1.3MW capacity and the new financial analysis, issued on 2 November 2012, was officially reviewed by a third-party local expert, Mr. T.H. Kalupahana, who is an accredited consultant by the SEA to conduct prefeasibility studies for on-grid renewable energy project. The quotation for equipment, which can confirm the technical parameters of turbine and generators in the CPA-DD.	2. the person who examine and certificate the Ganthuna project is an experienced engineer (accredited consultant). the request to downsize Ganthuna project capacity to 1,300kW stated in "Certification by the Accredited Consultant" was issued by judgment based on his experience. therefore, project development should not submit other evidence to determine the appropriateness of project capacity. (actually, Such certification process is Sri Lankan's practice, and Project developer follow this practice..) ---------- Pre-FSR, issued in January 2011, was reviewed and certified by 3rd party consultant for SEA submission and consultant recommend changing capacity to 1.3MW. So, PP revised Pre-FSR with capacity of 1.3MW (issued on 2 November 2012) and the revised one was reviewed again by the 3rd party consultant to validate the appropriateness of revised data (capacity, financial data) and consultant certified it. #38_ Certified Pre-FSR		
58		(c) Review, as appropriate, feasibility reports, public announcements and annual financial reports related to the proposed project activity and the project participants; (d) Assess the correctness of computations carried out and documented by the project participants; and (e) Assess, where applicable, the sensitivity analysis by the project participants to determine under what conditions variations in the result would occur, and the likelihood of these conditions.	Refer ID. #57. Please provide documentary evidences of used values in the IRR calculation, especially, tariff, plant load factor, escalable O&M.cost rate. ↓ DOE found that the IEER, chapter 01 introduction and chapter 02 description of the proposed project and reasonable alternatives, has the value of annual gross electricity generation of 4.96 GWh rather than 3.926 GWh of the Pre-FSR. Additionally, initial CPA-DD has the value of 4.555 GWh. Please provide the documentary evidence of the annual gross electricity generation that is applied to this project. ↓ DOE confirmed the NCRE Purchase tariffs 2012-	As DOE said only three-tier tariff apply escalable base O&M cost, but the applied escalable rate is the value in the items 'Escalable Base O&M rate (year 1-20) - 1.98%' in the table of 3-tier tariff, not the section 'O&M cost escalation rate - 6.14%'.	CL	OK

			2013, issued on 5 October 2012, by PUCSL. Regarding tariff, there are two options of tarrifs based on the NCRE purchase tariffs. Two options are 1. Three-tiered Tariff and 2. Flat Tariff. PP chose the option 2. Flat Tariff, 17.17 for Mini-hydro-local. It was stated that the flat tariff will not be escalated for any reason over the entire 20-year period. It is acceptable to use the flat tariff, applied to the CPA-DD. However, the PP used escalable base O&M cost, 6.14%, in the IRR analysis. According to the NCRE purchase tariff, it seems that the escalable base O&M cost only applies to Three-tiered tariff, not flat tariff. Three-tiered tariff consists of three different values in 20 years, 17.26 (1-8 years), 6.55 (9-15 years), and 5.95 (16-20 years). Please have further explanation regarding the applicability of escalable O&M cost because it seems to be a tool to support getting lower tariffs after nine years. ↓ DOE confirmed that the escalation O&M rate is a kind of compensation for NCRE tariff. Even though the escalation O&M cost, 6.14%, would not be applied, the IRR is calculated as 11.82%, still less than benchmark of 14.45%.			
59		121. To confirm the suitability of any benchmark applied in the investment analysis, the DOE shall: (a) Determine whether the type of benchmark applied is suitable for the type of financial indicator presented; (b) Ensure that any risk premiums applied in determining the benchmark reflect the risks associated with the project type or activity; (c) Determine whether it is reasonable to assume that no investment would be made at a rate of return lower than the benchmark.	Refer to ID#57 ↓ Benchmark rate was revised to 14.45% based on one year of AWLR published by the Central Bank of Sri Lanka from six months AWPLR in the initial PoA-DD. DOE confirmed that it is suitable to use AWLR of the latest one year as the benchmark.	Central Bank of Sri Lanka issue the AWLR (Average Weighted Lending Rate) to the public regularly. The AWLR is calculated by the Central Bank based on all outstanding loans and advances granted by commercial banks to the private sector and the corresponding interest rates. CPA implementer of first CPA project, Peak Power Beta is the private sector, so they revised Benchmark as the averaged value of 12 months of AWLR (14.45%).	CL	OK

60		122. Where project participants rely on values from Feasibility Study Reports (FSR) that are approved by national authorities for proposed project activities, the DOE shall determine whether: (a) The FSR is the basis for the decision to proceed with the investment in the project, i.e. that the period of time between the finalization of the FSR and the investment decision is sufficiently short that it is unlikely in the context of the underlying project activity that the input values would have materially changed;	Refer to ID#58 ↓ DOE confirmed that the certified final version of Pre-FSR of CPA <<2013-PPB-001-1.3MW> is still in progress. The signing of SPPA between the CPA implementer and CEB in August and the equipment purchase is expected to be concluded after signing of SPPA. The input values in the Pre-FSR are reasonable because there is no big gap after Pre-FSR is issued.	Peak power beta and CEB will sign the SPPA in August 2013. Equipment purchase is expected to be concluded after SPPA signing. so they confirmed the equipment specification and estimate beforehand.	CL	OK
61		(b) The values used in the PDD and associated annexes are fully consistent with the FSR, and where inconsistencies occur the DOE shall assess the appropriateness of the values; (c) The input values from the FSR are valid and applicable at the time of investment decision. The DOE shall confirm this on the basis of its specific local and sectoral expertise and by cross-checking or other appropriate means.	Refer to ID#60	Refer to ID#60	CL	OK
	"Guidelines on the assessment of investment analysis (Version05)" on EB62 of Annex5					
62	110. The DOE shall comply with the latest version of the " Guidance on the Assessment of Investment Analysis " as provided by the CDM Executive Board and with other relevant guidance including the latest guidelines on plant load factors “guidelines for the reporting and validation of plant load factors”	General issues in calculation and presentation 3-1. The period of assessment should not be limited to the crediting period of the project activity. Both project IRR and equity IRR calculations shall as a preference reflect the period of expected operation of the underlying project activity (technical lifetime). If shorter period is chosen - include the fair value of the PoA assets at the end of the assessment period. (In general a minimum period of 10 years and a maximum of 20 years will be appropriate)	Construction year is not identified from the Pre-FSR. (Please provide a construction schedule for the proposed project and if necessary, revise IRR calculation spreadsheet accordingly.) DOE confirmed the construction schedule and revised IRR sheet. It was confirmed that the operational life is applied for 20 years for the IRR analysis of CPA <2013-PPB-001-1.3MW>, Ganthuna Small Hydropower Project. DOE conculded that it is reasonable.	PP attached construction schedule and revised IRR sheet to consider it. (2013.5.7) ID#62. Ganthuna construction schedule	CL	OK
63		3-2. The IRR calculation may include the cost of major maintenance and/or rehabilitation if these are expected to be incurred during the period of assessment.	6.14% of yearly escalation in O&M cost from NCRE Tariffs Methodology (PUCSL) 2012-2013. (Please submit the result of sensitivity analysis by applying with and without escalation rate (up to 6.14%) for O&M cost.) ↓ The revised IRR analysis spreadsheet, with sensitivity analysis without escalation, was confirmed.	PP consider the case that escalation ration for O&M cost, and added sheets 'analysis (wo escalation)' and 'sensitivity (w/o escalation)' #7_Ganthuna IRR analysis sheet	CL	OK

64		4-1. The fair value of any project activity assets at the end of the assessment period should be included as a cash inflow in the final year.	Residual value (fair value) is used for IRR calculation. However, the value used is not consistent between CPA-DD and IRR calculation spreadsheet. ↓ DOE confirmed that the residual value in the IRR analysis spreadsheet was in accordance with that of the CPA-DD.	PP revised residual value to 21.73 LKR Mn in CPA-DD. **. The Unit of Residual value is LKR Mn, not a %. (percentage of residual value is 5% of asset value.) #7_Ganthuna IRR analysis sheet	CAR	OK
65		4-2. The fair value should be calculated in accordance with local accounting regulations where available, or international best practice. It is expected that such fair value calculations will include both the book value of the asset and the reasonable expectation of the potential profit or loss on the realization of the assets.	Refer to ID#64	PP revised residual value to 21.73 LKR Mn in CPA-DD. **. The Unit of Residual value is LKR Mn, not a %. (percentage of residual value is 5% of asset value.) #7_Ganthuna IRR analysis sheet	CL	OK
66		5-1. Depreciation, and other non-cash items related to the project activity, which have been deducted in estimating gross profits on which tax is calculated, should be added back to net profits for the purpose of calculating the financial indicator (e.g. IRR, NPV).	It was confirmed that depreciation was considered in the IRR calculation. Refer ID. # 57	Refer ID. # 57	CL	OK
67		5-2. Taxation should only be included as an expense in the IRR/NPV calculation in cases where the benchmark or other financial indicator is intended for post-tax comparisons.	DOE confirmed that the benchmark and IRR calculation is applied based on pre-tax. It is not applicable to the CPAs under the PoA.		N/A	N/A
68		6. Input values used in all investment analysis should be valid and applicable at the time of the investment decision taken by the project participant. The DOE is therefore expected to validate the timing of the investment decision and the consistency and appropriateness of the input values with this timing. The DOE should also validate that the listed input values have been consistently applied in all calculations.	Refer to ID#57 ↓ The PP provided the details of project cost, issued on 30 December 2012. Please provide the details in the IRR analysis spreadsheet. However, those values have to be certified by the third party. ↓ The revised Pre-FSR with 1.3MW capacity and the new financial analysis, issued on 2 November 2012, was officially reviewed by a third-party local expert, who is an accredited consultant by the SEA to conduct prefeasibility studies for on-grid renewable energy project area.	Pre-FSR, issued in January 2011, was reviewed and certified by 3rd party consultant for SEA submission and consultant recommend changing capacity to 1.3MW. So, PP revised Pre-FSR with capacity of 1.3MW (issued on 2 November 2012) and the revised one was reviewed again by the 3rd party consultant to validate the appropriateness of revised data (capacity, financial data) and consultant certified it. #38_ Certified Pre-FSR	CL	OK

69		7. In the case of project activities for which implementation ceases after the commencement and where implementation is recommenced due to consideration of the CDM the investment analysis should reflect the economic decision making context at point of the decision to recommence the project. Therefore capital costs incurred prior to the revised project activity start date can be reflected as the recoverable value of the assets. (Capital expenditures should be included not at the original investment costs but at the market fair value at the point of the decision to proceed with the investment, demonstrating the value through assessments done by chartered specialists).	It is not applicable to this CPA.		N/A	N/A
70		8. Project participants should supply spreadsheet versions of all investment analysis. All formulas used in this analysis be readable and all relevant cells be viewable and unprotected. The spreadsheet will be made available to the Executive Board, UNFCCC secretariat and others contracted to assess the request for registration on behalf of the Board including assigned members of the Registration and Issuance Team.	Under review by DOE DOE confirmed that all formulae used in this analysis are readable and all relevant cells are viewable and unprotected.		CL	OK
71		Specific Guidance on the Calculation of Project IRR and Equity IRR 9. The cost of financing expenditures (i.e. loan repayments and interest) should not be included in the calculation of project IRR.	Under review by DOE DOE confirmed that the cost of financing expenditures (i.e., loan repayments and interest) was not included in the revised calculation of project IRR.		CL	OK
72		10. In the calculation of equity IRR only the portion of investment costs which is financed by equity should be considered as the net cash outflow, the portion of the investment costs which is financed by debt should not be considered a cash outflow.	It is not applicable to this PoA/CPA.		N/A	N/A

73		11. Due to the impact of loan interest on income tax calculations it is recommended that when a project IRR is calculated to demonstrate additionality a pre-tax benchmark be applied. In cases where a post-tax benchmark is applied the DOE shall ensure that actual interest payable is taken into account in the calculation of income tax. In such situations interest should be calculated according to the prevailing commercial interest rates in the region, preferably by assessing the cost of other debt recently acquired by the project developer and by applying a debt-equity ratio used by the project developer for investments taken in the previous three years.	Since the pretax benchmark is applied, it is not necessary to supply loan interest on income tax calculation.		OK	OK
74		Selection and Validation of Appropriate Benchmarks 12. In cases where a benchmark approach is used the applied benchmark shall be appropriate to the type of IRR calculated. Local commercial lending rates or weighted average costs of capital (WACC) are appropriate benchmarks for a project IRR. Required/expected returns on equity are appropriate benchmarks for an equity IRR. Benchmarks supplied by relevant national authorities are also appropriate if the DOE can validate that they are applicable to the project activity and the type of IRR calculation presented.	Refer. ID. #55 The PP changed the benchmark decision from the six months average of AWPLR, 13.75%, to one-year average of AWLR, 14.45%. DOE confirmed all the values of 12 months of AWLR and also confirmed the reason of changed benchmark definition from "AWPLR" to "AWLR." AWLR is acceptable as a benchmark for "Local commercial lending rate" that was regulated in the "Guidelines on the Assessment of investment analysis (Version 05)"; therefore, the benchmark of 14.45% is acceptable for the project.	The AWLR is calculated by the Central Bank based on all outstanding loans and advances granted by commercial banks to the private sector and the corresponding interest rates. CPA implementer of first CPA project, Peak Power Beta is the private sector, so they revised Benchmark as the averaged value of 12 months of AWLR (14.45%).	CL	OK
75		13. In the cases of projects which could be developed by an entity other than the project participant the benchmark should be based on parameters that are standard in the market. The DOE s validation of the benchmark shall also include its opinion on whether a company-specific benchmark or a benchmark based on parameters that are standard in the market is suitable in the context of the underlying project activity.	· It is not applicable to this PoA/CPA		N/A	N/A

76		14-1. Internal company benchmarks / expected returns (including those used as the expected return on equity in the calculation of a weighted average cost of capital - WACC), should only be applied in cases where there is only one possible project developer and should be demonstrated to have been used for similar projects with similar risks, developed by the same company or, if the company is brand new, would have been used for similar projects in the same sector in the country/region.	·It is not applicable to this PoA/CPA		N/A	N/A
77		14-2. This shall require as a minimum clear evidence of the resolution by the company's Board and/or shareholders and will require the validating DOE to undertake a thorough assessment of the financial statements of the project developer - including the proposed WACC - to assess the past financial behavior of the entity during at least the last 3 years in relation to similar projects.	·It is not applicable to this PoA/CPA		N/A	N/A
78		15. If the benchmark is based on parameters that are standard in the market, the cost of equity should be determined either by: (a) selecting the values provided in Appendix A; or by (b) calculating the cost of equity using best financial practices, based on data sources which can be clearly validated by the DOE, while properly justifying all underlying factors. The values in the table in Appendix A may also be used, as a simple default option, if a company internal benchmark is used.	·It is not applicable to this PoA/CPA		N/A	N/A
79		16. If a company's internal benchmark is used for the expected return on equity, the cost of debt should be based on the weighted average cost of debt financing of the legal entity owning the CDM project activity. For loans, use the weighted average cost of outstanding long-term debt. For bonds, use the weighted average yield of the bonds during the last three months prior to the submission of the CDM-PDD for validation or prior to the investment decision, whichever is earlier. The use of bonds to determine the cost of debt is only appropriate for corporate bonds issued in the host country of the CDM project. In cases where the debt finance structure of the project is not yet available (e.g. a letter of intent for debt funding is not available), the	·It is not applicable to this PoA/CPA		N/A	N/A

		cost of debt can be assumed as the commercial lending rate in the country or the yield of a 10 year bond issued by the government of the host country or, if this is not available, the bond with the maturity which is closest to 10 years. The following should be documented in the CDM-PDD: (a) for bonds: the key parameters of the bond including the time of maturity, yield, registration issuance in the financial system and set-up in the market; (b) for loans from a financial institution: the contract of lending between the financial institution and the legal entity owning the assets of the project activity, or, in absence of the contract, a letter from the bank stating its intention to award the loan and the key terms for the loan; (c) for debt financing from a parent company: the transfer of capital to the legal entity, documented with the contract of lending between the parent company and the legal entity owning the assets of the project activity and/or the parameters of the corporate bonds as mentioned above. This latter option is only valid for corporate bonds issued in the host country of the CDM project activity. If the benchmark is based on parameters that are standard in the market, the cost of debt should be calculated as the cost of financing in the capital markets (e.g. commercial lending rates and guarantees required for the country and the type of project activity concerned), based on documented evidence from financial institutions with regard to the cost of debt financing of comparable projects. In cases where this data is not available, use the commercial lending rate in the host country to calculate the cost of debt.				

80		17. If a company's internal benchmark is used for the expected return on equity, then the percentage of debt financing and equity financing should reflect the long-term debt/equity finance structure of the legal entity owning the assets of the project activity. The percentage should be determined based on the latest balance sheet provided under local fiscal/accounting standards and rules if: (a) the legal entity owning the assets of the project activity has balance sheets audited by a third party within two years prior to the submission of the CDM-PDD for validation; and (b) the accounting books of the legal entity reflect at least the total value of all the assets needed for the project activity. If the debt/equity finance structure is not yet available, 50% debt and 50% equity financing may be assumed as a default.	·It is not applicable to this PoA/CPA		N/A	N/A
81		18. If the benchmark is based on parameters that are standard in the market, then the typical debt/equity finance structure observed in the sector of the country should be used. If such information is not readily available, 50% debt and 50% equity financing may be assumed as a default.	·It is not applicable to this PoA/CPA		N/A	N/A
82		Investment comparison analysis and benchmark analysis 19. If the proposed baseline scenario leaves the project participant no other choice than to make an investment to supply the same (or substitute) products or services, a benchmark analysis is not appropriate and an investment comparison analysis shall be used. If the alternative to the project activity is the supply of electricity from a grid this is not to be considered an investment and a benchmark approach is considered appropriate.	·It is not applicable to this PoA/CPA		N/A	N/A

83		Sensitivity analysis 20. Only variables, including the initial investment cost, that constitute more than 20% of either total project costs or total project revenues should be subjected to reasonable variation (all parameters varied need not necessarily be subjected to both negative and positive variations of the same magnitude). The results of this variation should be presented in the PDD and be reproducible in the associated spreadsheets. Where a DOE considers that a variable which constitute less than 20% have a material impact on the analysis they shall raise a corrective action request to include this variable in the sensitivity analysis.	Refer to ID#63 DOE confirmed that project cost, electricity generation, and tariff were used for the sensitivity analysis. Also, confirmed the sensitivity analysis without O&M cost escalation.	PP consider the case that escalation ration for O&M cost, and added sheets 'analysis (wo escalation)' and 'sensitivity (w/o escalation)' #7_ganthuna IRR analysis sheet	CL	OK
84		21-1. The DOE should assess in detail whether the range of variations is reasonable in the project context. Past trends may be a guide to determine the reasonable range. As a general point of departure variations in the sensitivity analysis should at least cover a range of +10% and -10%, unless this is not deemed appropriate in the context of the specific project circumstances.	· DOE confirmed that the range of variation, -10% to +10%, is reasonable.		OK	OK
85		21-2. In cases where a scenario will result in the project activity passing the benchmark or becoming the most financially attractive alternative the DOE shall provide an assessment of the probability of the occurrence of this scenario in comparison to the likelihood of the assumptions in the presented investment analysis, taking into consideration correlations between the variables as well as the specific socio-economic and policy context of the project activity.	·It is not applicable to this PoA/CPA		N/A	N/A

86		In situations where an investment analysis is carried out in nominal terms, project participants can convert the real term values provided in the table below to nominal values by adding the inflation rate. The inflation rate shall be obtained from the inflation forecast of the central bank of the host country for the duration of the crediting period. If this information is not available, the target inflation rate of the central bank shall be used. If this information is also not available, then the average forecasted inflation rate for the host country published by the IMF (International Monetary Fund World Economic Outlook) or the World Bank for the next five years after the start of the project activity shall be used.	·The proposed project uses the real-term values (lending rate). ·It is not applicable to this PoA/CPA		N/A	N/A
	7.12.12 Barrier analysis					
87	124. If barrier analysis has been used to demonstrate the additionality of the proposed CDM project activity, the PDD shall demonstrate that the proposed CDM project activity faces barriers that: (a) Prevent the implementation of this type of proposed CDM project activity; (b) Do not prevent the implementation of at least one of the alternatives.	125. Issues that have a clear direct impact on the financial returns of the project activity cannot be considered barriers and shall be assessed by investment analysis. This does not refer to either (a) Risk related barriers, for example risk of technical failure, that could have negative effects on financial performance, or (b) Barriers related to the unavailability of sources of finance for the project activity.	·It is not applicable to this PoA/CPA		N/A	N/A

88		126. The DOE shall apply a two-step process to assessing the barrier analysis performed, as follows: (a) Determine whether the barriers are real. The DOE shall assess the available evidence and/or undertake interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) to determine whether the barriers listed in the PDD exist. The DOE shall ensure that existence of barriers is substantiated by independent sources of data such as relevant national legislation, surveys of local conditions and national or international statistics. If existence of a barrier is substantiated only by the opinions of the project participants, the DOE shall not consider this barrier to be adequately substantiated. If the DOE considers, on the basis of its sectoral or local expertise, that a barrier is not real or is not supported by sufficient evidence, it shall raise a CAR to have reference to this barrier removed from the project documentation;	·It is not applicable to this PoA/CPA		N/A	N/A
89		(b)Determine whether the barriers prevent the implementation of the project activity but not the implementation of at least one of the possible alternatives. Since not all barriers present an insurmountable hurdle to a project activity being implemented, the DOE shall apply its local and sectoral expertise to judge whether a barrier or set of barriers would prevent the implementation of the proposed CDM project activity and would not equally prevent implementation of at least one of the possible alternatives, in particular the identified baseline scenario.	·It is not applicable to this PoA/CPA		N/A	N/A

90		(b) Determine whether the barriers prevent the implementation of the project activity but not the implementation of at least one of the possible alternatives: Since not all barriers present an insurmountable hurdle to a project activity being implemented, the DOE shall apply its local and sectoral expertise to judge whether a barrier or set of barriers would prevent the implementation of the proposed project activity and would not equally prevent implementation of at least one of the possible alternatives, in particular the identified baseline scenario.	·It is not applicable to this PoA/CPA		N/A	N/A
	7.12.13. Common practice analysis					
91	128. For proposed large-scale project activities, unless the proposed project type is first-of-its-kind as determined in accordance with the relevant guidelines, the DOE shall assess whether the project participants have conducted a common practice analysis.	129. The DOE shall use official sources and its local and sectoral expertise to: (a) Assess whether the geographical scope (e.g. the defined region) of the common practice analysis is appropriate for the assessment of common practice related to the project activities technology or industry type. For certain technologies, the relevant region for assessment will be local and for others it may be transnational/global. If a region other than the entire host country is chosen, the DOE shall assess the explanation of why this region is more appropriate;	· It is not applicable to this proposed project		N/A	N/A
92		(b) Determine to what extent similar and operational projects (e.g. using similar technology or practice), other than project activities,17 have been undertaken in the defined region; (c) Assess, if similar and operational projects, other than project activities, are already "widely observed and commonly carried out" in the defined region, whether there are essential distinctions between the proposed project activity and the other similar activities.	· It is not applicable to this proposed project		N/A	N/A
	7.12. 14. Monitoring plan					

93	131. The DOE shall determine whether the description of the monitoring plan included in the PDD is based on the approved monitoring methodology including applicable tool(s).	132. The DOE shall apply a two-step process to meet the above requirement: (a) To assess compliance of the monitoring plan with the approved methodology and the applicable tool(s), the DOE shall: (i) Identify the list of parameters required by the selected approved methodology including applicable tool(s) by means of document review; (ii) Confirm that the description of the monitoring plan contains all necessary parameters, that they are described and that the means of monitoring described in the plan complies with the requirements of the methodology including applicable tool(s).	CDM Operation Manual (prepared on 21/01/2013 Version 0) is not based on the actual situation for this proposed PoA as well as CPA-DD. (Please revise the manual in accordance with the actual situation of this proposed PoA/CPA and revise the MP in the PoA-DD and CPA-DD.) Also, DOE identified that the initial CDM Operation Manual is not consistent with the PoA-DD, CPA-DD, and other relevant requirements, such as PS, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities" (EB 70, Annex 5). DOE confirmed by performing interview with the PP and reviewing the Power system diagram of CPA <2013-PPB-001-1.3MW> that there are two meters, for $EG_{BL,y}$, and two generator meters, for TEG_y, will be installed at the hydropower plant. It is also stated that area of reservoir will be measured for each CPA in the PoA-DD and CPA-DD. Those parameters that will be monitored during the crediting period are confirmed to be consistent with the applied methodology and relevant tools. However, "Cap_{BL}" and "A_{BL}" are not stated in the Section VII. 3-4. of "CDM Operation Manual." Those parameters need to be monitored for ER calculation. ↓ Monitoring parameters, $EG_{BL,y}$, Energy Input, Energy Output, Cap_{BL}, A_{BL} and TEG_y were confirmed in the PoA-DD and "CDM Operational Manual" Version 2, issued on 20 June 2013. Those parameters comply with the applied methodology, AMS I.D. Version 17.	- PP added the monitoring parameter "Cap_{BL}", "A_{BL}", in the CDM Operation Manual (Section VII. 3-4. of CDM Operation Manual) Appendix 2_ srilankaPoA_CDM Operation Manual v2-1	CAR	OK
94		(b) To assess the implementation of the plan the DOE shall, by means of review of the documented procedures, interviews with relevant personnel, project plans and any physical inspection of the proposed project activity site, assess whether:(i) The monitoring arrangements described in the monitoring plan are feasible within the project design;(ii) The means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, are sufficient to ensure that the	Refer to ID#93. SPPA is not ready at the time of on-site visit. Please submit once it is available. Power system diagram of CPA <2013-PPB-001-1.3MW> hydropower plant was submitted. However, the location of main and backup meters were not clear. Moreover, accuracy of meters and calibration frequency were not confirmed during the on-site inspection Furthermore, it is not clear whether there is any relevant law/regulation regarding the accuracy of	*. CPA implementer (Peak Power Beta) will not install backup generators and backup meter in their Ganthuna project site. To determine about it, they send a confirmation letter.*. CPA implementer contract with CEB to supply electricity as NCRE tariff. To do contract, they should comply with related regulation. (please refer to the attached regulation) - Calibration frequency: the metering equipment shall be tested at least annually.	CAR	OK

		emission reductions achieved by/resulting from the proposed project activity can be reported ex post and verified.	metering system. (Please provide a contract/specification of meters once it is available.) It is stated that calibration frequency will be determined based on "manufacturer specifications, but at least once in three years." Please provide "manufacture specification" and the reason of once in three years. In Section 6.4, Calibration of CDM operation manual, it is stated that "CEB shall carry out calibration according to manufacturer's specification, but at least once in three years. Pleaser clarify that PP will not implement and involve the electricity meter calibration. (Different description from that of CPA-DD). Calibration frequency of meters is not stated. DOE confirmed that the CME did not provided the requirements of meter accuracy and calibration frequency in the in PoA-DD and CPA-DD ↓ DOE confirmed the related parts of MP for the PoA and CPA. It will be implemented based on "standardized agreement for purchase of electricity energy between CEB and company (seller)," which is also referred in CDM Operation Manual, i.e., calibration frequency, meter accuracy. Please provide the specification of electricity meters, if available. In addition to that, please provide further explanation regarding monitoring system in the PoA-DD. - Internal audit for each CPA but no mention about internal audit in the CPA-DD. - It is stated that the I/A Report is prepared by the chief executive officer, but organization structure of typical CPA did not describe about it. - No mention about internal audit in the CDM Operation Manual either. Please confirm it. - There is no mention about "Contingency Plan" in the CDM Operation Manual. Please clarify how the CME and CPA implementer deal with the situation. ↓ DOE confirmed the revised PoA-DD, CPA-DD, and CDM Operation Manual. DOE concluded that the MP was prepared to cover the applied methodology and PoA's eligibility criteria.	(page 10) - Accuracy: any metering equipment is found to be inaccurate by more than 2.0%, CEB shall cause such metering equipment to be made accurate or replaced as soon as possible. (page10)ID#94_confirmation letter.ID#94_Standardized Agreement for Purchase of Electricity Energy ---------- There are not the guidelines and actual process for the Internal audit of Ganthuna project (1st CPA). so, PP didn't mention about I/A in the CPA-DD and Operation manual. To avoid confusion, PP delete I/A process in the PoA-DD also, but if it will be necessary to the involved CPA after registration of PoA, CPA implementer will be able to add this process in the CPA-DD and Operation Manual. - PP mentioned Contingency plan in PoA-DD and CPA-DD, but, in Operation manual, PP mentioned it as Corrective and Preventive Action. so PP unified 'Corrective and Preventive Action' and 'Contingency Plant' as Contingency Plan in the Operation Manual. Appendix 2_ srilankaPoA_CDM Operation Manual v2		
	8.4.11. Monitoring plan for a PoA/CPA					

95	198. The DOE shall determine whether the monitoring plan for a CPA is in accordance with the approved monitoring methodology, including applicable tool(s).		It was confirmed that the MP for a CPA is in accordance with the approved monitoring methodology, including applicable tool(s). "Letter of Intent for Project Participation" in "Programme of Activities for Small Scale hydropower CDM in Sri Lanka" was signed by deputy general manager of Peak Power Beta (Pvt.) Ltd. on 07/01/2013. Based on the CDM operation manual, the CME established four Annexure for CPA inclusion. However, DOE could not confirm the Annexure II, III and IV during the on-site assessment. Especially, eligibility criteria in the Annexure III are not satisfied the actual situation for this proposed PoA. ↓ DOE confirmed the CME-CPA contract between SLCF and Peak Power Beta (Private) Limited issued on 8 February 2013. The contents of contract is in accordance with that of "CDM Operation Manual," issued on 21 January 2013. Appendix II is also provided. Please clarify Annex III. Assessment Results (Details) and Annex IV. Certificate of Double counting check form also needs to be provided. ↓ DOE confirmed the Annex II and Annex IV, but Annex III has not been provided. ↓ DOE confirmed Annex III. However, please confirm the form is not consistent with the CDM Operation Manual and refer ID. 94 ↓ DOE confirmed the revised PoA-DD, CPA-DD, and CDM Operation Manual. DOE concluded that the MP was prepared to cover the applied methodology and PoA's eligibility criteria.	- PP added some contents about detail of project activity in the Annex III. (i.e. Company name, Hydropower plant name, Capacity) Appendix 2_ srilankaPoA_CDM Operation Manual v2-1	CAR	OK
	7.13. Environmental impacts					

96	134. The DOE shall determine whether the project participants conducted an analysis of the environmental impacts of the proposed project activity, including trans boundary impacts, and whether those impacts are considered significant by the project participants or the host Party.	136. The DOE shall assess the above requirements by means of a document review and/or using local official sources and expertise.	Refer ID. # 99	Refer ID. # 98 and 99	CL	OK
97	135. The DOE shall also determine whether the project participants conducted an environmental impact assessment, if required to do so by the host Party, in accordance with the host Parties procedures.		Refer ID. # 99	Refer ID. # 98 and 99	CL	OK
	8.4.12. Environmental analysis of a PoA					
98	199. The DOE shall determine whether an analysis of the environmental impacts of the PoA was undertaken as per the requirements of the CDM modalities and procedures.		DOE confirmed that environmental analysis will be implemented based on each CPA, not PoA.		OK	OK
99	200. If the analysis was not undertaken for the PoA but conducted at the CPA level, the DOE shall determine whether the analysis of the environmental impacts was conducted as described in the CDM-PoA-DD and the CDM-CPA-DD.		Please provide the details of IEER report and approval letter. ↓ DOE confirmed that the EIA will be implemented under CPA level for this PoA. For CPA <2013-PPB-001-1.3MW>, the EIA report, IEER in September 2011. The approval of this IEER was issued by the CEA, Ref. SA/KE/08/03/06/09, issued on 18 November 2011.	For CPA <2013-PPB-001-1.3MW> , the EIA report, Initial Environmental Examination (IEE) Report in September 2011. The approval of this IEER was provided.	CL	OK
	7.14. Local stakeholder consultation					
100	138. The DOE shall determine whether the project participants have completed a local stakeholder consultation process and that due steps were taken to engage stakeholders and solicit comments for the proposed project activity.	139. The DOE shall, by means of document review and interviews with local stakeholders as appropriate, determine whether: (a) Comments have been invited from local stakeholders that are relevant for the proposed project activity; (b) The summary of the comments received as provided in the PDD is complete; (c) The project participants have taken due account of all comments received and have described this process in the PDD.	Refer. ID. # 102 It was confirmed by the on-site visit and interview that the local stakeholder consultation was held on 30/10/2012 as stated in the PoA-DD. During the consultation, the following issues were discussed: -The proposed technology to be adopted for the hydropower project - Other facilities that could be derived with the installation of the Hydro Electricity plant. - Social, economic, and environmental influences. - The form of electricity generation is clean and pollution free. - Employment opportunities for the residents during the construction period.		OK	OK

	8.4.13. Local stakeholder consultation					
101	201. The DOE shall determine whether the local stakeholder consultation process was carried out for the whole PoA or at the CPA level. If comments by local stakeholders were invited with regard to the whole PoA, the DOE shall determine how these comments were invited; whether the summary of the comments received is complete and how due account was taken of all comments received.		· Local stakeholder consultation was not implemented under whole PoA, but under each CPA.		N/A	N/A
102	202. If the local stakeholder consultation is conducted at the CPA level, the DOE shall determine whether it is in accordance with the level of consultation specified by the coordinating/managing entity and whether the local stakeholder comments were taken into account and described in the CDM-PoA-DD and the CDM-CPA-DD.		It was confirmed by the on-site visit and interview that the local stakeholder consultation was held on 30/10/2012 as stated in the PoA-DD. The memo of interview was as follows: - The stakeholder interview was conducted on 20/02/2013. - Six villagers (including three villagers who participated in the stakeholder consultation meeting on 30/10/2012) - Occupation: Farmer - There are two villages near the project site with 600 households. Four households live near the project site. - The project site, including land for road, was already purchased by PP (Peak Power Beta company). - There was no resettlement, but some farmers had to sell their farmland. - The land price was set by negotiation and the villagers were satisfied with it. - The villagers support the proposed project because of road construction and labour creation. - At the consultation meeting, the PP explained possibility of lack of water, but all villagers agreed with it. - The villagers consider that there will be no significant impact on natural environment. In addition, the villagers do not eat fish. - Electricity is less than expected for current situation. ↓ DOE confirmed that the local stakeholders consultation, carried out on 30 October 2012, was informed by using invitation letter and visiting the residents from/on 20 September 2012. The		OK	OK

			documentary evidence of the invitation letter was also confirmed by DOE.			
	VIII. Specific validation requirements (additional)					
	8.1. Project activity eligibility					
103	150. The DOE shall determine whether the proposed project activity meets the small-scale eligibility requirements.	151. For a project activity that is within the small-scale project activity threshold but applies a large-scale approved methodology, the DOE shall determine whether this project activity follows the modalities and procedures for large-scale project activities.	· It is not applicable to this proposed project		N/A	N/A
104		152. The DOE shall determine whether: (a) The project activity qualifies within the thresholds of the three possible types of small-scale project activities. It may include more than one component; for example, a type III methane recovery component activity and a type I electricity component activity; (b) The project activity conforms to one or more of the approved small-scale methodologies applied in conjunction with the general guidelines to SSC CDM methodologies; (c) The proposed small-scale project activity is not a debundled component of a large-scale project activity.	Refer ID. # 108 and 109	Refer ID. # 108 and 109	CL	OK
	8.4. 9. Eligibility criteria for inclusion of a CPA in the PoA					
105	196. The DOE shall assess the eligibility criteria for inclusion of a CPA in the PoA in accordance with the "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for program of activities " .		Manufacturer's specifications should be submitted. - Please refer ID. # 9 - In the PoA-DD, Table B.7, methodological applicability check of typical CPA has PoA scenario and Part II of Generic CPA-DD Table B.1 has "No reservoirs will be used for this power plant" scenario. Please confirm that no reservoir is one of the criteria of CPAs. DOE confirmed the revised criteria of CPAs for reservoir issue in the PoA-DD. Please provide the revised CDM Operational Manual. ↓	PP broaden the hydro technology criteria can be involve in this PoA therfore, CPA with reservoir also can be included in this PoA PoA-DD - 8page (tabe b.3) - 14page (table b.1) - 26/30 page (PEy) - 28/32 page (hydropower monitoring parameter) - changed items: PDD applicability, Eligibility Criteria, Project Emission calculation, monitoring parameters.	CAR	OK

			DOE confirmed the revised CDM Operational Manual Version 2. Please refer I.D. 94. DOE confirmed the revised CDM Operation Manual (Version 2, dated 20 June 2013), which is revised in accordance with the PoA-DD, CPA-DD, and other relevant requirements, such as PS, "Demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities." DOE also confirmed all the annexures and the certificates of approver and technical officer of CME and equipment technical parameters from the manufacturer. DOE concluded that the MP was prepared to cover the applied methodology and PoA's eligibility criteria.			
	8.4.10. Crediting period of a PoA/CPA					
106	197. The DOE shall determine whether the length of a PoA does not exceed 28 years (60 years for A/R).		It was confirmed that the crediting period of PoA is 28 years		OK	OK
	8.4.15. Inclusion or renewal of a crediting period of a CPA under a registered PoA					
107	204. The DOE shall assess the CPA and the specific CDM-CPA-DD against the latest version of the PoA to determine whether the CPA meets the requirements of the PoA.		It is not applicable to this PoA		N/A	N/A
	2. Debundling					
108	154. The DOE shall determine whether the proposed small-scale project activity is not a debundled component of a large-scale project activity in accordance with the Guidelines on assessment of debundling for SSC project activities"	155. The DOE shall determine the proposed small-scale project activity to be a debundled component of a large-scale project activity if there is a registered small-scale project activity or an application to register another small-scale project activity.	Please provide all hydropower projects within the same watershed with "name of project owner (CME/CPA)," "CDM project or not," and "Distance from the proposed CPA project" ↓ The PP provided the confirmation letter regarding the existing hydropower project in the same watershed with the CPA <2013-PPB-001-1.3MW> project. The letter was issued by the Sri Lanka SEA on 30 April 2013. It was stated that there is no other small hydropower project that belongs to the CPA <2013-PPB-001-1.3MW>implementer. With the confirmation, DOE decided that this project has satisfied the requirements of "Guidelines on assessment of de-bundling for SSC project activities, Version 3.0 (EB 54, Annex 13). In addition to that, there is no CDM-registered small hydropower in the	The PP provided the confirmation letter regarding the existed hydropower project in the same watershed with the CPA <2013-PPB-001-1.3MW> project. The letter was issued by the Sri Lanka Sustainable Energy Authority, on 30 April 2013. It was stated that there is no other small hydro power project belongs to the CPA <2013-PPB-001-1.3MW> implementer.	CL	OK

			same watershed with the CPA <2013-PPB-001-1.3MW> .			
109		156. The DOE shall, where appropriate, take into account specific debundling requirements for Type I project activities and small-scale transport project activities.	Refer to ID#108	Refer to ID#108	CL	OK
	14. Determination of occurrences of debundling under a PoA					
110	203. The DOE shall ascertain that the proposed small-scale CPA of a PoA is not a debundled component of a large-scale project activity in accordance with the Guidelines on assessment of debundling for SSC project activities .		Refer to ID#108	Refer to ID#108	CL	OK

Table A-2 Risk analysis before on-site assessment

*Evaluation: High = No descriptions in the PDD / Moderate = some descriptions but necessary to cross-check / Low = descriptions confirmed

ID	Risk		Checkpoint	H/M/L	Comment
1	Additionality requirements	Investment analysis (VVS paragraph 117-122, EB65 Annex4)	Accuracy of financial (IRR) calculations?	L	It needs to be confirmed during the validation period.
2			Sensitivity analysis: parameter selection complete & reasonable?	L	The PPs selected three parameters of Project cost, Annual power generation and Electricity tariff for sensitivity analysis in the CPA-DD. DOE will confirm its appropriateness of the selection and also will confirm the reason why the exchange rate was described in the CPA-DD.
3			Sensitivity analysis: fluctuation of range complete & reasonable?	L	Adopted range of -10%-+10% is general in other CDM hydropower projects. Moreover, fluctuation range assessment, where IRR might be beyond 10% of benchmark, has been taken into consideration.
4			Suitable benchmark applied for the type of financial indicator?	M	It needs to be confirmed whether the benchmark 13.75% is appropriate by reviewing the documentary evidences.
5			The following investment indicators are reasonable? 1) Total static investment (LKR) per kW? 2) Total static investment (LKR) per MWh?	M	1) Total static investment (LKR) per kW -386.19 Million LKR/1300kW = 297.069 LKR/kW
6			Plant load factor (estimated operation hours/8760 h) is reasonable?	M	It was described 40% of Power density. It needs to be confirmed its appropriateness and need to be compared with other similar hydropower projects in Sri Lanka.
7			Coefficient of effective electricity generation is reasonable?	L	Confirm during on-site assessment
8			Electricity tariff is reasonable?	M	It needs to be confirmed whether the applied electricity tariff 17.15 LKR/kW is appropriate by reviewing the documentary evidences.
9		Prior CDM consideration (VVS paragraph 105-111, paragraph 195, EB65 Annex 4)	The period of time between PDR finalization and CDM decision is sufficiently short?	L	The PP has to implement prior consideration notification to the secretariat and the host Party DNA. The relevant documents need to be provided when it is available.
10			CDM benefits were considered?	N/A	
11			Start date substantiated? & according to Glossary of Terms -Implementation -Construction -Real action	N/A	
12			Real & continuing action after CDM decision making?	N/A	

ID	Risk		Checkpoint	H/M/L	Comment
13		Common practice analysis (VVS paragraph 128-129, Add. Tool)	Extent of similar & operational non-CDM projects in region, distinctions between CDM project & other similar activities (VVM paragraph 117-119, Add. Tool)	N/A	
14		Barrier analysis (Add. Tool)	Investment barriers, other than the economic/financial, technological barriers, barriers due to prevailing practice, other barriers, specified in methodology	N/A	
15	Baseline methodology	Baseline identification (VVS paragraph 88-93)	Baseline scenario applied validated, referenced, & reasonable to occur without CDM, identification of alternatives, supplementary & no reasonable baselines excluded	L	Need to confirm by evidential document.
16		Methodology specific requirements	requirements as specified in the approved methodology used?	L	Need to confirm by evidential document.
17		Applicability conditions (VVS paragraph 73-76, Deviation at registration & methodology revision procedures)	Substantiate methodology applicability conditions, request a revision to or a deviation from the methodology	L	Applicability of the methodology (AMS. I.D ver.17), relevant tools (additionality and emission factor calculation), and calculation of EF (OM, BM and CM) in Sri Lanka
18		Algorithms and/or formulae (VVS paragraph 96-98)	Equations & parameters correctly applied, justification of the choice of data & parameters used in the equations	L	Some descriptions on formulae and in tables of parameters should be carefully checked.
19		Project boundary (VVS paragraph 82-85)	Correct delineation of project boundary & meets requirements, all sources & GHGs included in project boundary	L	The PoA boundary and sources and GHGs included are consistent with definition in the applied methodology. The power density of the proposed PoA will be confirmed at the on-site assessment.
20	Emission reduction	Baseline emissions	The entities involved in the study are reliable?	L	It will be confirmed during on-site assessment.
21			External data sources are appropriate?	L	Emission factors will be confirmed by relevant documentary evidences.
22		Project emissions	Major emission sources, if any?	L	According to the applied methodology (AMS.I.D ver.17), Power density of CPAs need to be confirmed.
23	Monitoring methodology	Monitoring plan compliance	All parameters provided	L	It is in accordance with the applied methodology.
24			Means & provision for monitoring	L	Basic information seems to be covered in the PoA-DD and CPA-DD. Details need to be confirmed by on-site assessment and evidential documents (if any at present status).

ID	Risk		Checkpoint	H/M/L	Comment
25			Reporting & verification (methodologies & PDD)	L	Basically information seems to be covered in the PoA-DD and CPA-DD. Details need to be confirmed by on-site assessment and evidential documents (if any at present status).
26		Implementation of the plan	monitoring arrangements feasible	L	Basically information seems to be covered in the PoA-DD and CPA-DD. Details need to be confirmed by on-site assessment and evidential documents (if any at present status).
27			Means of implementation for ex-post reporting & verification (methodologies & PDD)	M	Basically information seems to be covered in the PoA-DD and CPA-DD. Details need to be confirmed by on-site assessment and evidential documents (if any at present status).
28	Participation requirements	Project description (VVM paragraph	Not a de-bundled large scale project?	M	Need to confirm at on-site assessment and interviews.
29			In terms of retrofit, are any differences compared to pre-project?	L	The proposed PoA is Greenfield hydropower PoA. Need to confirm at on-site assessment.
30			Leakage covered?	L	According to applied methodology, there is no leakage. Need to confirm during the on-site assessment.
31			Bundled project?	L	The proposed PoA is not a bundled project. Need to confirm at on-site assessment.
32			Increase in fuel or production?	L	The proposed PoA is hydropower, and don't need fuel consumption basically.
33			Is plant capacity concrete?	L	
34		LoA from Parties (VVS paragraph 45-48)	Provided & complete?	L	LoAs has not been published. Need to be confirmed during validation
35			Correct & cross references?	H	LoAs has not been published. Need to be confirmed during validation
36		PoA-DD and CPA-DD (VVM paragraph 62-63)	As per template & guidance?	L	The received PoA-DD, CPA-DD is the latest version of template.
37	Consultation requirements	Local stakeholder	Inconsistency & details of the local stakeholder consultation? (e.g. benefits of the CDM)	M	Need to confirm by local stakeholder interview.
38			Local residents are resettled with sufficient compensation?	M	Need to confirm at on-site assessment and interviews.
39		Global stakeholder	Inconsistency & details of the global stakeholder consultation? (e.g. different approved methodology applied)	L	Still on the process of GSC. Need to confirm by public comments.

ID	Risk		Checkpoint	H/M/L	Comment
40	Environmental impact assessment		Licensed?	M	Need to confirm at the on-site assessment.
41			Any further requirements when approved?	L	Need to confirm the relevant local regulation and laws.

APPENDIX B: QUALIFICATIONS

Name:	PARK, Yong Tae		
Position:	☒ 1. Lead Auditor ☐ 2. Auditor ☐ 3. Technical Expert		
Fields of Expertise:	**Sectoral Scopes (SS)**	**Technical Areas (TA)**	
	SS 1: Energy industries (renewable/non-renewable sources)	☐	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX)
		☒	TA 1.2: Energy generation from renewable energy sources
	SS 2: Energy distribution	☐	TA 2.1: Electricity distribution
		☐	TA 2.2: Heat distribution
	SS 3: Energy demand	☐	TA 3.1: Energy demand
	SS 4: Manufacturing industries	☐	TA 4.1: Cement sector (COMPLEX)
		☐	TA 4.2: Aluminum (COMPLEX)
		☐	TA 4.3: Iron and steel (COMPLEX)
		☐	TA 4.4: Refinery (COMPLEX)
	SS 5: Chemical industry	☐	TA 5.1: Chemical process industries (COMPLEX)
	SS 6: Construction	☐	TA 6.1: Construction
	SS 7: Transport	☐	TA 7.1: Transport
	SS 8: Mining/mineral production	☐	TA 8.1: Mining and mineral processes, excluding those included in TA 8.2 below
		☐	TA 8.2: Oil and gas industry, coal mine methane recovery and use (COMPLEX)
	SS 9: Metal production	☐	TA 9.1: Metal production
	SS 10: Fugitive emissions from fuels (solid, oil and gas)	☐	TA 10.1: Mining and mineral processes, excluding those included in TA 10.2 below
		☐	TA 10.2: Oil and gas industry, coal mine methane recovery and use (COMPLEX)
	SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	☐	TA 11.1: Chemical process industries (COMPLEX)
		☐	TA 11.2: GHG capture and destruction
	SS 12: Solvents use	☐	TA 12.1: Chemical process industries (COMPLEX)
	SS 13: Waste handling and disposal	☐	TA 13.1: Waste handling and disposal
		☐	TA 13.2: Animal waste management
	SS 14: Afforestation and reforestation	☐	TA 14.1: Forestry
	SS 15: Agriculture	☐	TA 15.1: Agriculture
		☐	TA 15.2: Animal waste management
Approved by:	INANAGA, Hiroshi, Chief Executive Officer of Deloitte-TECO		

NOTE: In accordance with Deloitte-TECO's "Auditor's List with Technical Areas of Sectoral Scopes"

Name:	OTANI, Yuichi		
Position:	☒ 1. Lead Auditor ☐ 2. Auditor ☐ 3. Technical Expert		
Fields of Expertise:	**Sectoral Scopes (SS)**	**Technical Areas (TA)**	
	SS 1: Energy industries (renewable/non-renewable sources)	☐	TA 1.1: Thermal energy generation from fossil fuels and biomass, including thermal electricity from solar (COMPLEX)
		☒	TA 1.2: Energy generation from renewable energy sources
	SS 2: Energy distribution	☐	TA 2.1: Electricity distribution
		☐	TA 2.2: Heat distribution
	SS 3: Energy demand	☐	TA 3.1: Energy demand
	SS 4: Manufacturing industries	☐	TA 4.1: Cement sector (COMPLEX)
		☐	TA 4.2: Aluminum (COMPLEX)
		☐	TA 4.3: Iron and steel (COMPLEX)
		☐	TA 4.4: Refinery (COMPLEX)
	SS 5: Chemical industry	☐	TA 5.1: Chemical process industries (COMPLEX)
	SS 6: Construction	☐	TA 6.1: Construction
	SS 7: Transport	☐	TA 7.1: Transport
	SS 8: Mining/mineral production	☐	TA 8.1: Mining and mineral processes, excluding those included in TA 8.2 below
		☐	TA 8.2: Oil and gas industry, coal mine methane recovery and use (COMPLEX)
	SS 9: Metal production	☐	TA 9.1: Metal production
	SS 10: Fugitive emissions from fuels (solid, oil, and gas)	☐	TA 10.1: Mining and mineral processes, excluding those included in TA 10.2 below
		☐	TA 10.2: Oil and gas industry, coal mine methane recovery and use (COMPLEX)
	SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	☐	TA 11.1: Chemical process industries (COMPLEX)
		☐	TA 11.2: GHG capture and destruction
	SS 12: Solvents use	☐	TA 12.1: Chemical process industries (COMPLEX)
	SS 13: Waste handling and disposal	☒	TA 13.1: Waste handling and disposal
		☐	TA 13.2: Animal waste management
	SS 14: Afforestation and reforestation	☐	TA 14.1: Forestry
	SS 15: Agriculture	☒	TA 15.1: Agriculture
		☐	TA 15.2: Animal waste management
Approved by:	INANAGA, Hiroshi, Chief Executive Officer of Deloitte-TECO		

NOTE: In accordance with Deloitte-TECO's "Auditor's List with Technical Areas of Sectoral Scopes"

Name:	SHI, Xueting		
Position:	☒ 1. Lead Auditor ☐ 2. Auditor ☐ 3. Technical Expert		
Fields of Expertise:	**Sectoral Scopes (SS)**	**Technical Areas (TA)**	
	SS 1: Energy industries (renewable/non-renewable sources)	☐	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX)
		☒	TA 1.2: Energy generation from renewable energy sources
	SS 2: Energy distribution	☐	TA 2.1: Electricity distribution
		☐	TA 2.2: Heat distribution
	SS 3: Energy demand	☐	TA 3.1: Energy demand
	SS 4: Manufacturing industries	☐	TA 4.1: Cement sector (COMPLEX)
		☐	TA 4.2: Aluminum (COMPLEX)
		☐	TA 4.3: Iron and steel (COMPLEX)
		☐	TA 4.4: Refinery (COMPLEX)
	SS 5: Chemical industry	☐	TA 5.1: Chemical process industries (COMPLEX)
	SS 6: Construction	☐	TA 6.1: Construction
	SS 7: Transport	☐	TA 7.1: Transport
	SS 8: Mining/mineral production	☐	TA 8.1: Mining and mineral processes, excluding those included in TA 8.2 below
		☐	TA 8.2: Oil and gas industry, coal mine methane recovery and use (COMPLEX)
	SS 9: Metal production	☐	TA 9.1: Metal production
	SS 10: Fugitive emissions from fuels (solid, oil and gas)	☐	TA 10.1: Mining and mineral processes, excluding those included in TA 10.2 below
		☐	TA 10.2: Oil and gas industry, coal mine methane recovery and use (COMPLEX)
	SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	☐	TA 11.1: Chemical process industries (COMPLEX)
		☐	TA 11.2: GHG capture and destruction
	SS 12: Solvents use	☐	TA 12.1: Chemical process industries (COMPLEX)
	SS 13: Waste handling and disposal	☐	TA 13.1: Waste handling and disposal
		☐	TA 13.2: Animal waste management
	SS 14: Afforestation and reforestation	☐	TA 14.1: Forestry
	SS 15: Agriculture	☐	TA 15.1: Agriculture
		☐	TA 15.2: Animal waste management
Approved by:	INANAGA, Hiroshi, Chief Executive Officer of Deloitte-TECO		

NOTE: In accordance with Deloitte-TECO's "Auditor's List with Technical Areas of Sectoral Scopes"

Name:	ISHIGAI,Chikara		
Position:	☒ 1. Lead Auditor ☐ 2. Auditor ☐ 3. Technical Expert		
Fields of Expertise:	**Sectoral Scopes (SS)**	**Technical Areas (TA)**	
	SS 1: Energy industries (renewable/non-renewable sources)	☒	TA 1.1: Thermal energy generation from fossil fuels and biomass including thermal electricity from solar (COMPLEX)
		☒	TA 1.2: Energy generation from renewable energy sources
	SS 2: Energy distribution	☒	TA 2.1: Electricity distribution
		☒	TA 2.2: Heat distribution
	SS 3: Energy demand	☒	TA 3.1: Energy demand
	SS 4: Manufacturing industries	☐	TA 4.1: Cement sector (COMPLEX)
		☐	TA 4.2: Aluminum (COMPLEX)
		☐	TA 4.3: Iron and steel (COMPLEX)
		☐	TA 4.4: Refinery (COMPLEX)
	SS 5: Chemical industry	☒	TA 5.1: Chemical process industries (COMPLEX)
	SS 6: Construction	☐	TA 6.1: Construction
	SS 7: Transport	☐	TA 7.1: Transport
	SS 8: Mining/mineral production	☐	TA 8.1: Mining and mineral processes, excluding those included in TA 8.2 below
		☒	TA 8.2: Oil and gas industry, coal mine methane recovery and use (COMPLEX)
	SS 9: Metal production	☐	TA 9.1: Metal production
	SS 10: Fugitive emissions from fuels (solid, oil and gas)	☐	TA 10.1: Mining and mineral processes, excluding those included in TA 10.2 below
		☒	TA 10.2: Oil and gas industry, coal mine methane recovery and use (COMPLEX)
	SS 11: Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	☐	TA 11.1: Chemical process industries (COMPLEX)
		☐	TA 11.2: GHG capture and destruction
	SS 12: Solvents use	☒	TA 12.1: Chemical process industries (COMPLEX)
	SS 13: Waste handling and disposal	☐	TA 13.1: Waste handling and disposal
		☐	TA 13.2: Animal waste management
	SS 14: Afforestation and reforestation	☐	TA 14.1: Forestry
	SS 15: Agriculture	☐	TA 15.1: Agriculture
		☐	TA 15.2: Animal waste management
Approved by:	INANAGA, Hiroshi, Chief Executive Officer of Deloitte-TECO		

NOTE: In accordance with Deloitte-TECO's "Auditor's List with Technical Areas of Sectoral Scopes"