SSC PoA Validation Report

Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

“Installing Solar Water Heating Systems in the South of Viet Nam”

Project No. JQA-C0115

(No. 1812000136)

Date: 08 June 2012

JAPAN QUALITY ASSURANCE ORGANIZATION

Report Title:	PoA Title:
SSC PoA Validation Report	Installing Solar Water Heating Systems in the South of Viet Nam
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Coordinating/Managing Entity: The Energy Conservation Center of Ho Chi Minh City	Project Participants: - The Energy Conservation Center of Ho Chi Minh City - Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
Approved by: Tadayuki Yano	Client: Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

Summary:

This is the Validation Report for the small-scale (SSC) programme of activities (PoA) "Installing Solar Water Heating Systems in the South of Viet Nam". The Energy Conservation Center of Ho Chi Minh City (ECC) is the Coordinating/Managing Entity (CME) of the proposed PoA. Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. and the ECC are the project participants (PPs) of the proposed PoA.

The goal of the PoA is to promote energy saving in the south of Viet Nam composed of Ho Chi Minh City (HCMC) and 21 provinces through the promotion of the installation of residential Solar Water Heating (SWH) systems. The SWH systems will be systematically installed through a subsidy programme coordinated by the ECC.

JQA, as a DOE, performed the validation on the basis of the relevant decisions of UNFCCC, Kyoto Protocol, COP/MOP and CDM-EB under the contract with Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

JQA confirms that the proposed PoA meets all the relevant UNFCCC and Host Party requirements. JQA determines that the project activity is valid as a PoA.

Validation Team:	Technical Reviewer:
Team Leader: Hiroshi Motokawa Member: Jun Takata Member: Akiko Furuya	Itaru Watanabe

Abbreviations

AMS	Approved Small-scale Methodology
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CDM-EB	CDM Executive Board
CER	Certified Emission Reduction
CL	Clarification Request
CM	Combined Margin
CME	Coordinating / Managing Entity
COP	Conference of the Parties
COP/MOP	Conference of the Parties serving as the Meeting of the Parties
CPA	Component Project Activity
CPA-DD	Component Project Activity Design Document
DNA	Designated National Authority
DOE	Designated Operational Entity
ECC	The Energy Conservation Center of Ho Chi Minh City
EF	Emission Factor
EIA	Environmental Impact Assessment
EVN	Electricity of Viet Nam
EWH	Electric Water Heating
GHG	Greenhouse Gas
GWP	Global Warming Potential
HCMC	Ho Chi Minh City
ID	Identification
ISO	International Organization for Standardization
JETRO	Japan External Trade Organization
JIS	Japan Industrial Standard
JQA	Japan Quality Assurance Organization
LDCs	Least Developed Countries
LoA	Letter of Approval
LSC	Local Stakeholder Consultation
MoC	Modalities of Communication
MOST	Ministry of Science and Technology
MONRE	Ministry of Natural Resources and Environment of Viet Nam
MoU	Memorandum of Understanding
NASA	National Aeronautics and Space Administration
NCV	Net Calorific Value
NGO	Non-governmental Organization
NOCCOP	National Office for Climate Change & Ozone Protection

ODA	Official Development Assistance
O&M	Operation and Maintenance
OM	Operating Margin
PDD	Project Design Document
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
PP	Project Participant
QA/QC	Quality Assurance and Quality Control
QUATEST 3	Quality Assurance and Testing Centre 3
R&D	Research and Development
SD	Sustainable Development
SIDSs	Small Island Developing States
SME	Small and Medium Enterprises
STAMEQ	Science-technological Organization of the Directorate for Standards, Metrology and Quality
SOP	Standard Operational Procedure
SV	Site-visit
SWH	Solar Water Heating
USEPA	United States Environmental Protection Agency
UNFCCC	United Nations Framework Convention on Climate Change
UV	Ultraviolet
VVM	CDM Validation Verification Manual/Version 01.2

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1 . INTRODUCTION

Japan Quality Assurance Organization (hereinafter referred to as JQA) performed the validation of a PoA "Installing Solar Water Heating Systems in the South of Viet Nam". The Coordinating/Managing Entity (CME) for the proposed PoA, the Energy Conservation Center of Ho Chi Minh City (hereinafter the ECC) (Viet Nam), plans to promote energy saving in the south of Viet Nam through the promotion of the installation of residential Solar Water Heating (SWH) systems. Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. (Japan) also involves in the PoA as a project participant (hereinafter PP). This report summarizes the findings obtained through the validation process and the validation opinion of JQA.

1.1. Objective

The objective of the validation is to review whether the proposed PoA conforms to the requirements defined by the UNFCCC, the Kyoto Protocol, CDM Modalities and Procedures and relevant decisions by COP/MOP and CDM-EB. Validation is a part of the CDM project cycle and a DOE independently assesses whether a proposed PoA is valid to be submitted to the CDM-EB for request for registration.

1.2. Scope

The scope of the assessment is defined by the relevant standards including applied methodologies and tools, procedures, guidelines, clarifications, forms and information notes issued by the CDM-EB. The project documentation prepared by the CME/PPs includes:

- CDM-SSC-PoA-DD "Installing Solar Water Heating Systems in the South of Viet Nam" (Version 02.1, 13/10/2011 and Version 04, 04/06/2012) (hereinafter "PoA-DD") **(Ref. 1)**
- Generic CDM-SSC-CPA-DD "Installing Solar Water Heating Systems in the South of Viet Nam - XX" (Version XX, DD/MM/YYYY) (hereinafter "generic CPA-DD") **(Ref. 2)**
- Specific CDM-SSC-CPA-DD "Installing Solar Water Heating Systems in the South of Viet Nam - 1" (Version 02.1, 13/10/2011 and Version 04, 04/06/2012) (hereinafter "specific CPA-DD") **(Ref. 3)**

Validation of the proposed PoA is based on the VVM Track rules. The PoA-DD and the CPA-DD were reviewed to assess their conformity with:

- UNFCCC;
- Kyoto Protocol;
- CDM Validation and Verification Manual (VVM) (Version 01.2);
- AMS-I.J. / Version 01 "Solar water heating systems (SWH)" (Sectoral Scope: 1);

- AMS-I.D. / Version 17 “Grid connected renewable electricity generation” (Sectoral Scope: 1)
- Tool to calculate the emission factor for an electricity system (Version 02.2.1);
- Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (Version 01.0);
- Standard for sampling and surveys for CDM project activities and programme of activities (Version 02.0);
- Best practices examples focusing on sample size and reliability calculations (version 01.0)
- Glossary of CDM Terms (Version 06.0);
- Procedure 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);
- Guidelines on assessment of de-bundling for SSC project activities (Version 03.0);
- Guidelines for demonstrating additionality of microscale project activities (Version 03.0);
- General guidelines to SSC CDM methodologies (Version 17.0);
- Clarifications regarding the "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 01.0);
- CDM-SSC-PoA-DD - Small-Scale CDM Programme of Activities Design Document form (Version 01.0);
- CDM-SSC-CPA-DD - Small-Scale CDM Programme Activity Design Document form (Version 01.0); and
- Relevant decisions of COP/MOP and CDM-EB.

Note that the scope of this validation does not involve the validation of “Installing Solar Water Heating Systems in the South of Viet Nam - 1” (CPA-1) for inclusion to the proposed PoA. The validation of CPA-1 is covered by a separate validation report, namely, “SSC CPA Validation Report for “Installing Solar Water Heating Systems in the South of Viet Nam - 1” **(Ref. 4)**, prepared by JQA.

1.3. PoA Description

The summary of the proposed PoA is as given below:

CME:	The ECC
PPs:	The ECC (Viet Nam)
	Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. (Japan)
Non-Annex I Party:	Viet Nam (25/09/2002: Kyoto Protocol ratified)
Annex I Party:	Japan (04/06/2002: Kyoto Protocol accepted)
Geographical boundary:	South of Viet Nam composed of Ho Chi Minh City (HCMC)

	and 21 provinces
Technology:	Residential SWH systems
Starting date of the PoA:	09/11/2009 (approval by the People's Committee of HCMC)
Length of the PoA:	28 years and 0 month

1.4. Validation Team and Technical Reviewer

The manager of CDM/JI Assessment Division organized the validation team as shown in Table 1 based on the JQA CDM Quality Manual taking the following aspects into consideration:

- Necessary technical area
- Project expertise requirements
- Assessor qualification suitable for technical and regional aspects of the project;
- Knowledge and experiences of the host country.

Table 1 Validation team and Technical Reviewer

Name	Qualification[1)]	Task [2)]	Coverage of Technical Area	On-site Visit	Local Experience
Hiroshi Motokawa	TLA	TL	✓		✓
Jun Takata	A	TM	✓	✓	✓
Akiko Furuya	A	TM	✓	✓	✓
Itaru Watanabe	TLA	TR	✓		✓

1) TLA: Team Leader Assessor; A: Assessor

2) TL: Team Leader; TM: Team Member; TR: Technical Reviewer

The validation team and technical reviewers cover Sectoral Scope 1 defined by the applied methodology AMS-I.J. and the relevant Technical Area 1.2.

The roles and responsibilities of the team leader are to prepare the validation plan including desk review, site-visit and documentation, and to manage the validation activities of the team. The team leader is responsible for the validation opinion and conclusion by the assessment team.

The roles and responsibilities of the team member is to implement the desk review and/or the site-visit including the investigation and collection of background information and interview with the CME/PPs and stakeholders, and also to indicate potential Corrective Action Request (CAR), Clarification Request (CL) and/or Forward Action Request (FAR) based on the information obtained through the desk review and/or the site-visit.

The certificates of the assessors and the technical reviewer are attached (Appendix B). The expertise and experience of the assessors and the technical reviewer are also attached (Appendix C).

2. METHODOLOGY

2.1. Schedule

The timeline of the validation process of the proposed PoA is as follows:

01/04/2009:	Contract with Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. for Validation
04/06/2009 – 03/07/2009:	Publication of the PoA-DD (Version 01), the generic CPA-DD (no version) and specific CPA-DD (Version 01) applying AMS-I.C. (Version 14) on the UNFCCC website
15/10/2011 – 13/11/2011:	Publication of the PoA-DD (Version 02.1), the generic CPA-DD (Version XX) and the specific CPA-DD (Version 02.1) applying AMS-I.J. (Version 01) on the UNFCCC website
15/12/2011:	Preparation of the checklist based on the desk review
01-03/02/2012:	Site-visit
10/02/2012:	Revision of the checklist based on the result of the site-visit
16/05/2012:	Preparation of the PoA-DD (Version 03), the generic CPA-DD (Version XX) and the specific CPA-DD (Version 03)
24/05/2012:	Preparation of the draft SSC PoA Validation Report
05/06/2012:	Technical review
08/06/2012:	Preparation of the SSC PoA Validation Report

The PoA-DD, generic CPA-DD and specific CPA-DD for the proposed PoA underwent global stakeholder consultation process twice since the applied methodology was changed from AMS-I.C. (Version 14) to AMS-I.J. (Version 01), induced by the development of new methodology dedicated to the SWH systems in 2011 by CDM-EB.

2.2. Validation Process

The validation process basically consists of the following five steps:

1) Document review
2) Follow-up actions (e.g., site-visit and telephone or email interviews);
3) Resolution of Clarifications and Corrective Action Requests
4) Draft Validation Report
5) Internal Quality Control

At the commencement of validation, the PoA-DD, the generic CPA-DD and the specific CPA-DD are made publicly available on the UNFCCC website. When JQA receives any public comments, CME/PPs and the CDM secretariat are notified that public comments are received. Any comments received are uploaded to the UNFCCC website.

In the validation, Appendix A “PoA Validation Checklist” is prepared by JQA based on “CDM Validation and Verification Manual (VVM)” (Version 01.2), “CDM-SSC-PoA-DD - Small-Scale CDM Programme of Activities Design Document form” (Version 01.0) and “CDM-SSC-CPA-DD - Small-Scale CDM Programme Activity Design Document form” (Version 01.0). Appendix A is composed of the following tables:

Table 1: Comprehensive Checklist for Validation
Table 2: Validation Requirements and CARs/CLs/FARs
Table 3: PoA-DD Requirements and CARs/CLs/FARs
Table 4: Generic CPA-DD Requirements and CARs/CLs/FARs
Table 5: Resolution of CARs/CLs

The purpose of the Validation Checklist is:

- To organize, detail and clarify the requirements with which a PoA and a generic CPA are expected to meet; and
- To ensure a transparent validation process by inducing the auditor to document how every requirement is validated and which conclusions have been reached.

Issues and/or findings identified in the process are indicated as “CAR”, “CL” and/or “FAR” in the CDM Validation Checklist. The criteria for CAR, CL and FAR, in accordance with Para 35 – 37 of VVM (Version 01.2.), are as follows:

CAR (Corrective Action Request);

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions,

(b) The CDM requirements have not been met or

(c) There is a risk that emission reductions cannot be monitored or calculated.

CL (Clarification Request);

Information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

FAR (Forward Action Request)

Issues related to project implementation that requires review during the first verification of the project activity. FARs shall not relate to the CDM requirements for registration.

All the CARs and/or CLs resolved through the response from CME/PPs are described in Table 5.

2.2.1. Document review

The main purposes of the document review are as follows:

- Confirm the completeness of the PoA-DD and the generic CPA-DD in accordance with “CDM-SSC-PoA-DD - Small-Scale CDM Programme of Activities Design Document form” (Version 01.0) and “CDM-SSC-CPA-DD - Small-Scale CDM Programme Activity Design Document form” (Version 01.0), respectively, with reference to “Glossary of CDM Terms” (Version 06);
- Assess the conformity of the proposed PoA with all relevant requirements;
- Gather information relevant to the PoA from independent sources to determine whether the information provided by CME/PPs is reliable and credible; and
- Identify issues to be confirmed through site-visit.

The main points to be checked through the document review are summarized below.

- Appropriateness of the baseline and monitoring methodologies applied to CPAs under the proposed PoA including qualification within the thresholds of small-scale project activities.
- Transparency and conservativeness of the assumptions for the baseline.
- Technological, political, socio-demographic and environmental and legal aspects and trends relevant to the PoA.
- Additionality of the PoA, including compliance with requirements applicable for small-scale and/or microscale project activities.
- Appropriateness of formulae and accuracy of calculation.
- Responsibilities and authorities for monitoring activities for PoA/CPA including sampling plan and quality control and quality assurance system.
- Debundling for small-scale project activity.
- Eligibility criteria for inclusion of a CPA under the PoA and the implementation and management system for the PoA.
- Consistency between the PoA-DD and the generic CPA-DD.

2.2.2. Follow-up actions

The follow-up actions include site-visit to the project site and interview with local stakeholders such as CME/PPs, local residents, government officials, etc. Information to be collected in this process includes:

- Technologies/measures adopted by a CPA in the proposed PoA.
- Appropriateness of the project boundary including GHG emission sources and geographical boundary.
- Appropriateness of the baseline scenario and demonstration of additionality.
- Development and implementation of management and monitoring plan.
- EIA and local stakeholders consultation.

2.2.3. Resolution of Clarification Requests and Corrective Action Requests

JQA raises CARs/CLs/FARs based on the result of the document review and the follow-up actions. CME/PPs shall resolve all CARs and CLs through provision of additional documentary evidences and/or revision of the PoA-DD and the generic CPA-DD as appropriate.

2.2.4. Draft Validation Report

The draft Validation Report is prepared based on the results of the document review and the follow-up actions and the subsequent resolution of CARs/CLs. To ensure transparency, the final decisions are confirmed by using the PoA Validation Checklist.

2.2.5. Internal Quality Control

In order to ensure the quality of the validation, the draft Validation Report undergoes technical review. Firstly, the technical reviewer deliberates the appropriateness of the draft conclusions and the validation procedure through the review of the draft Validation Report and other relevant documents. Secondly, the technical reviewer informs the review results to the validation team. Then, the validation team responds to the technical reviewers' comments and revises the draft Validation Report as appropriate.

After that, the Manager of CDM/JI Assessment Division reports the review result to the Senior Executive of JQA. Finally, the Senior Executive determines whether the proposed PoA is valid as a CDM programme of activities.

3. VALIDATION FINDINGS

Through the Document Review and the Follow-up Actions, two CARs and forty-two CLs are raised. Major CARs/CLs and responses by CME/PPs are summarized in this chapter. Details of resolution of each CAR/CL/FAR are shown in Table 5 of Appendix A.

3.1. Approval and Participation

Letter of Approval signed by DNA of Viet Nam, Ref. 16/2010/DMHCC-BCD, was issued on 30/07/2010 **(Ref. 6)**. Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. provided the LoA to JQA on 30/12/2011. The duration of the validity of the LoA is 24 months from the date hereof. The DNA of Viet Nam unconditionally confirms:

- The Programme of Activities "Installing Solar Water Heating Systems in the South of Viet Nam" is developed by The Energy Conservation Center of Ho Chi Minh City and Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.
- The Coordinating/Managing Entity of the PoA is The Energy Conservation Center of Ho Chi Minh City.
- The government of Viet Nam has ratified the Kyoto Protocol on 25/09/2002.
- This is approval of voluntary participation in the proposed CDM Programme of Activities
- The Programme of Activities contributes to sustainable development in Viet Nam.

JQA confirmed through checking the information on the website of the National Office for Climate Change & Ozone Protection (NOCCOP), the Ministry of Natural Resources and Environment of Viet Nam (MONRE)[1] that there was no doubt of its authenticity.

Letter of Approval signed by DNA of Japan was issued on 07/02/2012 **(Ref. 7)**. Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. provided the LoA to JQA on 03/04/2012. The DNA of Japan unconditionally confirms:

- Japan has accepted the Kyoto Protocol on 04/06/2002.
- The Government of Japan approves the project "Installing Solar Water Heating Systems in the South of Viet Nam"
- The Government of Japan authorizes voluntary participation of Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. in the project "Installing Solar Water Heating Systems in the South of Viet Nam".

Through reviewing LoAs issued by the Government of Japan for other registered CDM project activities, JQA confirmed that there is no doubt of its authenticity because the format, contents, signatures of the LoA is quite as same as the other LoAs except for the title of the project/authorized party and the date of approval .

JQA confirms that the ECC is approved/authorized as CME as well as a PP and the Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. is approved/authorized as a PP and thus

[1] http://www.noccop.org.vn/Data/profile/Airvariable_Projects_77470Danh%20sach%20PoA%20-%20TA.pdf

the proposed PoA satisfies Para 45-48 of VVM and “Procedure 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).

3.2. Project design document and project description

3.2.1. PoA-DD and generic CPA-DD

JQA has confirmed that the latest version of CDM-SSC-PoA-DD form (Version 01.0) and CDM-SSC-CPA-DD form (Version 01.0) for VVM Track are used for completion of the PoA-DD and the generic CPA-DD. By using Table 3 (PoA-DD Requirements and CARs/CLs/FARs) and Table 4 (Generic CPA-DD Requirements and CARs/CLs/FARs) of the CDM Validation Checklist, JQA assessed whether the PoA-DD and the generic CPA-DD complies with the requirements provided in these forms.

Regarding the description in the PoA-DD, JQA raised CL37 - CL41 as follows:

CL37: It is not clear why parameters included in the database set up by the ECC described in A.4.4.1, A.4.4.2 and E.7.2 of the PoA-DD are different (e.g., crediting period of a CPA, result of acceptance testing, etc.)

Resolution: The descriptions have been revised to make them consistent.

CL38: The difference of the following two parameters described in A.4.4.2 of the PoA-DD is not clear:

- Data from the sample group indicating the proportion of SWHs that were operating during the monitoring period
- Data from the sample group indicating the number of systems operating

Resolution: The description is redundant and thus the description was revised.

CL39: The description "The figure in Annex 4 shows the monitoring structure for a typical CPA" in A.4.4.2 of the PoA-DD is to be reviewed as Annex 4 does not include any figure.

Resolution: “Annex 4” was corrected to “E.7.2”.

CL40: The units of daily solar radiation (kWh/day) and Heat Absorption (kJ) in Table A3.1 in Annex 3 are to be reviewed.

Resolution: The unit has been corrected as follows:

- Daily solar radiation: $kWh/m^2/day$
- Heat Absorption: kJ/m^2

CL41: Calculation result of OM emission factor is not provided in Table A.3.3. of Annex 3 of the PoA-DD.

Resolution: Calculation result of OM emission factor was added in Annex 3.

Regarding the description in the generic CPA-DD, JQA raised CL42 as follows:

CL42: It is not clear why Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. is included in Annex 1 although it is not listed as a entity/individual responsible for the SSC-CPA.

Resolution: Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. was removed from Annex 1.

Through the resolution of these CLs, JQA confirmed that the PoA-DD and the generic CPA-DD were prepared according to CDM-SSC-PoA-DD form (Version 01.0) and CDM-SSC-CPA-DD form (Version 01.0) and satisfies Para 56 of VVM.

3.2.2. Project Description

Policy/measure or stated goal of the PoA is to promote energy saving in the south of Viet Nam, composed of Ho Chi Minh City and 21 provinces (Ninh Thuan, Binh Thuan, Lam Dong, Binh Duong, Binh Phuoc, Ba Ria Vung Tau, Dong Nai, Long An, Tien Giang, Ben Tre, Tay Ninh, Hau Giang, Bac Lieu, Can Tho, Ca Mau, Dong Thap, An Giang, Kien Giang, Vinh Long, Tra Vinh and Soc Trang) through the installation of new residential SWH systems, as described in A.2. of the PoA-DD. The ECC, the CME of the PoA, is a governmental agency established by the People's Committee of HCMC in 2002 for the purpose of promotion of energy conservation. Its scope of operation involves the public activities such as media campaign and education, the energy consultation service to industrial/commercial sectors and the investment to projects for energy saving and renewable energy, and its geographical area of activities covers whole Viet Nam **(Ref. 13)**. The ECC will voluntarily implement the subsidy programme for the implementation of the proposed PoA.

General operating and implementing framework of the PoA is a subsidy programme. The cost of the SWH systems will be partly subsidized by the ECC as an incentive to encourage people to install SWH systems. JQA confirmed that the ECC had successfully completed a pilot project of a subsidy programme for residential SWH systems in late 2008 through the review of the feasibility study report for "Installing Solar Water Heating Systems in the South of Viet Nam" **(Ref. 14)** prepared by Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., and the interview with CME/PPs and local residents who participated in the pilot project. JQA confirmed that the ECC incorporated the management system, operational procedure, documentations and materials developed for the pilot project in the proposed PoA with appropriate modifications **(Ref. 10)**.

Regarding the type of the projects eligible to a CPA under the proposed PoA, JQA raised CL01 as follows:

CL01: CME/PPs are requested to determine whether the programme involves projects which replace existing electric water heating (EWH) systems in existing households with SWH systems, and to describe the finally decided target population in the PoA-DD.

Resolution: The PoA design was changed to involve both retrofit and new construction,

namely, the types of projects described in Para 2 (a), 2 (b) (i) and 2 (b) (ii) of AMS-I.J. According to Para 102 of EB 65 Meeting Report, CDM-EB agreed to remove the requirement in Type I methodologies, when applied to PoAs, that the replaced energy-generating equipment should be scrapped and that this scrapping should be independently monitored. This is applicable to a CPA in the proposed PoA and thus leakage is not necessary to be considered. Project descriptions in the PoA-DD were also revised.

The technology to be employed by a CPA in the proposed PoA is residential SWH system. According to "SWHPOA-06: Check list of technical specification of the SWH systems under the CPA" **(Ref. 10)** and "SWHPOA-07: Eligibility Criteria Check List for the inclusion of CPA" **(Ref. 10)**, included in the Standard Operational Procedure (SOP) for the PoA **(Ref. 10)**, SWH systems which satisfy the following conditions are eligible to be installed under the programme:

- For domestic use
- Either flat plate or evacuated tube collectors
- Passive systems without a forced circulation system or auxiliary heat source, so that all systems installed under CPAs does not consume energy sources other than solar energy
- Collector area per system is less than or equal to $8m^2$
- Tank volume with at least 50 litres per square meter of collector area
- Compliance with the Vietnamese quality standard for SWH systems TCVN 8251:2009 announced by the Ministry of Science and Technology, Viet Nam **(Ref. 15)** and also following requirements:
  - Unglazed collector must be stabilized against UV degradation;
  - Glazed collector must have at least one glass cover and be insulated on the sides and back to achieve a loss coefficient not more than 5 W/m^2C;
  - Evacuated tube collector must maintain vacuum insulation between absorber and ambient

The above conditions are determined mainly based on the conditions to apply the stipulated energy saving method determined in Para 10 (c) of AMS-I.J. According to "SWHPOA-08: Contract with SWH distributors" **(Ref. 10)**, only SWH distributors whose products comply with the every technical requirement described above are eligible to be registered by the ECC as a qualified SWH distributor for a CPA in the proposed PoA. Households want to participate in a CPA in the PoA shall purchase SWH systems from such registered providers **(Ref. 10)**. Through this procedure, only SWH systems meeting the technical requirements are installed under a CPA in the propose PoA.

Through the review of SOP **(Ref. 10)**, interview with CME/PPs and local residents, and site-visit to the households joined the pilot project in 2008, JQA confirms that the description of the PoA and a typical CPA provided in the PoA-DD and the generic CPA-DD are accurate

and complete and satisfies Para 59 - 63 of VVM.

3.3 Baseline and monitoring methodology

3.3.1 Applicability of the selected methodology to the project activity

The methodology applied to a CPA included in the proposed PoA is AMS-I.J. “Solar water heating systems (SWH)” (Version 01).

Table 2 summarizes the JQA’s validation comments regarding the applicability of AMS-I.J. Refer to E.2. of the PoA-DD for CME/PPs’ justification. As demonstrated in Table 3, a typical CPA included in the PoA satisfies every conditions provided under “technology/measure” in AMS-I.E.

Table 2 Assessment of the satisfaction of applicability conditions

No.	Technology/measure	Validation Comment
1	This category comprises the installation of residential SWH systems and commercial SWH systems for hot water production. The SWH systems displace electricity or fossil fuel that would otherwise have been used to produce hot water.	Through the check of Criterion 13, only residential SWH systems are included in a CPA (refer to Section 3.10.1 of this report for details). The SWH systems displace grid electricity (refer to Section 3.3.3. of this report for details).
2	There are two types of projects included in this category: retrofits and new construction. For the purposes of defining baselines and other requirements the following definitions apply: (a) Retrofit projects are SWH project(s) that replace existing electric or fossil fuel based water heating system(s) in existing facility(ies); (b) New construction projects are: (i) SWH project(s) installed in new facility(ies); (ii) SWH project(s) installed in existing facility(ies) that, prior to the project implementation, do not have installed water heating systems; (iii) SWH project(s) installed in existing facility(ies) which require water heating capacity expansions; or (iv) Replacement of failed solar water heating system(s). This methodology is applicable if it is shown (as per paragraph 8) that for new construction projects, conventional electric or fossil fuel based water heating system(s)	As described in Section 3.2.2. of this report, types of (a), (b) (i) and (b) (ii) will be included in a CPA. According to “SWHPOA-10 Checklist for SWH system installation (pre-installation check by SWH distributors)” **(Ref. 10)**, staff of a registered SWH system provider visit a interested household before installation of SWH systems and confirms if the existing buildings does not have SWH systems. As confirmed in Section 3.3.3. of this report, for new construction projects, conventional EWH systems would have been installed in the absence of the PoA.

No.	Technology/measure	Validation Comment
	would have been installed in the absence of the project activity.	
3	Commercial SWH systems shall include operational indicators that may be easily interpreted by the intended users of the systems and that indicate that water is being heated by solar energy. The minimum requirement for such an indicator is a visible temperature display (thermometer) on the solar preheat storage tank. The thermometer does not require calibration.	Not applicable. As described in 1 above, the proposed PoA does not involve commercial SWH systems.
4	To qualify as a small-scale project, the definitions in paragraph 4 (d) in the "General Guidelines to SSC CDM methodologies" or the related paragraphs in the latest version of the guidelines are applicable.	According to Para 4 (d) in the "General Guidelines to SSC CDM methodologies", for thermal applications of solar energy projects, maximum output shall be calculated using a conversion factor of 700 Wth/m^2 of aperture area of glazed flat plate or evacuated tubular collector, i.e., eligibility limit in terms of aperture area is 64,000 m^2 of the collector. Since Criterion 15 requires that the total size of collector surface area of SWH systems installed under a single CPA does not exceed 21,428m^2 (threshold of microscale project activity equivalent to 5MW), a CPA included in the PoA automatically qualifies for a small-scale project.
5	For residential and commercial SWH projects the hot water consumption rate and temperature at which the hot water is supplied to the load (for example, 40 litres per day at 40 ^oC), that occur during the crediting period are used to determine emissions savings. The consumption rate (and temperature) is the rate (and temperature) of water actually utilized (for example for personal washing or for an industrial process) and is not the rate (and temperature) at which hot water is produced, which may be greater than the rate (and temperature) of consumption.	Through the check of Criteria 4, 7, 8, 9 10 and 12, a CPA included in the proposed PoA is eligible to apply the stipulated energy saving method and thus default value provided by AMS-I.J. (450 kWh/year) is used for determine energy savings. The consumption rate is not used for calculation of emission reductions.

Through the validation process, JQA raised CL02-05 regarding the justification of the applicability of the methodology as follows:

CL02: Regarding item 1 in the table in section E.2. of the PoA-DD, it is not clear how the CPAs under the PoAs satisfies "residential" SWH systems defined by AMS-I.J. (footnote 1).

Resolution: The definition of the residential SWH systems, namely, one that (a) Heats water to be used for domestic purposes only (e.g. bathing, cooking, clothes washing, etc.); (b) Is installed to serve one or more residences; and (c) Has a maximum stand alone (independent) collector area of 100 m^2, were added in E.2. of the PoA-DD. According to the SOP for the PoA, (a) and (b) is checked implemented by acceptance testing as well as pre-installation check **(Ref. 10)**, and (c) is ensured by Criterion 4, as described in E.2. of the PoA-DD.

CL03: Regarding item 1 and 3 in the table in section E.2. of the PoA-DD, it is not clear how the ECC ensures a CPA involves only "residential" SWH systems and excluded "commercial" SWH systems.

Resolution: As determined in “SWHPOA-10 Checklist for SWH system installation (pre-installation check by SWH distributors)” **(Ref. 10)**, commercial users/buildings are excluded at the stage of pre-installation check by registered SWH system providers, and again confirmed at the stage of acceptance testing.

CL04: Regarding item 2 in the table in section E.2. of the PoA-DD, it is not clear how the ECC ensures a CPA involves only (b) new construction projects under which SWH systems installed in (i) newly-built residences, and excludes (ii) existing residences that prior to the project implementation, do not have installed water heating systems.

Resolution: The PoA design was changed to involve both retrofit and new construction, namely, the types of projects described in Para 2 (a), 2 (b) (i) and 2 (b) (ii) of AMS-I.J. (Refer to CL01 in section 3.2.2. of this report). The final design , namely, SWH projects in new facilities and SWH projects installed in existing facilities that, prior to the project implementation, do not have installed water heating systems, is reflected in “SWHPOA-10 Checklist for SWH system installation (pre-installation check by SWH distributors)” **(Ref. 10)** and checked by SWH system providers at the stage of pre-installation check.

CL05: Regarding item 5 in the table in section E.2. of the PoA-DD, the basis of the justification is not clear.

Resolution: Reference to item (iv) of the table in E.6.1. of the PoA-DD was added for clearer demonstration.

Through the interview with CME/PPs, SWH providers and the local residents during on-site

assessment, JQA confirmed that there were no emission sources, which were not addressed by the applied methodology, and were expected to contribute more than 1% of the overall expected average annual emissions reductions.

JQA confirms that a CPA included in the proposed PoA meets all the applicability conditions determined in AMS-I.J./Version 01 and complies with Para 70-71 of VVM.

3.3.2 Project boundary

According to AMS-I.J., the project boundary is defined “The physical, geographical site of the SWH system delineates the project boundary. The boundary also extends to the facility or facilities consuming the heated water generated by the SWH system.” Meanwhile, AMS-I.D. drawn upon by AMS-I.J., defines that “The spatial extent of the project boundary includes the project power plant and all power plants connected physically to the electricity system that the CDM project power plant is connected to.”

Regarding the description of the project boundary of a typical CPA in the proposed PoA, JQA raised CL06 as follows:

> **CL06:** The description provided in Section E.3. of the PoA-DD does not clearly mention whether the physical project boundary includes the national electricity grid or not, although it is included in the table of sources and gases included in the CPA boundary.
>
> **Resolution:** The sentence "The project boundary for a CPA under the PoA also includes the national electricity grid from which electricity is sourced in the baseline scenario." was added in Section E.3. of the PoA-DD.

The GHG and sources being considered within the boundary is baseline CO_2 emissions from the grid electricity that would have been consumed for water heating. Refer to Section 3.3.3. of this report regarding the confirmation that the baseline system for a CPA is EWH systems.

Through the document review, the site inspection and the interview with CME/PPs, JQA confirms that the delineation of the project boundary described in the PoA-DD is correct and meets requirements of AMS-I.J. and AMS-I.D., and complies with Para 79 of VVM.

3.3.3 Baseline identification

According to Para 7-8 of AMS-I.J., baseline is defined as follows:

- For retrofit projects, the baseline system(s) are the operating water heating system(s) and fuel source (fossil fuel or electricity) that existed immediately prior to the start of the SWH project activity.
- For new construction projects, the baseline system and fuel source (fossil fuel or electricity) assumed to be used for water heating is one that is demonstrated to be typical of new construction, for the given project activity as defined in paragraph 2 (b), in the region of the project activity at the time of the start of the project activity. Such demonstration shall include that typical water heating systems in the project region are

not solar water heating systems. The relevant requirements in the "General guidelines to SSC CDM methodologies" shall be followed.

On the other hand, according to E.4 of the PoA-DD, baseline for the proposed PoA is described as follows:

- Other than SWH systems, EWH systems are the only available technology in the market of Viet Nam to heat water for household showering which is the predominant usage of the heated water generated by the SWH systems at household.
- EWH systems are identified as the baseline system.

Regarding the justification of the baseline provided in the PoA-DD, JQA raised CL07-11 as follows:

CL07: It is not clear why a water heater sourced by fossil fuels, such as LPG, is excluded from alternative scenarios. Evidences (studies or surveys, statistics, market data, etc.) for the statement that "Other than SWH systems, electric water heaters are the only available technology in the market of Viet Nam to heat water for household showering which is the predominant usage of the heated water generated by the SWH systems at household." described in Section E.4. of the PoA-DD, are to be provided.

Resolution: Through the review of survey reports such as "Viet Nam electricity survey 2011"[3] (June 2011) published by Japan External Trade Organization (JETRO) Hanoi **(Ref. 16)** and "Viet Nam – Expanding Opportunities for Energy Efficiency"[4] (March 2010) published by The World Bank **(Ref. 17)**, and information available from website such as the giz wind energy project[5] **(Ref. 18)**, and the interview with local governmental officers, local SWH providers and local residents during on-site assessment, JQA confirmed that water heater sourced by fossil fuel was not commonly used in Viet Nam and thus it was reasonable to excluded it from alternative scenarios.

CL08: The data regarding the domestic sector electricity use of 44.5%, based on Electricity of Viet Nam (EVN) 2005, in Section E.4. of the PoA-DD, is rather outdated. It is requested to use more recent data.

Resolution: The information is updated to 40 % based on the report published by JETRO in 2011 **(Ref. 16)**.

CL09: According to the data from Jyukankyo Research Institute Inc. based on the survey conducted by EVN **(Ref. 19)**, which is quoted in footnote 9 in Section E.4. of the PoA-DD, the electricity consumed for water heating accounts for about 13% and 7% of the total electricity consumption of urban and rural household, respectively. The information is not consistent with the information provided in the PoA-DD (15%).

3 http://www.jetro.go.jp/jfile/report/07000429/vn_energy_report2011.pdf

4 http://siteresources.worldbank.org/EXTEAPASTAE/Resources/ASTAE-Vietnam-Expanding-OpportunitiesEE-Web.pdf

5 http://www.windenergy.org.vn/index.php?page=solar-energy

Resolution: The description of the Section E.4. of the PoA-DD was corrected to be consistent with the information provided in the data from Jyukankyo Research Institute Inc. **(Ref. 19)**.

CL10: It is described in Section E.4. of the PoA-DD that "As explained in A.4.3, due to its reasonable price range and easy installation, the electric water heater is the most commonly used technology in Viet Nam". Nevertheless, such information is not provided in A.4.3.

Resolution: The information about the price range of SWH systems and EWH systems and its source was added in E.4. of the PoA-DD. Through the review of information source, "Feasibility Study Report of ECC" (2008) **(Ref. 20)**, JQA confirmed that the information was correctly quoted. JQA also cross-checked the information with other sources, such as catalogues of SWH systems obtained on-site, report by Jyukankyo Research Institute Inc.[6] **(Ref. 21)** and the interview with local residents, and confirmed that the information provided in the PoA-DD was correct and reliable.

CL11: CME/PPs are requested to identify and discuss all 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, on the identification of the baseline scenario.

Resolution: Information regarding national policies and initiatives regarding the energy efficiency was added in E.4. of the PoA-DD. Through the review of the national policies and initiatives and information from other sources such as the website of National Energy Efficiency Programme (VNEEP)[7] **(Ref. 22)**, JQA confirmed that there were no policies and circumstances to oblige households to install SWH systems. Through the review of documentary evidences including "Viet Nam electricity survey 2011"[8] (June 2011) published by JETRO Hanoi **(Ref. 16)** and "Viet Nam – Expanding Opportunities for Energy Efficiency" [9] (March 2010) published by The World Bank **(Ref. 17)**, JQA has also confirmed that domestic electricity consumption has been skyrocketing in recent years and thus the description in E.4. of the PoA-DD is correct.

Through the resolution of these CLs, JQA confirmed that the domestic water heating technology commonly available in the market of Viet Nam was limited to EWH systems and SWH systems, and the typical water heating system in the project region was EWH systems, not SWH systems. Therefore, it is demonstrated that the baseline scenario is identified in accordance with AMS-I.J. and the proposed PoA and complies with Para 81-82 of VVM.

6 http://eco.nikkeibp.co.jp/em/column/nakagami/43/02.shtml

7 http://tietkiemnangluong.com.vn/en/activity-news/31003-0/index.html

8 http://www.jetro.go.jp/jfile/report/07000429/vn_energy_report2011.pdf

9 http://siteresources.worldbank.org/EXTEAPASTAE/Resources/ASTAE-Vietnam-Expanding-OpportunitiesEE-Web.pdf

3.3.4 Algorithms and/or formulae used to determine emission reductions

JQA reviewed the equations for calculation of emission reductions provided in the PoA-DD to confirm whether;

- All assumptions and data used are listed in the PoA-DD, including their references and sources;
- All documentation used as the basis for assumptions and source of data is correctly quoted and interpreted in the PoA-DD;
- All values used in the PoA-DD are considered reasonable in the context of the proposed CDM project activity;
- The baseline methodology is applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;
- All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.

The results of the assessment are described in detail in 1) to 5) below.

1) Description of Assumptions and Data Used

JQA assessed whether all assumptions and data used by CME/PPs are listed in the PoA-DD, including their references and sources. Data and parameters used in the calculation of emission reductions are as follows:

< Data and parameters to be reported in CPA-DD >

- $EF_{EL,y}$ (tCO_2/MWh): Emission factor for electricity grid in year y
- ES_y ($kWh/m^2/year$): The stipulated energy saving values

< Data and parameters to be monitored by each CPA >

- N (unit): The number of SWH systems installed.
- $A_{x,y}$ (m^2/yr): The collector area of SWH system *x* verified to have been installed by the project activity in year *y*.
- Result of acceptance test (-): Result of acceptance test
- $D_{x,y}$ (-): The proportion of days in which SWH system x is being installed in year y.
- R_y (%):The proportion of SWH systems that are operational and in compliance with manufacture-required maintenance procedures in year *y*
- l_y (-): Average annual technical grid losses during year y

JQA confirms that all data and parameters used by CME are listed in E.6.3 and E.7.1 of the PoA-DD, including their references and sources.

2) Correct Quotation and Interpretation of Documentation

JQA reviewed all documentation used as the basis for assumptions and sources of data. The following documents are quoted in the PoA-DD:

- Data published by DNA Viet Nam[10] **(Ref. 23)** for $EF_{EL,y}$
- AMS-I.J. / Version 01 for ES_y
- Electricity of Viet Nam (EVN) for I_y

Regarding $EF_{EL,y}$, JQA raised CL15 as follows:

> **CL15:** Some figures provided in Table A3.3. and Table A3.4. of the PoA-DD are not consistent with its source, Official Letter No.151/KTTVBDKH dated 26 March 2010 **(Ref. 23)**.
>
> **Resolution:** Wrong figures were corrected.

Regarding ES_y, AMS-I.J. determines that the "stipulated energy saving method" is only applicable residential SWH system projects that displace electricity for water heating and satisfies conditions provided under 10 (c) are satisfied.

Regarding the justification for condition 10 (c) (iv), JQA has raised CL14 as follows:

> **CL14:** Regarding Table A 3.1 in Annex 3 of the PoA-DD, the following information is to be described:
> 1) Equations and parameters (e.g. SWH efficiency, conversion factors, etc.) used to estimate the amount of water can be heated by the SWH systems in a transparent manner.
> 2) Correct URL for the footnote 1 since the URL currently provided does not show the numbers described in Table A 3.1.
> 3) Equations and parameters used to estimate the water temperature, which is based on ASHRAE psychometric analysis CD - psychart 1, in a transparent manner.
>
> **Resolution:** JQA has confirmed that Table A 3.1 in Annex 3 is revised appropriately as explained below.
>
> 1) Spreadsheet including equations and parameters used to estimate the amount of water can be heated by the SWH systems **(Ref. 9)** were provided. It also includes a list of longitude and latitude of HCMC and 21 provinces which is used to obtain the data of daily solar radiation and the average temperature from NASA's website[11] (footnote 1 in Annex 3; refer to 2) below). Through the review of the spreadsheet, JQA confirmed that the sources of data were appropriate in the context of the PoA, the data were correctly quoted and the calculation was correct as explained below.
>   - The data of daily solar radiation and the average temperature shown in Table A 3.1. are obtained by inputting the data of longitude and latitude in the NASA's website provided in the footnote 1. The data of longitude and latitude of HCMC and 21 provinces listed in the spreadsheet **(Ref. 9)** are obtained mainly from the website of provincial governments and the average longitude and latitude is used.

[10] http://www.noccop.org.vn/Data/vbpq/Airvariable_Idoc_vnHe%20so%20phat%20thai%202008.pdf
[11] http://eosweb.larc.nasa.gov/sse/RETScreen/

JQA confirmed that the longitude and latitude were correctly quoted and the values provided in Table A 3.1. were replicated correctly.

- Collector size of 2.07m^2 is the average of 455 different types of SWH systems sold by 57 SWH providers in the south of Viet Nam. The information was gathered by the ECC through the pilot project in 2008. JQA confirmed that the data was appropriate in the context of the proposed PoA and the calculation was correct.
- Heat absorption efficiency of 60% is determined based on "JIS A 4111-1997 Solar water heater for dwellings" **(Ref. 24)** and website information by Jyukankyo Research Institute Inc.[12] **(Ref. 25)** in a conservative manner (higher value). JQA independently reviewed several technical literatures[13] **(Ref. 26-27)** and confirmed that the applied efficiency of 60% is considered to be appropriate.
- The hot water temperature of 60 ^{o}C is the minimum temperature based on the specifications of 455 different types of SWH systems sold by 57 SWH providers in the south of Viet Nam **(Ref. 9)**. JQA confirmed that the data is appropriate in the context of the proposed PoA.
- The water temperature was initially based on the wet bulb temperature obtained through ASHRAE psychometric analysis CD - psychart 1. However, the source was changed to the ambient air temperature for conservativeness (refer to 3) below).
- The amount of water heated (L/day) provided in Table A 3.1. is obtained by the equation: Amount of water heated = (Daily solar radiation * Collector size * 60% * 3,600) / {(Hot water temperature - Water temperature) *4.186}. The figure 3,600 is the conversion factor from kWh to kJ and 4.186 is specific heat of water (kJ/kg/°C). JQA confirmed the equation and the calculation results were correct.

2) URL of footnote 1[11] is correct. The data of daily solar radiation and the average temperature shown in Table A 3.1. are obtained through inputting the longitude and latitude provided in the spreadsheet used as the basis for Table A 3.1. **(Ref. 9)**.
3) The source of the water temperature is revised from the wet bulb temperature calculated based on the atmospheric temperature and the humidity using ASHRAE psychometric analysis CD - psychart 1, to the air temperature obtained through inputting longitude and latitude in NASA's website provided in the footnote 1 in Annex 3. The data obtained using ASHRAE psychometric analysis CD - psychart 1 is the wet bulb temperature, which is the minimum temperature which may be achieved by purely evaporative cooling of a water-wetted, ventilated surface. Since the use of wet bulb temperature as tap water temperature in the south of Viet Nam could result in too low estimate since heat could be supplied to tap water from ground, insulation, etc., JQA requested CME/PPs further justification. Finally, CME/PPs determined to

[12] http://www.kankyo.metro.tokyo.jp/climate/attachement/01%20jyukanken.pdf
[13] RETScreen® Software Online User Manual www.retscreen.net/download.php/ang/470/0/SWH3.pdf
"A review of solar water heating systems" N V Ogueke, E E Anyanwu, O V Ekechukwu, Journal of Renewable and Sustainable Energy (2009)

use the air temperature as water temperature. JQA considers the approach is conservative.

Table 3 given below shows the conditions provided under Para 10 (c) of AMS-I.J. and validation comments. Through the review of the information contained in the PoA-DD (refer to E.6.1. of the PoA-DD for CME's justification) and other documentary evidences, JQA confirmed that a CPA included in the proposed PoA satisfied every condition to apply the stipulated energy saving method in AMS-I.J.

Table 3 List of conditions to apply the stipulated energy method

No.	Conditions	Validation Comment
(i)	Individual solar collector area per system is less than or equal to eight square meters per residential unit (e.g. eight square meters for a single family residence or 32 square meters for a four unit apartment building)	This condition is checked through Criterion 4 and thus CPAs included in the PoA satisfy this condition. The ECC confirms whether products of a SWH provider satisfies this conditions by using "SWHPOA-06 Check list of technical specification of the SWH systems under the CPA" **(Ref. 10)** prior to making contract with a SWH provider. Through the contact, the ECC ensures that only the SWH systems which satisfy this condition are sold to households join the programme.
(ii)	The tilt and orientation of the solar collectors shall be +/- 45 of due equator and a tilt +15 to -25 degrees of latitude	This condition is checked through Criterion 9 and thus CPAs included in the PoA satisfy this condition. Furthermore, under the contract, the ECC makes the registered SWH providers check whether a SWH system can be installed so as to meet this condition at the stage of pre-installation through "SWHPOA-10 Check list for SWH system installation (pre-check by SWH distributors)" **(Ref. 10)**. In addition, after the completion of the installation, the ECC further makes SWH providers check the compliance of this condition through "SWHPOA-12 Check list for SWH system installation (Acceptance testing)" **(Ref. 10).**
(iii)	Thermal storage volume (preheat tank volume) is either: (a) At least 50 litres per square meter of collector area; or (b) Adequate to bridge time gap between solar supply and load demand during an average winter day for a typical installation, as demonstrated by calculation or model	This condition is checked through Criterion 8 and thus CPAs included in the PoA satisfy this condition. Furthermore, the ECC confirms whether products of a SWH provider satisfies this conditions by using "SWHPOA-06 Check list of technical specification of the SWH systems under the CPA" **(Ref. 10)** prior to making contract with a SWH provider. Through the contact, the ECC ensures that only the SWH systems which satisfy this condition are sold to

No.	Conditions	Validation Comment
		households join the programme.
(iv)	The sizing calculations of the SWH systems are documented to be such that the average annual, daily amount of water heated by the SWH systems is less than or equal to the average annual, daily hot water demand for a typical installation;	Through the review of the document quoted in footnote 10 of the PoA-DD ("Comparing household water end-use data from Vietnam and Australia: Implications for water and wastewater planning" (2011) Monique Retamal, Nguyen Dinh Giang Nam, Juliet Willetts et al. **(Ref. 28)**), JQA confirmed that the statements that the average household water consumption is approximately 740L/house/day and 34% of it was used for shower were correctly quoted and interpreted. 251L/house/day is calculated correctly from these data (740 * 0.34 = 251.6). On the other hand, as described CL14 above, Table A3.1 in Annex 3 was correctly revised and the revised sizing calculations of the SWH systems demonstrates that the average annual, daily amount of water heated by the SWH system is 168 L/house/day at the maximum and does not exceed 251L/house/day. Therefore, this condition is demonstrated to be satisfied.
(v)	There must be no shading of the solar collectors between 10 am to 2 pm on the shortest day of the year at the time of installation	This condition is checked through Criterion 10 and thus CPAs included in the PoA satisfy this condition. Furthermore, under the contract, the ECC makes the registered SWH providers check whether a SWH system can be installed so as to meet this condition at the stage of pre-installation through "SWHPOA-10 Check list for SWH system installation (pre-check by SWH distributors)" **(Ref. 10)**. In addition, after the completion of the installation, the ECC further makes SWH providers check the compliance of this condition through "SWHPOA-12 Check list for SWH system installation (Acceptance testing)" **(Ref. 10)**.
(vi)	The quality and performance of the solar collectors and SWH systems shall meet the criteria in the OG100 standard at <www.solar-rating.org>, or equivalent national or international standard, or the requirements given below:	This condition is checked through Criterion 7 and thus CPAs included in the PoA satisfy this condition. Furthermore, the ECC confirms whether products of a SWH provider satisfies this conditions by using "SWHPOA-07 Eligibility Criteria Check List for the inclusion of CPA" **(Ref. 10)** prior to making contract with a SWH provider. Through the contact, the ECC ensures that only the SWH systems which

No.	Conditions	Validation Comment
	• Unglazed collector must be stabilized against UV degradation; • Glazed collector must have at least one glass cover and be insulated on the sides and back to achieve a loss coefficient not more than 5 W/m2C; • Evacuated tube collector must maintain vacuum insulation between absorber and ambient.	satisfy this condition are sold to households join the programme.

By the way, regarding the appropriateness of source of the l_y, JQA has raised CL16 as follows:

CL16: According to Para 11 of AMS-I.J., a default value of 10% shall be used for average annual technical grid losses (l_y) if no recent data are available or data cannot be regarded accurate and reliable. It is requested to demonstrate that no recent data are available or data cannot be regarded accurate and reliable.

Resolution: The PoA-DD has been changed to use data published by the Electricity of Viet Nam (EVN) instead of applying a default value of 10%. This parameter is included in E.7.1. of the PoA-DD to ensure that the recent data is applied throughout the monitoring period.

Through the resolution of the CLs, JQA confirms that documentation used by PPs for $EF_{EL,y}$, ES_y and l_y are correctly quoted and interpreted in the calculation of emission reductions.

3) Appropriateness of Values Used in the PoA-DD

JQA has assessed whether all the values of data and parameters to be reported in CPA-DD are reasonable in the context of the proposed PoA. Note that values of data and parameters to be monitored by each CPA are neither reported in the PoA-DD nor the generic CPA-DD.

- $EF_{EL,y}$ (tCO_2/MWh): 0.5764, calculated using "Tool to calculate the emission factor for an electricity system" (Version 2.2.1) according to AMS.I.D. (Version 17). Refer to 4) in this section for the correct application of the applied tool.
- ES_y (kWh/m^2/year): 450 based on AMS-I.J.

According to Para 10 (c) of AMS-I.J., two default values are provided for ES_y based on hot water demand of users as follows:

- For applications that can be reasonably demonstrated to have substantial hot water consumption demand year round: a single value of 450 kWh/year per square meter of

collector area is stipulated for energy savings and is based on 5 kWh/m^2/day solar resource, 25% solar water heater efficiency, and 365 days/year of hot water use;

- For applications that cannot be reasonably demonstrated to have substantial hot water consumption demand year round (such applications can be residences that are temporary or seasonal housing or located in regions with very hot summers, for example, during which season(s) there is no or limited demand for hot water): a single value of 300 kWh/year per square meter of collector area is stipulated for energy savings.

As described in E.6.1. of the PoA-DD, the geographical boundary of the PoA, the south of Viet Nam, lies in tropical zone and its annual temperature variation range is narrow. Therefore, substantial seasonal change in hot water demand caused by the local climate is not expected. Temporary or seasonal housing will be excluded from CPAs by checking Criterion 13 *ex-ante*. In addition, the ECC makes the registered SWH providers check and exclude temporary or seasonal housings at the stage of pre-installation through "SWHPOA-10 Check list for SWH system installation (pre-check by SWH distributors)" **(Ref. 10)**. Therefore, 450 kWh/year/m^2 is applicable to CPAs in the proposed PoA.

JQA has confirmed the values used in the PoA-DD are appropriate.

4) Correct Application of Methodology / Tools

JQA has reviewed the PoA-DD whether the equations and parameters in the PoA-DD are in accordance with AMS-I.J. According to E.6.2 of the PoA-DD, emission reductions (ER_y) of a CPA in the PoA are calculated by the following equation:

$$ER_y = ES_y \times \sum_{x=1}^{N} \left(A_{x,y} \times D_{x,y} \right) \times R_y \times 10^{-3} \times EF_{EL,y} \times 1/\left(1 - l_y\right)$$

Where:

- ER_y: Emission reduction in year *y* (tCO_2e /yr).
- ES_y: The stipulated energy saving values (kWh/year/m^2). 450 kWh/year/m^2 is applied.
- $A_{x,y}$: The collector area of SWH system *x* verified to have been installed by the project activity in year *y* (m^2/yr).
- $D_{x,y}$: The proportion of days in which SWH system *x* is being installed in year y (-).
- R_y: The proportion of SWH systems that are operational and in compliance with manufacture-required maintenance procedures in year *y*
- $EF_{EL,y}$: Emission factor for electricity grid (tCO_2e /MWh). 0.5764 tCO_2e/MWh is applied. The value is calculated based on "Tool to calculate the emission factor for an electricity system" (Version 2.2.1) according to AMS.I.D. (Version 17).
- l_y: Average annual technical grid losses during year y (-).

AMS-I.J does not provide any specific equation for calculation of emission reductions. Through the review of AMS-I.J., JQA has raised CL13 regarding the appropriateness of the

equation in light with the methodological requirements.

CL13: The equation (1) provided in E.6.1 of the PoA-DD does not include the monitoring parameter required by Para 14 of AMS-I.J., namely, the number of systems that are demonstrated to be operational and in compliance with manufacturer-required maintenance procedures, planned to be checked by annual inspection. CME/PPs are requested to clarify how the monitoring data obtained through the annual inspection is used in the calculation of emission reductions.

Resolution: The equation (1) was revised so as to include the parameter R_y.

Regarding grid emission factor, according to Para 9 of AMS-I.J., emission reductions are calculated as the energy savings that result from the project implementation multiplied by an emission factor for the electricity and/or fossil fuel displaced. For the emission factor for displaced electricity, an annual emission factor shall be calculated, in accordance with the provisions in AMS-I.D "Grid connected renewable electricity generation" (tCO2/MWh).

According to E.6.2 of the PoA-DD, a combined margin (CM) is used for emission factor of electricity displaced, and is calculated based on "Tool to calculate the emission factor for an electricity system" (Version 2.2.1) as per Para 12 (a) of AMS.I.D. (Version 17).

Regarding the application of the tool, JQA has raised CL12 as follows:

CL12: The version of "Tool to calculate the Emission Factor for an electricity system" is not the latest. The tool is not correctly applied regarding the following issues:

- Titles of the steps (Step 1 -6) are different with those provided in the tool.
- Step-wise analysis to determine the sample group of power unit m used to calculate the BM in Step 5 is not presented.

Resolution: E.6.2 of the PoA-DD was revised based on the latest version of the tool (version 2.2.1).

As described in E.6.2 of the PoA-DD, the DNA of Viet Nam has published the emission factor of the national electricity grid in the Official Letter No.151/KTTVBDKH dated 26 March 2010[14]. JQA confirmed that the data were the most recent data available at the time of submission of the PoA-DD for validation, and the data were correctly quoted through the resolution of CL15, as described in 1) in this section.

With respect to leakage, according to Para 12 of AMS-I.J., if the project equipment is transferred from another activity and/or baseline equipment is not destroyed, leakage is to be considered.

As SWH systems installed by a CPA in the proposed PoA are purchased from registered SWH providers **(Ref. 10)**, project equipment will not be transferred from another activity.

[14] http://www.noccop.org.vn/Data/vbpq/Airvariable_Idoc_vnHe%20so%20phat%20thai%202008.pdf

In the case of retrofit projects that replace existing EWH system with SWH system, baseline equipment (EWH system) may not be destroyed and temporarily used even after the installation of SWH systems in case when hot water is not provided from SWH systems because of malfunctions or cloudy/rainy conditions. Nevertheless, according to Para 102 of EB 65 Meeting Report, CDM-EB agreed to remove the requirement in Type I methodologies, when applied to PoAs, that the replaced energy-generating equipment should be scrapped and that this scrapping should be independently monitored. Furthermore, "SSC_560: Clarification on the auxiliary heating system under AMS-I.J" describes as follows:

"The SSC WG agreed to clarify that electricity demand for auxiliary heating demand does not need to be considered as leakage. This is because the stipulated energy savings values of 300 and 450kWh/m² per year do include consideration of electricity (or fossil fuel) demand for auxiliary heating of water."

Through the review of the relevant EB rulings, JQA confirmed that leakage was not necessary to be considered for CPAs under the proposed PoA.

Through the resolution of CL13 and the review of EB rulings regarding the leakage based on AMS-I.J., JQA confirmed that the equation provided in E.6.2 of the PoA-DD satisfied all relevant methodological requirements.

JQA confirms that the applied methodology and tool are correctly applied.

5) Reproducibility of calculation

The PoA-DD provides equations and *ex-ante* determined values used for the calculation of emission reductions in E.6.1, E.6.2, E.6.3 and E.7.1 in a transparent manner. These equations and values are sufficiently clear to replicate the estimates of emission reductions.

As demonstrated in 1) – 5) above, the proposed PoA satisfies Para 90 - 92 of VVM.

3.4 Additionality of Project Activity

3.4.1 Demonstration of additionality of the PoA

The proposed voluntary measure by the PoA is the promotion of energy saving in the southern region of Viet Nam, composed of HCMC and 21 provinces, through the installation of new SWH systems in households.

Para 7 and 8 of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0) requires that;

- Additionality shall be demonstrated by establishing that in the absence of CDM, none of the implemented CPAs would occur; and
- PoAs that consist of one or more microscale projects as CPAs shall include eligibility criteria derived from all the relevant requirements of the "Guidelines for demonstrating

additionality of microscale project activities".

According to Para 2 of "Guidelines for demonstrating additionality of microscale project activities" (Version 03.0), project activities up to five megawatts that employ renewable energy technology are additional if any one of the conditions below is satisfied:

(a) The geographic location of the project activity is in one of the least developed countries or the small island developing States (LDCs/SIDS) or in a special underdeveloped zone of the host country identified by the government before 28 May 2010;
(b) The project activity is an off-grid activity supplying energy to households/communities (less than 12 hours grid availability per 24 hrs is also considered "off-grid" for this assessment);
(c) The project activity is designed for distributed energy generation (not connected to a national or regional grid) with both conditions (i) and (ii) satisfied;
  (i) Each of the independent subsystems/measures in the project activity is smaller than or equal to 1500kW electrical installed capacity;
  (ii) End users of the subsystems or measures are households/communities/small and medium enterprises (SMEs)."

According to "SSC_576: Clarification on the eligibility of SWHs under microscale additionality guidelines" approved at EB65, thermal energy generating equipment like SWHs and biogas stoves are eligible under paragraph 2(c). The SSC WG further agreed to clarify that the SWHs displacing grid-connected electric heaters can apply paragraph 2(c).

JQA has raised CL18 regarding the category to which a CPA in the PoA fallen under as follows:

> **CL18:** PPs are requested to demonstrate why not "distributed energy generation" (Para 2(c)) but "an off grid activity" (Para 2(b)) is applied to a typical CPA under the PoA among types of activities provided in Para 2 of "Guidelines for demonstrating additionality of microscale project activities".
>
> **Resolution:** The demonstration of additionality has been revised based on Para 2 (c) taking "SSC_576: Clarification on the eligibility of SWHs under microscale additionality guidelines" into consideration.

As shown in Table 4, the proposed PoA includes eligibility criteria derived from all the relevant requirements of the "Guidelines for demonstrating additionality of microscale project activities", based on "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities". Therefore, additionality of the PoA is demonstrated.

Table 4 Eligibility criteria derived from microscale additionality requirements

Microscale additionality requirements	Derived eligibility criteria and validation comment
2. Project activities up to 5 megawatts that employ renewable energy technology are additional if any one of the conditions below is satisfied:	Criterion 15. Total size of collector surface area of the SWH systems installed under a CPA does not exceed 21,428 m^2 of a threshold of microscale project activities throughout the crediting period of a CPA. As described in E.5.1 of the PoA-DD, up to 5MW (electricity) is converted to up to 21,428 m^2 collector area based on Para 4 (b) and 4 (d) of "General guidelines to SSC CDM methodologies" (5MWe * 3MWth/MWe / 700Wth/m2 *10^6)
2 (c) (i) Each of the independent subsystems/ measures in the project activity is smaller than or equal to 1500 kW electrical installed capacity;	Criterion 4. The size of collector surface area of the SWH system installed under a CPA does not exceed 8 m^2 of a threshold of very small residential SWH systems determined in the methodology AMS-I.J. As described in E.5.1 of the PoA-DD, 1500kW electrical installed capacity is converted to 6,428 m^2 collector area based on Para 4 (b) and 4 (d) of "General guidelines to SSC CDM methodologies" (1500kWe * 3kWth/kWe / 700Wth/m2 *10^3). Since Criterion 4 requires that the size of the collector area do not exceed 8m^2, this requirement is covered by Criterion 4.
2 (c) (ii) End users of the subsystems or measures are households/ communities/ SMEs.	Criterion 12. The SWH systems installed under a CPA are residential SWH systems. This additionality requirement is addressed by Criterion 12.
8 (a) Project activities remain under the thresholds defined above during each year of the crediting period and in cases where *ex ante* projected emissions reductions show an increase during the crediting period; project activities that go beyond the microscale limits in any year of the crediting period are not eligible;	Criterion 4. The size of collector surface area of the SWH system installed under a CPA does not exceed 8 m^2 of a threshold of very small residential SWH systems determined in the methodology AMS-I.J. Criterion 7. The SWH systems under a CPA comply with technical requirements for SWH systems TCVN8251: 2009 announced by the Ministry of Science and Technology, Viet Nam **(Ref. 15)** and the requirements given below: - Unglazed collector must be stabilized against UV

Microscale additionality requirements	Derived eligibility criteria and validation comment
	degradation; - Glazed collector must have at least one glass cover and be insulated on the sides and back to achieve a loss coefficient not more than 5 W/m2C; - Evacuated tube collector must maintain vacuum insulation between absorber and ambient. Criterion 8. The volume of storage tanks of the SWH systems under a CPA is at least 50 litres per square meter of collector area. Criterion 9. The tilt and orientation of the solar collectors shall be+/-45 of due equator and a tilt +15 to -25 degrees of latitude. This requirement shall be ensured by the acceptance testing. Criterion 10. There must be no shading of the solar collectors between 10am to 2pm on the shortest day of the year at the time of installation. This requirement shall be ensured by the acceptance testing. Criterion 12. The SWH systems installed under a CPA are residential SWH systems." Criterion 13. The SWH systems under a CPA will be installed to the residential buildings which are not temporary or seasonal housings. The above criteria are requirement to apply the stipulated energy saving method of AMS-I.J. Since the default value of 450kWh/year/m^2-collector area is used for calculation of emission reductions, *ex-ante* projected emissions reductions is stable. Therefore, CPAs in the PoA would not go beyond the microscale limits in any year of the crediting period.
8 (b) Renewable energy projects that produce electrical, thermal and mechanical energy, and cogeneration projects are covered. Definitions provided for output capacity and guidelines provided for conversion from electrical to thermal units in the most recent version of "General Guidelines to SSC CDM methodologies" shall be used. Where applicable, additional guidelines provided	This requirement is addressed by Criteria 4 and 15 as described 2 and 2 (c) (i) above. "General Guidelines to SSC CDM methodologies" (Version 17) is used for conversion from electrical to thermal units.

Microscale additionality requirements	Derived eligibility criteria and validation comment
in relevant methodologies shall be followed, e.g. eligibility of cogeneration projects as currently defined in AMS-I C	
8 (c) A project activity with more than one component, where each component meets the microscale threshold, is eligible. The sum of the size of components of a project activity belonging to the same type (capacity for Type I, energy savings for Type II and emission reductions for Type III) shall not exceed the limits for microscale project activities (e.g. the limit for the methane recovery component is 20 ktCO2e/yr and the limit for the electricity production component is 5 MW output capacity).	This requirement is not applicable as CPAs in the proposed PoA do not involve more than one component.
9. Microscale CDM project activities shall apply the “Guidelines on the demonstration and assessment of prior consideration of the CDM” (EB 57, paragraph 12).	This requirement is not applicable based on Para 3 of “Clarifications regarding the "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 01)
10. Microscale CDM project activities shall demonstrate that they are not a debundled component of a small-scale (SSC) CDM project activity by applying the criteria in the “Guidelines on assessment of debundling for SSC project activities”, for example by suitably considering microscale thresholds in the place of SSC thresholds (EB 62, para 48).	This requirement is not applicable based on Para 10 of “Guidelines on assessment of de-bundling for SSC project activities” (Verson 03), CPAs in the proposed PoA is exempted from the debundling check (refer to Section 3.9.2 of this report and A.4.4.1 of the PoA-DD for details).

Regarding the descriptions in A.4.3. of the PoA-DD, JQA has raised CL17 as follows:

CL17: "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0) is not addressed in demonstration of additionality in Section A.4.3 of the PoA-DD.

Resolution: The description of Section A.4.3 of the PoA-DD was revised by applying “Guidelines for demonstrating additionality of microscale project activities”, based on “Standard for demonstration of additionality, development of eligibility criteria and

application of multiple methodologies for programme of activities".

From the assessment above, JQA has confirmed that the additionality of the proposed PoA is demonstrated satisfactory based on "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0) and "Guidelines for demonstrating additionality of microscale project activities" (Version 03.0).

3.4.2 Prior consideration of CDM

Regarding the start date and the implementation timeline of the PoA, JQA has raised CL19 - 20 as follows:

CL19: The evidence of starting date of the PoA, the approval of PoA by the Peoples' Committee of HCMC on 09/11/2009, is to be provided. A timeline including major events are to be described in A.4.3 of the PoA-DD, and relevant and documentary evidences for major events are to be provided.

Resolution: The approval from the People's Committee of HCMC **(Ref. 29)** as well as evidences for major events was provided **(Ref. 6, 30-34)**. JQA confirmed that the timeline provided in A.4.3. of the PoA-DD is correct and complete.

CL20: CME/PPs are requested to demonstrate that the defined starting date of the PoA, 09/11/2009 **(Ref. 29)**, is the earliest date at which either the implementation or construction or real action of a project activity begins.

Resolution: The justification of the selected starting date, namely, "no implementation or construction or real action of the project has been started before issuance of this approval" was added in B.1. of the PoA-DD. JQA considered the selected starting date complies with "Glossary of CDM Terms" (Version 06).

According to "Guidance on the Demonstration and Assessment of Prior Consideration of the CDM" (Version 04.0), for a project activity with the start date on or after 2 August 2008, PPs are required to inform a Host Party DNA and the UNFCCC secretariat of the commencement of the project activity and of their intention to seek CDM status within 6 months of the project activity start date. Nevertheless, as per Para 8 of "Clarifications regarding the "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"", this procedure is not applied to the PoA.

3.4.3 Identification of alternatives

As already described in Section 3.4.1, additionality of the PoA is demonstrated based on "Guidelines for demonstrating additionality of microscale project activities" (Version 03.0) referred to in "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0).

Therefore, identification of alternatives is not relevant.

3.4.4 Investment analysis

As already described in 3.4.1, additionality of the PoA is demonstrated based on “Guidelines for demonstrating additionality of microscale project activities” (Version 03.0) referred to in “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” (Version 01.0). Therefore, investment analysis is not relevant.

3.4.5 Common practice analysis

As described in 3.4.1, additionality of the PoA is demonstrated based on “Guidelines for demonstrating additionality of microscale project activities” (Version 03.0) referred to in “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” (Version 01.0). Therefore, common practice analysis is not relevant.

3.5 Monitoring plan

3.5.1 Monitoring plan of the PoA

According to CDM-SSC-PoA-DD (Version 01), the following information is required to be reported in A.4.4.2. of the PoA-DD:

(i) Description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of reductions of anthropogenic emissions by sources or removals by sinks of greenhouse gases achieved by CPAs under the PoA.

(ii) In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA (whether in groups or not, with different or identical verification periods) a transparent system is to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA

As described in the PoA-DD, since CME opts for a verification method that does not use sampling but verifies each CPA, (i) is not applicable. According to (ii), a transparent system is required to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA.

Regarding the description in A.4.4.2., JQA has raised CL21 as follows:

CL21: Regarding the monitoring of PoA, the specific parameter/system/procedure in order to ensure that 1) no double accounting occurs and 2) status of verification can be determined anytime for each CPA, are to be described.

Resolution: Sequential registration number for SWH is used to ensure that no double

accounting occurs. A parameter of "status of verification" was added as a parameter in the database. JQA reviewed "SWHPOA-DATA Database of the PoA" **(Ref. 12)** and confirmed the parameter was added.

Through the resolution of CL21, JQA confirms that the transparent system that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA is determined. Also refer to Section 3.10.1 regarding to the operational and management arrangements of the PoA established by the ECC as CME.

3.5.2 Monitoring plan for a CPA

1) Monitoring parameters

The following data/parameters to be monitored by each CPA are listed in E.7.1 of the PoA-DD:

- N (unit): The number of SWH systems installed
- $A_{x,y}$ (m^2): The collector area of the SWH system *x* verified to have been installed by the project activity in year *y*
- Result of acceptance test (-): Result of acceptance test
- $D_{x,y}$ (-): The proportion of days in which SWH system *x* is being installed in year y
- R_y (-): The proportion of SWH systems that are operational and in compliance with manufacture-required maintenance procedures in year *y*
- l_y (-): Average annual technical grid losses during year *y*

Table 5 summarizes how these seven monitoring parameters provided in the PoA-DD satisfy the monitoring requirements provided in AMS-I.J.

Table 5 Methodological requirements and monitoring plan for a CPA

Methodological requirement	Description in E.7.1 of the PoA-DD	
Para 10 (c): Stipulated energy saving method; This method is only applicable to residential SWH system projects that displace electricity for water heating. ... The appropriate value is multiplied by the aggregate collector area verified to have been installed by the project activity.	N	Directly determined in the course of installing SWH systems included in a CPA. The ECC will collect and record the number of systems installed under a CPA. The value will be monitored continuously.
	$A_{x,y}$	The ECC will record the collector area of each SWH system installed under a CPA based on the specification of each system. The value will be monitored continuously.
Para 11: Displaced electricity can include technical grid losses (transmission and distribution) for the grid serving the locations where the project SWH system(s) are	l_y	The value shall be determined from recent data published by EVN. The ECC will collect the data from EVN.

Methodological requirement	Description in E.7.1 of the PoA-DD	
installed. … The average annual technical grid losses shall be determined using recent, accurate and reliable data available for the host country. This value can be determined from recent data published either by a national utility or an official governmental body. Reliability of the data used (e.g. appropriateness, accuracy/ uncertainty, especially exclusion of non technical grid losses) shall be established and documented by the project participant. A default value of 10% shall be used for average annual technical grid losses, if no recent data are available or the data cannot be regarded accurate and reliable.		
Para 13: Within three months of installation each SWH system shall be inspected and undergo acceptance testing (commissioning) for proper operation in compliance with manufacturer specifications. Acceptance testing shall be documented and confirm system operation, per design specifications, and change-of-operating modes over a range of typical operating conditions. The installation date of each SWH system shall be recorded.	Result of acceptance test	Only the SWH systems which passed the acceptance test are to be considered for the calculation of emission reductions. Therefore, the value is not used for the calculation of emission reductions. The ECC and the SWH system distributors will inspect and undergo acceptance testing (commissioning) for proper operation in compliance with manufacturer specifications within three months of installation of each SWH system. The ECC will record the result of acceptance testing. The SWH systems do not pass the acceptance test are not included in a CPA.
	$D_{x,y}$	The ECC will collect and record the date of installation of each SWH system installed under a CPA. The proportion of days in year y is calculated based on the record of the date of installation of each SWH system and recorded in the database.

Methodological requirement	Description in E.7.1 of the PoA-DD	
Para 14: For residential SWH systems, in any given year, emission reductions can only be claimed for systems that are demonstrated to be operational and in compliance with manufacturer-required maintenance procedures, on an annual or biennial (every other year) basis during the crediting period. … Compliance with this requirement shall be implemented via an inspection of systems and review of maintenance records. A statistically valid sample of the residences where the systems are installed can be used to determine the percentage of systems operating and in compliance with manufacturer-required maintenance procedures. Such sampling shall take into consideration occupancy and demographics differences, as per the relevant requirement for sampling in the "General guidelines for sampling and surveys for SSC project activities".	R_y	The ECC will conduct an annual inspection to check the proper operation and in compliance with manufacturer-required maintenance procedures for the sampled SWH systems. The sample of the residences where the systems are installed will be selected by simple random sample method to meet 90/10 confidence/ precision following "Standard for sampling and surveys for CDM project activities and programme of activities", version 02.0.
Para 15: When the project proponent chooses to inspect annually, a 90% confidence interval and 10% margin of error shall be achieved for the sampling parameter.		

Among the monitoring parameters, sampling is applied to determine R_y. JQA raised CL22-26 regarding the sampling/monitoring plan for R_y as follows based on "Appendix 5: Recommended evaluation criteria for DOE Validation" in "Standard for sampling and surveys for CDM project activities and programme of activities" (Version 02) (note that "General guidelines for sampling and surveys for SSC project activities", which is drawn upon by Para 14 of AMS-I.J., was superseded by this standard at EB65).

CL22: The sampling plan for R_y does not indicate whether the sampling frame will be kept, and that random numbers will be generated and these random numbers will then be used to select the sample.

Resolution: The following descriptions were provided in E.7.2. of the PoA-DD:

- The ECC will select samples randomly using random number tables.
- The sampling frame which is the database including the information of all SWH systems under a CPA will be kept for a period of at least two years after the crediting

period of the PoA.

CL23: It is not clear how the staff of the ECC confirm whether: 1) SWH is operational; and 2) SWH is in compliance with manufacture-required maintenance procedures with respect to the monitoring of R_y.

Resolution: The ECC staff will check the following items at the annual inspection by using checklist included in "SWHPOA-15: Procedure of annual inspection" **(Ref. 10)**:

- If the temperature of hot water generated by the SWH system is sufficient (through interview with the SWH system owner).
- If the amount of hot water generated by the SWH system is sufficient (through interview with the SWH system owner).
- If the SWH system has not had any problem during 1 year (through interview with the SWH system owner).
- Annual maintenance records from the SWH distributor.
- If the vacuum tube or flat plate is maintained clean.

Through the check of above items, the ECC staff will be able to confirm 1) and 2) sufficiently.

CL24: It is not clear what questions the staff of the ECC will make when they visit the randomly selected households for monitoring of R_y. It is also to be confirmed whether the questions could be subject to respondent error, measurement error or bias in answers.

Resolution: The ECC staff will make the following three questions to system owners at the time of annual inspection **(Ref. 10)**:

- The temperature of hot water generated by the SWH system is sufficient
- The amount of hot water generated by the SWH system is sufficient
- The SWH system has not had any problem during 1 year.

Since these questions are very simple, JQA considers that the questions are not subject to respondent error due to sensitivity or lack of recall, or subject to measurement error. Bias in the answers is also not expected.

CL25: QA/QC strategy for sampling of R_y including a procedure for defining outliers and under what circumstances outlier data/measurements may be excluded and/or replaced is to be clarified.

Resolution: The sampling of R_y is aiming to check if a SWH system is operational or not and thus no outlier is expected.

CL26: The proposed skill sets, qualifications and experience of the personnel to be engaged to conduct sampling are to be confirmed.

Resolution: The persons who conduct sampling are the employees of the ECC and will take training every year before the implementation of annual inspection. Details of

training are specified in “SWHPOA -05 Training procedures” **(Ref. 10)**.

Through the resolution of these CLs, JQA confirmed that the sampling plan for R_y satisfies all evaluation criteria “Appendix 5: Recommended evaluation criteria for DOE Validation” in “Standard for sampling and surveys for CDM project activities and programme of activities”.

As described in E.7.2 of the PoA-DD, all information required by “Appendix 3: Recommended outline for a Sampling Plan” in “Standard for sampling and surveys for CDM project activities and programme of activities” (Version 02.0) is provided as follows:

(a) Sampling Design:

(i) Objectives and Reliability Requirements: The objective of the sampling is determining the rate of SWH systems “R_y ” that are demonstrated to be operational and in compliance with manufacture-required maintenance procedures during the crediting period, and with a 90/10 confidence/precision.

(ii) Target Population: The target population is all SWH systems included in a CPA.

(iii) Sampling Method: Simple random sampling is to be used for the project.

(iv) Sample Size: The sample size (n) is calculated using the following equation based on the “Best practice examples focusing on sample size and reliability calculations”, version 01.0 for each CPA:

(v) Sampling Frame: The sampling frame is the database including the information of all SWH systems under a CPA.

(b) Data:

(i) Field Measurements: The ECC will select samples randomly using random number tables from the database every 12 months for each CPA. The assigned staff of the ECC will visit the households that have sample SWH systems to confirm 1) that SWH is operational, and 2) in compliance with manufacture-required maintenance procedures. When the SWH system satisfies both requirements, it is identified as “Success”. The result “Success/Fail” will be recorded in the database.

(ii) Quality Assurance/Quality Control: In case the responses cannot be obtained from some sampled households, the additional samples should be selected using random number tables to collect the result from n SWH systems. The proportion “R_y” will be calculated after the all n results are recorded in the database.

The population of a CPA in the PoA is domestic SWH systems installed in the HCMC and 21 provinces in the south of Viet Nam under the ECC’s subsidy program for the specific CPA. Although the proposed PoA include two types of projects in a CPA, namely, retrofit projects (SWH projects that replaces existing EWH systems in existing facilities) and new construction projects (SWH projects installed in new facilities and SWH projects installed in existing facilities prior to the project implementation, do not have installed water heating systems), sub-grouping of the population by the project type is considered to be unnecessary since the monitoring of electricity consumption by existing EWH systems are not required based on “SSC_560: Clarification on the auxiliary heating system under AMS-I.J”, namely, “The SSC

WG agreed to clarify that electricity demand for auxiliary heating demand does not need to be considered as leakage. This is because the stipulated energy savings values of 300 and 450kWh/m² per year do include consideration of electricity (or fossil fuel) demand for auxiliary heating of water." and thus monitoring parameter for the retrofit projects and the new construction projects are completely the same. R_y, the percentage of SWH systems operating and in compliance with manufacture-required maintenance procedure, would not likely to be different between the retrofit projects and new construction projects since SWH systems are new technology for both of them and the possibility of occurrence of failure or malfunction of SWH systems would not depends on the project type. On the other hand, the eligibility criteria 3-8 define technological requirements for SWH systems installed by the PoA and thus technological feature of SWH systems installed by the PoA is rather homogeneous. In addition, climate conditions such as the temperature and precipitation, and their seasonal fluctuation pattern are homogeneous within the PoA boundary. Therefore, JQA considers that it is not necessary to divide the population to sub-populations or clusters, and simple random sampling is considered to be most suitable to a CPA in the proposed PoA.

As described in E.7.1. of the PoA-DD, R_y is planned to be monitored annually so as to achieve 90% confidence interval and 10% margin error. JQA confirms this sampling plan complies with Para 14 and 15 of AMS-I.J. To determine the sample size of each CPA, CME applies the following equation as described in E.7.2. of the PoA-DD based on Para 16 of "Best practices examples focusing on sample size and reliability calculations" (version 01.0).

$$n \geq \frac{1.645^2 NV}{(N-1)\times 0.1^2 + 1.645^2 V}$$

Where:

$$V = \frac{p(1-p)}{p^2}$$

n: Sample size
N: Total number of households
p: Our expected proportion
1.645: Represents the 90% confidence required
0.1: Represents the 10% relative precision (0.1*0.5 = 0.05 = 5% points either side of p)

According to Para 23 of "Best practices examples focusing on sample size and reliability calculations", when population sizes are large (or infinite), then an approximate equation can be used, which ignores the actual size of the population (N). On the other hand, according to Para 24 of the best practice examples, since the exact equation can be easily calculated, it is recommended that the exact equation be used in preference to the approximate one. It avoids having to decide whether the population size is large enough for it to be possible to use the approximate equation.

As defined by Criterion 15, the maximum total collector area of a CPA based on the microscale threshold is 21,428 m^2, which is equivalent to 10,352 SWH systems when applying the average collector area of 2.07m^2 provided in Annex 3 of the PoA-DD. Meanwhile, only 100 SWH systems are planned to be installed under the first real case CPA included in the PoA (CPA-1) **(Ref. 3)**. CME/PPs selected to apply the exact equation for estimation of sample size of R_y and JQA considers the approach is appropriate and complies with the requirements of the best practice example.

Through the resolution of above CLs, JQA has confirmed that the monitoring and sampling plan for a CPA complies with AMS-I.J. as well as "Standard for sampling and surveys for CDM project activities and programme of activities".

2) Implementation of the monitoring and sampling

E.7.2 of the PoA-DD describes the monitoring procedure as follows:

1) The ECC will keep a record of the number, location, type, the installation date, and owner of each SWH system under a CPA.
2) The SWH system distributors will inspect and undergo acceptance testing (commissioning) for proper operation in compliance with manufacturer specifications within three months of installation of each SWH system. The result of acceptance testing shall be sent to the ECC. The ECC will record the result of acceptance testing for each SWH system in the database.
3) The ECC will conduct an annual inspection to check the proper operation and in compliance with manufacturer-required maintenance procedures for sampled SWH systems. The sample of the residences where the systems are installed will be selected by simple random sample method to meet 90/10 confidence/precision following "Standard for sampling and surveys for CDM project activities and programme of activities", version 02.0.

Regarding the step 1), JQA reviewed "SWHPOA-DATA Database of the PoA" **(Ref. 12)** in which a record of each SWH system under a CPA were going to be kept. A worksheet is created per CPA and data of all SWH systems included in a CPA are summarized in a worksheet. JQA confirms that the following data will be recorded for each SWH system:

- Registration Number
- Voucher Number
- Invoice Number
- Name of customer
- Date of Birth (DD/MM/YYYY)
- Address on ID card
- Number of ID card
- Date of Issuance of ID Card (DD/MM/YYYY)
- Telephone Number

- Address to install SWH
- District
- Name of Distributor
- Type of SWH system
- Flat plate/ Evacuated Tube
- Tank Size (L)
- Collector Size (m^2)
- Subsidy Payment Date (DD/MM/YYYY)
- SWH System Installation Date (DD/MM/YYYY)
- Result of Acceptance Testing
- Sampled for Double Check
- Result of Double Check
- Sampled for Annual Inspection
- Result of Annual Inspection
- Date of Annual Inspection (DD/MM/YYYY)
- 1^{st} Crediting Period
- Days installation in the 1^{st} Crediting Period
- Aggregated Collector Area

Through the step 1), a record for parameter N, $A_{x,y}$, and $D_{x,y}$ for each SWH system included in a CPA is collected and archived by the ECC.

Regarding the step 2), JQA reviewed "SWHPOA-12: Check list for SWH system installation (Acceptance testing)" **(Ref. 10)**, which were to be recorded by the registered SWH distributors and reported to CME (The Training and Communication Center). JQA confirms that the following data will be recorded in the check list:

- Customer Information (Name, Address, Telephone Number and Fax Number)
- Product Information (Installation Date, Brand Name, Type of SWH systems, Number of systems installed, Invoice Number, Certification Number and Voucher Number)
- Acceptance test check item
  - Location where SWH system was installed
  - There is no shading of the SWH system from 10 AM to 14 PM.
  - The orientation of the solar collector is in between +/-45 of due equator.
  - The tilt of the solar collector is less than 24°.
  - The heated water by the SWH system is used for domestic purpose only (e.g. bathing, cooking, clothes washing, etc).
  - There is no complaint from system owner 1 week after the installation (to check proper operation of the installed SWH system).
- Picture of SWH systems installed

Through the step 2), a record for parameter "Result of acceptance test" for each SWH system in a CPA is collected. The data is archived in "SWHPOA-DATA Database of the PoA" **(Ref.**

12) by CME (The Training and Communication Center).

Regarding the step 3), JQA reviewed "SWHPOA-15 Procedure of annual inspection" **(Ref. 10)**, to be recorded by CME. The documents provide detailed procedure for sampling and monitoring for R_y. Figure 1 summarizes roles and responsibilities of each department in the ECC and procedure for sampling and monitoring of R_y.

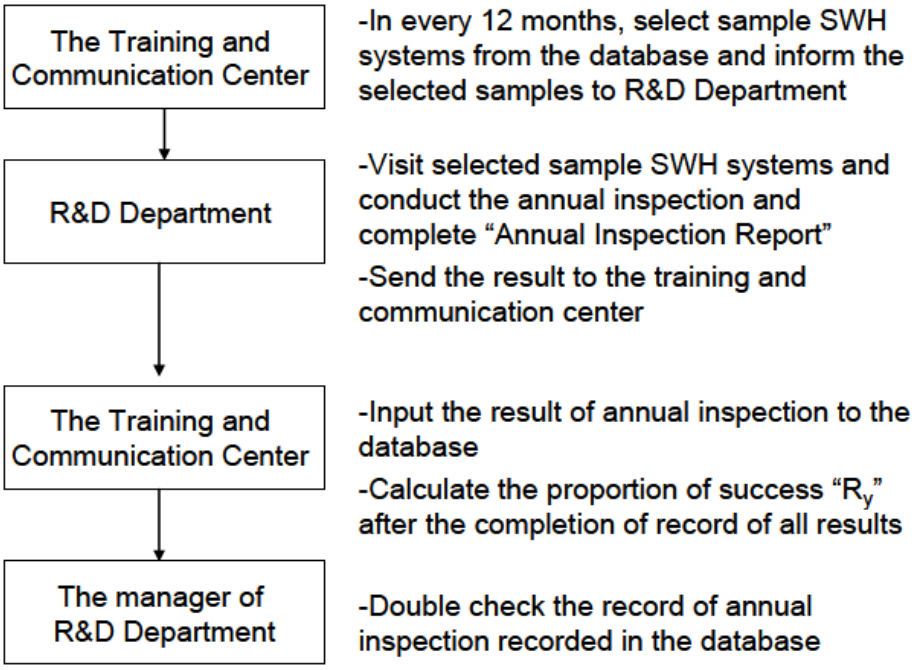

Figure 1 Procedures and role and responsibility for sampling and monitoring of R_y

JQA confirms that the following information will be recorded in "Annual Inspection Report", which consist SWHPOA-15 **(Ref. 10)**.

- Customer Information (SWH system sequential registration number CPA-XX-YYYY, SWH system owner's Name, Address, Telephone/Mobile/Fax Number, Installation Date, Brand Name, Type of SWH systems, Number of systems installed)
- Interview item to a SWH system owner
  - Temperature of hot water generated by the SWH system is sufficient
  - The amount of hot water generated by the SWH system is sufficient
  - The SWH system has not had any problem during 1 year.
- Check item
  - Confirmation of annual maintenance records from the SWH distributors
  - The evacuated tube or flat plate is maintained clean
  - There has been no problem occurred on the SWH systems during the year
  - Repair record if there has been any problem on the SWH system during the year
  - There is no shading of the SWH system from 10 AM to 14 PM.
  - The orientation of the solar collector is in between +/-45 of due equator.
  - The tilt of the solar collector is less than 24°.

- Picture of SWH systems installed

Through the step 3), a record for parameter R_y for each CPA is collected every year. The data is archived in "SWHPOA-DATA Database of the PoA" **(Ref. 12)** by CME (The Training and Communication Center).

JQA confirms that the monitoring plan is in line with AMS-I.J. and the ECC is able to implement the monitoring plan for a CPA and the means of implementation including data management and QA/QC are satisfactory.

Therefore, the monitoring plan for a CPA satisfies Para 123 of VVM.

3.6 Sustainable development

It is described in A.2 of the PoA-DD that the proposed project will contribute to sustainable development of the host country in following aspects:

- Economic dimension - Current electricity supply is not enough to meet projected demand especially in the southern region of Viet Nam. The Vietnamese Government is promoting energy conservation as well as expanding the electricity supply capacity in order to support the rapid development of the economy. The proposed PoA will reduce energy consumption for water heating for household use in the south of Viet Nam and help secure the electricity supply required for the country's continued economic growth.
- Environmental dimension - The PoA reduces electricity consumption and thereby reduces the amount of GHGs produced by fossil fuel combustion at the national electricity grid. Through promotional activities in the mass media such as television and newspaper advertisements to enhance the use of SWH systems, the ECC will communicate the economic and environmental benefits of SWH systems. This publicity will raise awareness of renewable energy and energy conservation among the Vietnamese people.
- Social dimension - The use of electric water heaters in the bathroom sometimes causes electric shock, which is a common concern for people who have small children. The introduction of SWH systems will provide a safe and steady supply of hot water and hence increase the quality of life of people in Viet Nam.

As described in Section 3.1, JQA confirmed the validity of LoA from DNA of Viet Nam **(Ref. 5)**. The LoA describes "The Programme of Activities contributes to sustainable development in Viet Nam."

JQA confirms that the proposed project activity satisfies Para 126 of VVM.

3.7 Local stakeholder consultation

As described in D.1 of the PoA-DD, the local stakeholder consultation was conducted at PoA level. Through desk review and on-site assessment, JQA confirmed that CPAs to be included in the proposed PoA had common features with regard to technology, target

population/area, implementation structure, etc. In addition, the proposed PoA has basically less negative social impacts. Therefore, JQA considers that the LSC at the PoA level is appropriate.

As described in D.2. of the PoA-DD the ECC collected comments from local stakeholders from August to December 2008 as part of their pilot project in 2008. The ECC interviewed local residents HCMC, Binh Duong Province, Dong Nai Province, Baria-Vungtau Province and Lam Dong Province, which was the target area of the pilot project **(Ref. 14)**.

Regarding the number of the stakeholders interviewed, JQA raised CL27 as follows:

> **CL27:** Through the review of the questionnaire **(Ref. 35)**, JQA confirmed that the only 55 people answered among 60 people asked in the local stakeholder consultation. Correct information is to be provided in Section D of the PoA-DD.
>
> **Response:** The description is corrected to "55 people".

No negative comments were received on the proposed PoA in the stakeholder consultation process. JQA also interviewed two families who participated in the pilot project during the on-site assessment and confirmed that they had no negative opinion on the pilot project and welcomed the proposed PoA. Therefore, change of the PoA design in response to the local stakeholder consultation is not necessary.

JQA confirms that the stakeholder consultation was held in transparent manner and the ECC took due account of the stakeholders comments. Therefore, the proposed PoA satisfies Para 129 of VVM.

3.8 Environmental analysis

As described in C.1 of the PoA-DD, the environmental analysis is conducted at PoA level. Through desk review and on-site assessment, JQA confirmed that CPAs to be included in the proposed PoA had common features with regard to technology, target population/area, implementation structure, etc. In addition, the proposed PoA has basically less negative environmental impacts. Therefore, JQA considers that the environmental analysis at the PoA level is appropriate.

As described in C.2 of the PoA-DD, no negative environmental impacts are expected through the implementation of the proposed PoA. As described in A.2. of the PoA-DD, the proposed PoA is expected to bring about environmental benefits such as reduction of electricity consumption and dissemination and awareness raising regarding energy savings at communities and homes.

According to Decree No. 21/2008/ND-CP described in C.1 and C.3 of the PoA-DD, EIA is not required to the installation of domestic SWH systems in households. JQA interviewed officers in Department of Natural Resources and Environment (DONRE) during the on-site assessment and confirmed that the information was correct. Regarding the Vietnamese EIA

regulation, JQA raised CL28 as follows:

CL28: CME is request to describe the effective EIA legislation in the PoA-DD. Through the interview with the officers in DONRE, JQA confirmed that Circular No.490/1998/TT-BKHCNMT **(Ref. 36)** is replaced with new law and not valid.

Response: The effective EIA legislation, Decree No. 21/2008/ND-CP **(Ref. 37)**, is described in C.1. of the PoA-DD instead of Circular No.490/1998/TT-BKHCNMT.

Appendix I of the Decree No. 21/2008/ND-CP (Decree No. 21/2008/ND-CP of February 28, 2008 amending and supplementing a number of articles of The Government's Decree No. 80/2006/ND-CP dated August 9, 2006, detailing and guiding the implementation of a number of articles of The Law on environmental protection) provides 102 types of projects subject to making EIA report. Through the review of the list, JQA has confirmed that the installation of residential SWH systems is not listed in it.

JQA confirms that the environmental analysis provided in the PoA-DD is appropriate and EIA is not required by the host Party legislation. Therefore, the project satisfies Para 132 of VVM.

3.9 Project design of SSC CDM project activity

3.9.1. SSC eligibility

As described in Section 3.4.1. of this report, the proposed PoA consist of one or more microscale projects as CPAs. Therefore, CPAs to be included in the proposed PoA are microscale project activities up to five megawatts, and thus they naturally would not exceed SSC limit of 15 MWel or 45 MWth. Therefore, the project satisfies Para 135 of VVM.

3.9.2. Debundling

Section II. GUIDANCE FOR DETERMINING THE OCCURRENCE OF DEBUNDLING UNDER A PROGRAMME OF ACTIVITIES (PoA) in "Guidelines on assessment of de-bundling for SSC project activities" (Version 03.0) defines that:

"10. If each of the independent subsystems/measures (e.g., biogas digester, solar home system) included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the methodology applied, then that CPA of PoA is exempted from performing de-bundling check i.e., considering as not being a de-bundled component of a large scale activity."

The independent subsystem for the proposed PoA is SWH system. As described in A.4.4.1 of the PoA-DD, the largest SWH system with the collector area of 8 m^2 is equivalent to just 5.6 kWth (= 8m^2 * 700 Wth/m^2 * 10^{-3}) based on the Para 4 (d) of "General guidelines to SSC CDM methodologies". Since the independent subsystem for the proposed PoA is far less than 450kWth (= 45,000kWth * 0.01), SSC-CPAs under the proposed PoA are exempted from the debundling check. Therefore, the proposed PoA satisfies Para 136 (c) of VVM.

3.10 Project design of CDM programme of activity

3.10.1. Operational and management arrangement for the PoA

According to CDM-SSC-PoA-DD (Version 01), the following information is required to be reported in A.4.4.1 of the PoA-DD:

(i) A record keeping system for each CPA under the PoA
(ii) A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA
(iii) The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity
(iv) The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA

Regarding (i) and (ii) above, JQA raised CL29 as follows:

CL29: Regarding "(i) A record keeping system for each CPA under the PoA", the following information is to be provided:
- Documents/agreement between the ECC and SWH system providers which show the role and responsibilities of them with respect to the PoA
- List of the SWH system providers registered under the PoA.
- Measure/procedure to invite participants of the programme.
- Procedure (flowchart) of application of subsidy for SWH system installation.
- Guidelines, forms, tickets, etc. used by the ECC and residents for application/receipt of subsidy for SWH system installation.

Regarding "(ii) A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA", the specific system/procedure adopted by the ECC is to be confirmed.

Resolution: The ECC provided the following information and JQA confirmed that the record keeping system for each CPA and the system/procedure to avoid double accounting developed by ECC were sufficient.
(i) The "Standard Operational Procedures" (SOP) for the PoA **(Ref. 10)** developed by the ECC includes information regarding the record keeping system for each CPA under the PoA as follows:
- "SWHPOA-02: Role and Responsibly" **(Ref. 10)** describes the organizational structure and the roles and responsibilities of the Director, the R&D Department (Manager and Staff), the Financial Department (Manager and Staff) and the Training and Communication Center of the ECC. The draft contract format between the ECC and a SWH system provider (Gia Nam Co., Ltd.) **(Ref. 38)** is also developed by the ECC and rights and responsibility of the ECC and a SWH system provider is also

defined in it.

- Registration of SWH system provider will be done at each CPA. For CPA-1, only Gia Nam Co., Ltd. is registered as a SWH provider **(Ref. 39)**.
- "SWHPOA-09: Announcement of CPA-XX" **(Ref. 10)** defines the contents of announcement of a CPA. The ECC plans to invite participants to a CPA through media campaign including newspaper, TV, radio and the ECC's website.
- "SWHPOA-03: Standard Operating Procedure" **(Ref. 10)** defines the procedure of subsidy application and provision.
- "SWHPOA-11: Voucher" **(Ref. 10)** provides the voucher used for the application of subsidy.

(ii) Double accounting is avoided by pre-installation check by SWH system provider according to "SWHPOA-10 Check list for SWH system installation (pre-check by SWH distributors)" **(Ref. 10)**. The sequential registration number is also given to each SWH system installed under a CPA of the PoA in the database "SWHPOA-DATA: Database for the PoA" **(Ref. 12)**.

Regarding the name of the organization and the role and responsibilities for the PoA, CL30 was raised as follows:

CL30: Name of the organization and the roles and responsibilities described in Section A.4.4.1 of the PoA-DD is not consistent with "SWHPOA-02: Role and Responsibility" **(Ref. 10)**.

Resolution: The descriptions in the A.4.4.1 in the PoA-DD as well as SWHPOA-02 were corrected so as to reflect the actual name of the organization and the roles and responsibilities in the ECC.

In the following section, each (i) - (iv) is discussed.

1) Record keeping system for each CPA under the PoA

As describe in A.4.4.1 of the PoA-DD and Section 3.5.2. of this report, database is set up for each CPA. According to "SWHPOA-03: Standard Operating Procedure" **(Ref. 10)** a CPA is developed and its database is created based on the following procedure:

1. Design a CPA "Installing Solar Water Heating Systems in the South of Viet Nam-XX (CPA-XX)"

1-1 "SWHPOA-04: Description of the CPA" is completed.

1-2 The training is provided to the ECC staff in charge of the eligibility check of a CPA before starting a new CPA following the training procedure (SWHPOA-05 Training Procedures).

1-3 "SWHPOA-06: Check list of technical specification of the SWH systems under the CPA" is completed.

1-4 "SWHPOA-07: Eligibility Criteria Check List for the inclusion of CPA" is completed.

1-5 The ECC contracts with selected SWH distributors for the implementation of CPA-XX

following the instruction (“SWHPOA-08: Contract with SWH distributors”)

2. Steps to provide subsidy

2-1 The ECC announces CPA-XX to the public through the media/SWH distributor participating in the CPA-XX (“SWHPOA-09: Announcement of CPA-XX”).

2-2 When the SWH system distributors identifies customers who show interest in purchasing SWH systems and receiving subsidy from the ECC, the SWH system distributors explain requirements to receive subsidy and give guidance about the procedure to receive subsidy. Upon the agreement from the customers, the SWH system distributor will continue the following process.

2-3 Staff of the SWH system distributors will visit the customers’ houses to check whether the eligibility criteria are satisfied based on “SWHPOA-10: Check list for SWH system installation” (pre-check by SWH distributors).

2-4 The SWH system distributors provide voucher of the ECC subsidy program as well as the invoice to the customers. The SWH system distributors and customers sign on the voucher (SWHPOA-11: Voucher).

2-5 Staff of SWH system distributors visits customers to install SWH systems. The staff of SWH system distributors completes the acceptance testing check list (SWHPOA-12: Check list for SWH system installation (Acceptance testing)).

2-6 The SWH system distributors send the result of acceptance testing to the ECC within 2 weeks after installation.

2-7 The customers visit the ECC office (Training and Communication Center) and show the following documents to receive subsidy

- Invoice from SWH distributor
- Voucher of the ECC subsidy program
- ID

2-8 The staff of the Training and Communication Center of the ECC checks the documents provided by the customers and prepare a internal approval application (SWHPOA-13 Internal approval application) to be submitted to the Financial Department of the ECC.

2-9 The Financial Department checks the internal approval application.

2-10 The Manager of the Financial Department reviews and signs the internal approval application.

2-11 The Director of the ECC reviews and signs the internal approval application.

2-12 Upon the approval, the internal approval application is sent to the Financial Department. Accounting staff of Financial Department send money to the staff of the Training and Communication Center.

2-13 The staff of the Training and Communication Center contact with the customers whose applications for the subsidy are accepted, and provide subsidy to the customers. The receipts (SWHPOA-14: Receipt of subsidy) are issued for the subsidy provided.

3. Record of the SWH systems which received subsidy

3-1 The staff of the Training and Communication Center cross-check the result of

acceptance testing with the receipt of the subsidy.

3-2 The staff of the Training and Communication Center input the relevant data into the database (SWHPOA-DATA) and gives each SWH system a sequential registration number (CPA-XX-YYYY).

3-3 The Manager of R&D Department double checks the record in the database.

Through the above mentioned procedure, information of each household as well as SWH system included in a CPA is collected and archived in the database. Refer to Section 3.5.2 of this report regarding the monitoring and record keeping of each CPA.

JQA confirms that the description provided in the PoA-DD is correct and the record keeping system for each CPA under the PoA is fully established by the ECC.

2) A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA

As described in CL29, double accounting will be avoided by pre-installation check by SWH system provider according to "SWHPOA-10: Check list for SWH system installation (pre-check by SWH distributors)" **(Ref. 10)**. The sequential registration number is also given to each SWH system installed under a CPA of the PoA in the database, "SWHPOA-DATA: Database for the PoA" **(Ref. 12)**. As described in A.4.4.1. of the PoA-DD as well as Section 3.5.2 of this report, the database includes detailed information on each participating household as well as SWH system and thus double accounting among CPAs in the proposed PoA would not likely to occur.

On the other hand, inclusion of a SWH system that has been already registered either as a CDM project activity or as a CPA of another PoA would not likely to occur because only the SWH systems which received subsidy from the ECC according to the procedure described 1) above will be included in the database.

Therefore, JQA considers that the system/procedure to avoid double accounting developed by the ECC is sufficient.

3) The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity

Refer to Section 3.9.2. of this report. CPAs included in the proposed PoA are exempted from the de-bundling check.

4) The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA

As described in A.4.4.1 of the PoA-DD, the ECC is not only the sole CME, but also the sole CPA implementer for all CPAs to be included in the PoA. Therefore, the ECC are always aware of and have agreed that their activity is being subscribed to the PoA.

In A.4.4.1 of the PoA-DD, the organizational structure and the roles and responsibilities of the Director, the R&D Department (Manager and Staff), the Financial Department (Manager and Staff) and the Training and Communication Center of the ECC are described. JQA confirms that the information is consistent with "SWHPOA-02: Role and Responsibility" **(Ref. 10)**. Figure 2, quoted from A.4.4.1 of the PoA-DD, shows the comprehensive management system/structure of the CME for the PoA.

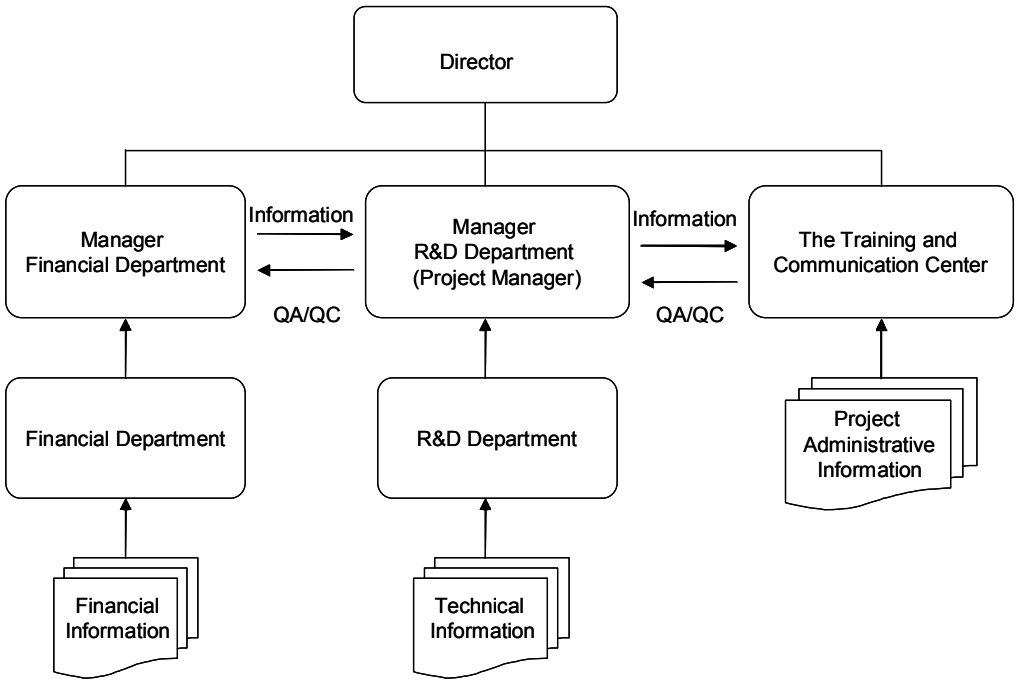

Figure 2 Operational and management arrangement of the CME for the PoA

JQA considers that the operational and management arrangement established by the ECC is clear and sufficient to control all records and information related to the implementation of individual CPAs, and to ensure each CPA is being operated in accordance with the specific requirements of the programme. Therefore, the proposed PoA satisfies Para 166 of VVM.

3.10.2. Eligibility criteria for CPAs

According to Para 14 of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0), the eligibility criteria shall cover minimum of the followings:

(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;
(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);
(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications;
(d) Conditions to check the start date of the CPA through documentary evidence;

(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;
(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A above;
(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;
(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;
(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid connected/off-grid) and distribution mechanisms (e.g. direct installation);
(j) Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;
(k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;
(l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.

Regarding these requirements, JQA raised CAR01 and CL31-36 as follows:

CAR01: Regarding the applicability criterion “A CPA to be included in the PoA shall meet the applicability conditions of the methodology AMS-I.J. The compliance with applicability conditions is justified in the Section B.5.2 of the CPA-DD of a CPA.”, the reference to Section B.5.2 of the CPA-DD is not correct because only the conditions to apply "stipulated energy saving method" for calculation of emission reductions are described in Section B.5.2 of the CPA-DD.

Response: The relevant criterion was revised to “Criterion 12. The SWH systems installed under a CPA are residential SWH systems.” and the wrong reference was removed.

CL31: Regarding the requirement for eligibility criteria “(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)”, CME is requested to clarify the registration number is labelled also on installed SWHs or only recorded in the database, and how the stated measures effectively prevent double counting.

Response: The registration number will not be labelled. However, the ECC records detailed information of each SWH system as well as household in “SWHPOA-DATA: Database of the PoA” **(Ref. 12)** and thus double accounting would not likely to occur (refer to Section 3.10.1 of this report). The eligibility criterion was revised from “A CPA is uniquely identified and the SWH systems installed under each CPA are to be uniquely identified with a sequential registration number.” to “Criterion 2. The database is set for a CPA and a sequential registration number will be assigned for the SWH systems under a

CPA." to improve clarity.

CL32: Regarding the requirement for eligibility criteria "(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications", CME is requested to clarify why the stated criteria in the PoA-DD do not include conditions specified in (ii), (iv) and (v), Para 10 (c) of AMS-I.J., while the remaining (i), (iii) and (vi) are included.

Response: Para 10 (c) (ii) and (v) of AMS-I.J. were added as new eligibility criteria (Criteria 9 and 10). Para 10 (c) (iv) of AMS-I.J. is justified *ex-ante* in E.6.1 and Annex 3 of the PoA-DD.

CL33: Regarding the eligibility criterion "The SWH systems under a CPA comply with technical requirements for SWH systems TCVN8251:2009 announced by the Ministry of Science and Technology, Viet Nam **(Ref. 15)**" provided in A.4.2.2. of the PoA-DD, TVCN 8251:2009 could not be considered as equivalent criteria of OG100[18] because its requirements includes only thermal absorber efficiency, thermal storage capacity and durability.

Response: The following three criteria given in Para 10 (c) (vi) of AMS-I.J were added to the eligibility Criterion 7 in addition to the compliance with TVCN 8251:2009, in order to address the methodological requirement:

- Unglazed collector must be stabilized against UV degradation;
- Glazed collector must have at least one glass cover and be insulated on the sides and back to achieve a loss coefficient not more than 5 W/m2C;
- Evacuated tube collector must maintain vacuum insulation between absorber and ambient.

CL34: Regarding the requirement for eligibility criteria "(d) Conditions to check the start date of the CPA through documentary evidence", CME is requested to specify what kind of "documentary evidence" is used to determine the start date of a CPA.

Response: The contract between the ECC and the SWH system distributors is used as the evidence. The relevant criterion is revised from "The start date of a CPA is presented through documentary evidence. The start date of a CPA is not prior to 04/06/2009 on which the validation of the PoA is commenced." to "Criterion 11. The start date of a CPA is presented through the contract between the ECC and the SWH system distributors who participate in a CPA." to improve clarity.

CL35: Regarding the requirement for eligibility criteria "(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance", CME is requested to demonstrate that a CPA under the proposed PoA will not receive any public funding from Annex I parties. Source of funding

[18] www.solar-rating.org

of subsidy for the PoA is also to be explained.

Response: Source of funding of subsidy for installation of SWH systems is the ECC's own budget. "Criterion 14. A CPA under the PoA will not receive any public funds resulting from official development assistance from Parties included in Annex I to the Convention." is newly created and is checked through completing "SWHPOA-07: Eligibility Criteria Check List for the inclusion of CPA" **(Ref. 10)** at the planning stage of a CPA by the ECC. Since the cost of SWH systems not covered by the ECC's subsidy is paid by the households which participate in a CPA, there is no risk of the use of the ODA for such payment by households.

CL36: Regarding the requirement for eligibility criteria "(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid connected/off-grid) and distribution mechanisms (e.g. direct installation)", there is no criterion to exclude residences that are temporary or seasonal housing from the target group. Such residences are required to apply 300 kW/yr as stipulated energy savings and are inconsistent with the description of E.6.3. of the PoA-DD.

Response: To address this issue, "Criterion 13. The SWH systems under a CPA will be installed to the residential buildings which are not temporary or seasonal housings." was newly created.

Through the resolution of the above CAR and CLs, the total of fifteen eligibility criteria are finally defined as described in A.4.2.2. of the PoA-DD. JQA confirmed that they satisfied the coverage required by Para 14 of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0) as shown in Table 6.

Table 6 Assessment of the eligibility criteria

Para 14 of PoA Standard	Relevant eligibility criteria	Validation Comment
(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	Criterion 1. A CPA is located in the south of Viet Nam composed of Ho Chi Minh City and 21 provinces described in the Section A.4.1.2. of CDM-SSC-PoADD.	Criterion 1 defines the requirement relevant to the geographical boundary of a CPA and is consistent with the geographical boundary set in the PoA. Time-induced boundary is not relevant to the proposed PoA.
(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	Criterion 2. The database is set for a CPA and a sequential registration number will be assigned for the SWH systems under a CPA.	Criterion 2 requires setting up a database and giving sequential registration number to each SWH system to avoid double counting. This criterion is considered to

Para 14 of PoA Standard	Relevant eligibility criteria	Validation Comment
		be effective to avoid double counting (refer to Section 3.10.1. of this report for details).
(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications;	Criterion 3. The SWH systems under a CPA are purchased from and installed by distributors who are registered under the installation program of the ECC. Criterion 4. The size of collector surface area of the SWH system installed under a CPA do not exceed 8 m^2 of a threshold of very small residential SWH systems determined in the methodology AMS-I.J. Criterion 5. The SWH systems under a CPA are systems with either flat plate or evacuated tube collectors. Criterion 6. The SWH systems under a CPA are passive systems without a forced circulation system or auxiliary heat source. Criterion 7. The SWH systems under a CPA comply with technical requirements for SWH systems TCVN8251: 2009 announced by the Ministry of Science and Technology, Viet Nam and the requirements given below: - Unglazed collector must be stabilized against UV degradation; - Glazed collector must have at least one glass cover and be insulated on the sides and back to achieve a loss coefficient not more than 5 W/m2C; - Evacuated tube collector must maintain vacuum insulation between absorber and ambient. Criterion 8. The volume of storage tanks of the SWH systems under a CPA is at	Criteria 4, 7, 8, 9 and 10 collectively satisfies all criteria to apply the stipulated energy saving method in calculation of emission reductions defined in Para 10 (c) of the AMS-I.J. Criteria 5 and 6 are set out by CME which is relevant to the specifications of SWH systems. Criterion 3 is comprehensive criterion which indirectly covers the criteria 4-10 as the SWH system providers whose products satisfies criteria 4-10 are only eligible to be registered under a CPA. JQA confirms that the specifications of technology including the level and type of service, performance specifications including compliance with testing/certifications are satisfactory addressed by these eight criteria.

Para 14 of PoA Standard	Relevant eligibility criteria	Validation Comment
	least 50 litres per square meter of collector area. Criterion 9. The tilt and orientation of the solar collectors shall be+/-45 of due equator and a tilt +15 to -25 degrees of latitude. This requirement shall be ensured by the acceptance testing. Criterion 10. There must be no shading of the solar collectors between 10am to 2pm on the shortest day of the year at the time of installation. This requirement shall be ensured by the acceptance testing.	
(d) Conditions to check the start date of the CPA through documentary evidence;	Criterion 11. The start date of a CPA is presented through the contract between the ECC and the SWH system distributors who participate in a CPA.	Criterion 11 requires that the starting date is checked through documentary evidence, the contract between the ECC and the SWH system distributors who participate in a CPA. It complies with the definition of the start date, the earliest date at which either the implementation or construction or real action of a CPA begins, based on "Glossary of CDM Terms" (Version 06).
(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	Criterion 3. The SWH systems under a CPA are purchased from and installed by distributors who are registered under the installation program of the ECC. Criterion 12. The SWH systems installed under a CPA are residential SWH systems. Criterion 13. The SWH systems under a CPA will be installed to the residential buildings which are not temporary or seasonal housings. Criterion 15. Total size of collector	As described in A.4.2.2. of the PoA-DD, Criterion 12 is the condition to ensure the compliance with Para 1 of AMS-I.J. Para 2 of AMS-I.J. is covered by Criterion 3 as the registered distributors are allowed to install SWH systems only for projects satisfies (a), (b) (i) and (b) (ii) based on "SWHPOA-10: Check list for SWH system

Para 14 of PoA Standard	Relevant eligibility criteria	Validation Comment
	surface area of the SWH systems installed under a CPA does not exceed 21,428 m^2 of a threshold of microscale project activities throughout the crediting period of a CPA.	installation" **(Ref. 10)** Para 3 of AMS-I.J. is not relevant as Criterion 12 specifies that only residential systems are included in a CPA. Para 4 of AMS-I.J. is covered by Criterion 15. Satisfaction of Para 5 of AMS-I.J. is demonstrated *ex-ante* as described Section 3.3.4. of this report. Criterion 13 is condition to apply 450 kWh/year/m^2 in the stipulated energy saving method. JQA confirms that applicability as well as other requirements in AMS-I.J. is addressed by Criteria 3, 12, 13 and 15.
(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A above;	Criterion 4. The size of collector surface area of the SWH system installed under a CPA do not exceed 8 m^2 of a threshold of very small residential SWH systems determined in the methodology AMS-I.J. Criterion 12. The SWH systems installed under a CPA are residential SWH systems. Criterion 15. Total size of collector surface area of the SWH systems installed under a CPA does not exceed 21,428 m^2 of a threshold of microscale project activities throughout the crediting period of a CPA.	As described in Section 3.4.1. of this report, a CPA under the proposed PoA is microscale project and the additionality is demonstrated based on "Guidelines for demonstrating additionality of microscale project activities" (Version 03.0) referred to in "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0). Criterion 15 is to satisfy the upper limit of the microscale project activities. Criteria 4 and Criteria 12 are set to satisfy Para 2 (c) (i) and (ii) of

Para 14 of PoA Standard	Relevant eligibility criteria	Validation Comment
		"Guidelines for demonstrating additionality of microscale project activities", respectively. JQA confirms that the demonstration of additionality is addressed by Criteria 4, 12 and 15.
(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	Not applicable. There are no eligibility criteria.	Local stakeholder consultation and environmental impact analysis are undertaken at PoA level. Therefore, criterion for (g) is not relevant.
(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	Criterion 14. A CPA under the PoA will not receive any public funds resulting from official development assistance from Parties included in Annex I to the Convention.	The subsidy provided to SWH system owners participate in a CPA under the PoA is sourced from the ECC's own budget. The ECC completes "SWHPOA-07: Eligibility Criteria Check List for the inclusion of CPA" **(Ref. 10)** at the planning stage of a CPA and confirms that no use of public funding from Annex I parties based on its budget.
(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid connected/off-grid) and distribution mechanisms (e.g. direct installation);	Criterion 12. The SWH systems installed under a CPA are residential SWH systems. Criterion 13. The SWH systems under a CPA will be installed to the residential buildings which are not temporary or seasonal housings.	Criteria 12 and 13 are developed to comply with applicability and other requirements of AMS-I.J. They also specify the target group of a CPA.
(j) Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved	Not applicable. There are no eligibility criteria.	As described in Section 3.5.1. of this report, CME selected verification method that does not use sampling but verifies each CPA. Therefore,

Para 14 of PoA Standard	Relevant eligibility criteria	Validation Comment
guidelines/standard from the Board pertaining to sampling and surveys;		criterion for (j) is not relevant.
(k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria and remains within those thresholds throughout the crediting period of the CPA;	Criterion 4. The size of collector surface area of the SWH system installed under a CPA do not exceed 8 m^2 of a threshold of very small residential SWH systems determined in the methodology AMS-I.J. Criterion 7. The SWH systems under a CPA comply with technical requirements for SWH systems TCVN8251: 2009 announced by the Ministry of Science and Technology, Viet Nam and the requirements given below: - Unglazed collector must be stabilized against UV degradation; - Glazed collector must have at least one glass cover and be insulated on the sides and back to achieve a loss coefficient not more than 5 W/m2C; - Evacuated tube collector must maintain vacuum insulation between absorber and ambient. Criterion 8. The volume of storage tanks of the SWH systems under a CPA is at least 50 litres per square meter of collector area. Criterion 9. The tilt and orientation of the solar collectors shall be+/-45 of due equator and a tilt +15 to -25 degrees of latitude. This requirement shall be ensured by the acceptance testing. Criterion 10. There must be no shading of the solar collectors between 10am to 2pm on the shortest day of the year at the time of installation. This requirement shall be ensured by the acceptance	Criterion 15 is condition to ensure that every CPA in aggregate meets the microscale threshold criteria. Criteria 4, 7, 8, 9 10 and 12 are conditions to apply the stipulated energy saving method, which ensures every CPA remain within the thresholds throughout the crediting period of the CPA.

Para 14 of PoA Standard	Relevant eligibility criteria	Validation Comment
	testing. Criterion 12. The SWH systems installed under a CPA are residential SWH systems. Criterion 15. Total size of collector surface area of the SWH systems installed under a CPA does not exceed 21,428 m^2 of a threshold of microscale project activities throughout the crediting period of a CPA.	
(l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.	Not applicable. There are no eligibility criteria.	As described in Section 3.9.2. of this report, CPAs under the PoA is exempted from the debundling check. Therefore, criterion for (l) is not relevant.

JQA confirms that these eligibility criteria covers every requirement provided in Para 14 (a)-(l) of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0), and are sufficiently objective, comprehensive and verifiable. Therefore, the established eligibility criteria satisfy Para 15-16 of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0).

Regarding the management system to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA, CME developed the management system covering the requirements provided in Para 17 (a)-(g) of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0) as shown in Table 7.

Table 7 Methodological requirements and monitoring plan for a CPA

Para 17 of the PoA Standard	Validation Comment
(a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their	According to A.4.4.1. of the PoA-DD and "SWHPOA-2: Role and Responsibility" **(Ref. 10)**, the Manager of the R&D Department has overall responsibility to ensure that a CPA meets eligibility criteria. Figure 3 shows who checks / double-checks each eligibility criterion in what stages of SOP based on "SWHPOA-3 Standard Operational

Para 17 of the PoA Standard	Validation Comment
competencies;	Procedure" **(Ref. 10)**. Competences of staff involved in the process of inclusion will be reviewed and ensured through the training before starting a new CPA based on "SWHPOA-5: Training procedures" **(Ref. 10)**.
(b) Records of arrangements for training and capacity development for personnel;	According to "SWHPOA-5: Training procedures" **(Ref. 10)**, before starting a new CPA, training is provided to staff of the Training and Communication Center and the R&D Department. At the training, the following procedures and documents are planned to be explained: - Description of the CPA (SWHPOA-04) - Eligibility criteria written in the PoA-DD and CPA-DD - Technical specification required in the SWHPOA-06 - Eligibility criteria documented in the SWHPOA-07 - The procedure to complete SWHPOA-06 and SWHPOA-07 - Role of each personnel who attend the training Training records shall be completed by the Manager of the R&D Department and sent to the Director of the ECC.
(c) Procedures for technical review of inclusion of CPAs;	As described in Figure 3 and "SWHPOA-2 Role and Responsibility" **(Ref. 10)**, the Manager of the R&D Department double-check the records in the database.
(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);	Refer to 2) of Section 3.10.1. of this report. The database for a CPA includes detailed information on each customer / SWH system and thus double accounting among CPAs in the PoA would not likely to occur. Inclusion of a SWH system that has been already registered either as a CDM project activity or as a CPA of another PoA also would not likely to occur because only the SWH systems which received subsidy from the ECC are included in the database.
(e) Records and documentation control process for each CPA under the PoA	As described in A.4.4.1. of the PoA-DD, a database will be set up for each CPA. Refer to Section 3.5.2 of this report regarding the information included in the CPA database. According to "SWHPOA-3 Standard Operational Procedure" **(Ref. 10)**, the staff of the Training and Communication Center input the data in the database after the cross-check between the result of the acceptance testing and the receipt of the subsidy. The Manager of R&D Department double check the database record. All monitoring data including all documents received from the SWH distributors and SWH system owners, the result of annual inspection, and database will be kept for a period of at least two years after the crediting period of each CPA.
(f) Measures for continuous improvements of the PoA	According to "SWHPOA-3 Standard Operational Procedure" **(Ref. 10)**, the internal audit to check the procedures, archived documents, and

Para 17 of the PoA Standard	Validation Comment
management system;	records in the database will be conducted at least once a year by the Manager of the R&D Department.
(g) Any other relevant elements.	Procedure for delivery of subsidy is also determined in “SWHPOA-3 Standard Operational Procedure” **(Ref. 10)**.

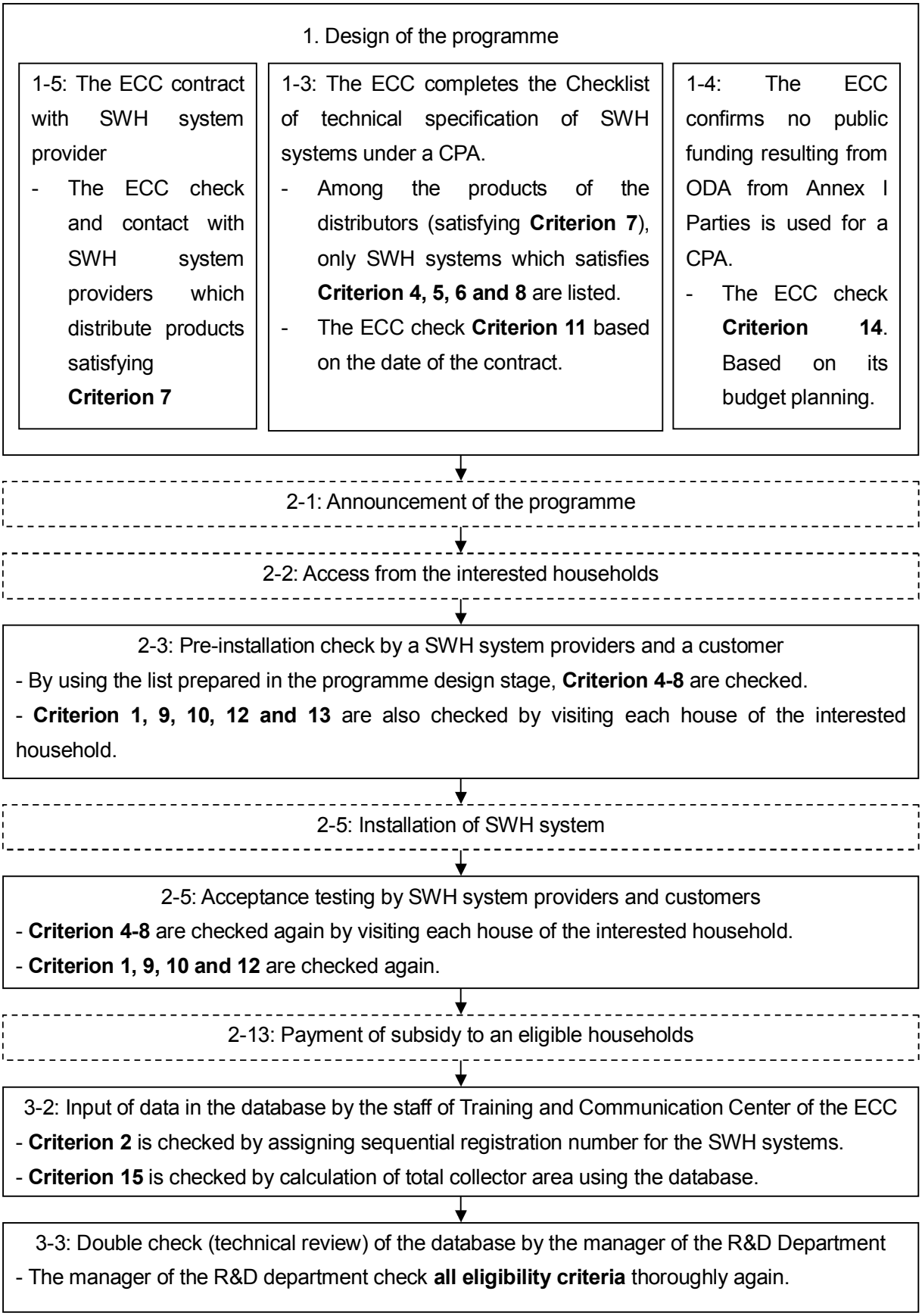

Figure 3 Process and responsibility of the eligibility check based on SOP

Through the review of eligibility criteria and the ECC's management system, JQA confirms

the proposed PoA satisfies Para 167 of VVM.

3.10.3. Consistency between PoA-DD and the PoA generic CPA-DD

According to Para 15 (d) of "Procedure 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), in addition to the validation requirements arising out of the modalities and procedures for a clean development mechanism, the validation by the DOE shall address the consistency between a PoA-DD and the PoA generic CPA-DD to be used for inclusion of a CPA in the registered PoA.

Regarding the consistency between the PoA-DD and the generic CPA-DD, JQA raised CAR02 as follows:

> **CAR02:** The information provided in the generic CPA-DD shall be consistent with the information provided in the final PoA-DD.
>
> **Resolution:** The generic CPA-DD was revised based on final design of the PoA.

JQA confirmed that all relevant sections and descriptions in the generic CPA-DD were revised so as to reflect the final design of the PoA-DD. Therefore, the proposed PoA satisfies Para 168 of VVM.

3.10.4. Application of multiple methodologies for PoA

Since only one methodology, AMS-I.J. is applied to CPAs under the PoA, requirements regarding the application of multiple methodologies for PoA specified in "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0) is not relevant.

4. GLOBAL STAKEHOLDER PROCESS

4.1. Description of how and when the PDD was made publicly available

The PoA-DD, generic CPA-DD and specific CPA-DD for the proposed PoA was made publicly available on the UNFCCC website twice. The first publication applied AMS-I.C. (Version 14) and the second publication applies AMS-I.J. (Version 01).

Comments by Parties, stakeholders and NGOs were invited during 04/06/2009 – 03/07/2009 for the first publication and during 15/10/2011 – 13/11/2011 for the second publication.

4.2. Description of how comments were received and made publicly available

At the first publication during 04/06/2009 – 03/07/2009, two comments were received via e-mail. These comments have been publicly available on the UNFCCC website[19]. On the other hand, at the second publication during 15/10/2011 – 13/11/2011, no comments were received.

4.3. Compilation of all comments received

The two comments received for the first publication are summarized in Table 8.

Table 8 Comments received by the first global stakeholder consultation during 04/06/2009 – 03/07/2009

Date	Name	Organization	Contact detail	Comment
13 Jun 2009	Sergio Guitart Franetovic	Estudiante Ingeniería Industrial Universidad de Chile (Industrial Engineering Student University of Chile)	6 2299184 sguitart@ing.uchile.cl	I am researching the initiatives of PoA that have been validated abroad, could it be possible to receive further information on this project? Specifically I am interested in the preliminary cost plan (annex 2k). My scope is to categorize the PoA initiatives done abroad and to do so, costs is very important data.
14 Jul 2009	-	VnCO2 Consulting Group Vietnam Climate Protection	Hanoi, Vietnam vncarbon@gmail.com +84 916 40 1891	I have read documents of PoA "installing solar water heating system in the South of Vietnam" and refer to Annex 29 (version 03), EB47, paragraph 5(d) that stated that "the start date of any CPA is not, or will not be, prior to the commencement of validation of the programme of activities, i.e. the date on which the CDM-POA-DD is first published for global stakeholder consultation;" the start date of this CPA is on 01 May 2009

[19] http://cdm.unfccc.int/UserManagement/FileStorage/330NR53YLT8OKC5U7VVFYT1J9B1QYH

Date	Name	Organization	Contact detail	Comment
				meanwhile public period of this PoA is from 04 June 09 to 03 July 09. This means that start date of CPA precedes the validation date of PoA and it seems that this is contrary to EB' guidelines and that without CDM revenue the PoA still is secure to carried out resuled in additionality of PoA is not fulfilled. Stakeholders seek a clarification from project participants on this starting date of CPA and PoA.

4.4. Explanation of how due account has been taken of comments received

The following table summarizes how JQA took due account of the comments during the validation process.

Table 9 Summary of the due account of the comment taken by JQA

Comment	Due account taken
I am researching the initiatives of PoA that have been validated abroad, could it be possible to receive further information on this project? Specifically I am interested in the preliminary cost plan (annex 2k). My scope is to categorize the PoA initiatives done abroad and to do so, costs is very important data.	As described in E.4. of the PoA-DD, price of SWH systems and EWH systems is US$ 400 - 700 and US$ 100 - 160, respectively. Through the interview, JQA confirmed that the ECC plans to provide 1,000,000 VND (about US$ 60 at the rate provided in E.4. in the PoA-DD) of subsidy per unit of SWH system for CPA-1. The source of the funding is the ECC and CER revenue will be supplementary used for the source of the subsidy and the operation of the programme. Note that the additionally of the PoA is not demonstrated based on the investment analysis.
I have read documents of PoA "installing solar water heating system in the South of Vietnam" and refer to Annex 29 (version 03), EB47, paragraph 5(d) that stated that "the start date of any CPA is not, or will not be, prior to the commencement of validation of the programme of activities, i.e. the date on which the CDM-POA-DD is first published for global stakeholder consultation;" the start date of this CPA is on 01 May 2009 meanwhile public period of this PoA is from 04 June 09 to 03 July 09. This	In the second publication applying AMS-I.J. (Version01), the start date of the first CPA to be included in the proposed PoA, CPA-1, is 16/01/2012. The date is after the second publication of the PoA-DD on the UNFCCC website for global stakeholder consultation during 15/10/2011 – 13/11/2011.

Comment	Due account taken
means that start date of CPA precedes the validation date of PoA and it seems that this is contrary to EB'guidelines and that without CDM revenue the PoA still is secure to carried out resuled in additionality of PoA is not fulfilled. Stakeholders seek a clarification from project participants on this starting date of CPA and PoA.	

5. VALIDATION OPINION

Japan Quality Assurance Organization (JQA) as a DOE has performed the validation of SSC PoA “Installing Solar Water Heating Systems in the South of Viet Nam”. The validation is based on the UNFCCC criteria for CDM including Article 12 of the Kyoto Protocol, modalities and procedures for CDM (Marrakesh Accord), subsequent decisions of COP/MOP and CDM-EB and host country criteria.

Standard auditing techniques is applied to the validation. The Validation Checklists for PoA and generic CPA were prepared in order to report the nature of the issues raised by a DOE, the nature of the responses provided by CME/PPs, the means of validation and the resulting changes in the specific CPA-DD in a transparent and unambiguous manner. The CPA validation, including the document review, the follow-up actions and the resolution of outstanding CARs and CLs, provided JQA sufficient evidences to determine the fulfilment of all relevant UNFCCC criteria for CDM. The validation is based on the information made available to JQA during the validation process.

The project host party is Viet Nam and the Annex I party is Japan. Host Party fulfils the participation criteria and approved the PoA and authorized CME and PPs. The DNA of host the party states that the PoA assists in achieving sustainable development. Annex I Party also fulfils the participation criteria approved the PoA and authorized the PPs.

The project correctly applies the approved small-scale baseline and monitoring methodology, AMS-I.J. “Solar water heating systems (SWH)” (Version 01), and AMS-I.D. “Grid connected renewable electricity generation” (Version 17) and “Tool to calculate the emission factor for an electricity system” (Version 02.2.1) drown upon by AMS-I.J. For assessment of additionality, the PoA correctly applies “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” (Version 01.0) and “Guidelines for demonstrating additionality of microscale project activities” (Version 03.0). The PoA includes eligibility criteria to ensure every CPAs included in the PoA satisfied the condition of additionality of microscale projects. Therefore, in the absence of CDM, none of the implemented CPAs would occur. Sampling is applied to determine key parameter R_y (the percentage of SWH systems operating and in compliance with manufacture-required maintenance procedure) and sample size and sampling method for R_y are determined in accordance with “Standard for sampling and surveys for CDM project activities and programme of activities” (Version 02.0) and “Best practices examples focusing on sample size and reliability calculations” (version 01.0).

JQA concludes that the project activity meets all the relevant UNFCCC and Host Party requirements. JQA determines that the proposed PoA is valid as a CDM programme of activities.

6. REFERENCES

Category 1: Submissions to CDM EB

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2. Generic CDM-SSC-CPA-DD “Installing Solar Water Heating Systems in the South of Viet Nam - XX” (Version Version XX, DD/MM/YYYY)
3. Specific CDM-SSC-CPA-DD “Installing Solar Water Heating Systems in the South of Viet Nam - 1” (Version 04, 04/06/2012)
4. SSC PoA Validation Report for “Installing Solar Water Heating Systems in the South of Viet Nam” (Version 01, 08/06/2012)
5. SSC CPA Validation Report for “Installing Solar Water Heating Systems in the South of Viet Nam - 1” (Version 01, 08/06/2012)
6. Letter of Approval for the Programme of Activities “Installing Solar Water Heating Systems in the South of Viet Nam” issued by Viet Nam DNA, Ref: 16/2010/DMHCC-BCD, 30/07/2010
7. Approval of a CDM project and authorization of voluntary participation under the Kyoto Protocol by the Government of Japan for Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., 07/02/2012
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9. Calculation spreadsheet for average annual daily amount of water heated by SWH systems, provided in Annex 3 of the PoA-DD
10. Standard Operational Procedure for the PoA developed by the ECC composed of:
    - SWHPOA-01: Project Description
    - SWHPOA-02: Role and Responsibility
    - SWHPOA-03: Standard Operating Procedure
    - SWHPOA-04: Description of the CPA
    - SWHPOA-05: Training procedures
    - SWHPOA-06: Check list of technical specification of the SWH systems under the CPA
    - SWHPOA-07: Eligibility Criteria Check List for the inclusion of CPA
    - SWHPOA-08: Contract with SWH distributors
    - SWHPOA-09: Announcement of CPA-XX
    - SWHPOA-10: Check list for SWH system installation (pre-check by SWH distributors)
    - SWHPOA-11: Voucher
    - SWHPOA-12: Check list for SWH system installation (Acceptance testing)
    - SWHPOA-13: Internal approval application
    - SWHPOA-14: Receipt of subsidy
    - SWHPOA-15: Procedure of annual inspection

11. Standard Operational Procedure for the PoA customized for CPA-1, including
    - SWHPOA-04: Description of the CPA
    - SWHPOA-06: Check list of technical specification of the SWH systems under the CPA
    - SWHPOA-07: Eligibility Criteria Check List for the inclusion of CPA
    - SWHPOA-08: Contract with SWH distributors
12. SWHPOA-DATA: Database of the PoA, including standard worksheets ("Data-CPA-X" and "CPA-X") and worksheets customized for CPA-1 ("Data-CPA-1" and "CPA-1")

Category 2: Others

13. The Energy Conservation Center of Ho Chi Minh City (ECC-HCMC) Introduce Experience in Process of Development of ECC-HCMC prepared by Huynh Kim Tuoc, Director of ECC-HCMC
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40. Certificate No. TK3-2958CK1 regarding the compliance of MEGASUN with TCVN 8251:2009, issued by QUATEST3 to Gia Nam Co., Ltd., 31/08/2011
41. Summary of 2011 and Implementation Plan in 2012 by EVN: Overcoming difficulties, EVN's website http://pcphuyen.cpc.vn/?show=group&groupid=22&catid=11&contentid=1210
42. Test report No. 200801772 / T2001-07042 regarding the performance of evacuated tube collectors, issued by Provincial Center for Quality Inspection & Testing of Zhejiang Solar Energy Products, 26/10/2011
43. Solar Direct website http://www.solardirect.com/swh/swh.htm
44. FAQ about Solar thermal energy, Environmental Bureau of Tokyo Metropolitan Government http://www.kankyo.metro.tokyo.jp/climate/renewable_energy/solar_energy/faq/solar_thermal.html#setsubi_q02_04
45. Website of Energy Star, USEPA http://www.energystar.gov/index.cfm?c=solar_wheat.pr_savings_benefits
46. Report on the comparative study of Japanese domestic hot-water supply equipment, September 2010, Special Committee on Global Warming, Environmental Committee, Summit of Nine Prefectures in Japan http://www.tokenshi-kankyo.jp/images/report_pdf/report3-1.pdf
47. Financial Plan for CPA-1, prepared by the Financial Department of the ECC

7. LIST OF INTERVIEWED PERSONS

The Energy Conservation Center of Ho Chi Minh City (ECC)	
Mr. Huynh Kim Tuoc,	Director
Mr. Pham Huy Phong,	Vice Director
Ms. Nguyen Thi Ngoc Tho	Manager of Technical Department
Mr. Nguyen Dac Loc	Financial Expert
Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.	
Ms. Akiko Ishii	Consultant
Local residents who joined the ECC's pilot SWH promotion project in 2008	
Mr. Nguyen Phu Hai	528/23 Thong Nhat St., Ward 6, Go Vap Dist., HCMC
Mr. Dang Quang Trac	645 Doan Van Bo, Ward 18, Distric 4, HCMC
Candidates for CPA-1 (household without SWH systems)	
Ms. Le Huu Tuan	74 Tan Chanh Hiep St., Tan Chanh Hiep Ward, 12 Dist., HCMC
Ms. Nguyen Thi My Dung	42/26 Hoang Hoa Tham St., Ward 7, Binh Thanh Dist., HCMC
SonHa Saigon Joint Stock Company	
Mr. Pham Hoang Phong	General Director
Ms. Ngo Thi Thanh Lan	Chief Financial Officer
Mr. Le Bao Thach	Sales Manager
Mr. Tran Phu Quoc	Sales & Marketing Manager
Gia Nam Company	
Mr. Bui Van Nam	Director
Mr. Nong Van Tuc	Project Manager
EVN SPC	
Mr. Nguyen Van Hop	Deputy General Director
Mr. Le Truong Vu	Deputy Director of International Relations Department
Mr. Lam Hoang Phuoc,	Deputy Director of Business Department
Mr. Hoang Dinh Lan,	Officer of General Office
Mr. Tran Cong Dien,	Officer of Technical Department
People's Committee of Ho Chi Minh City	
Ms. Huynh Thi Thu Ha,	Environment Expert
Waste Recycling Fund of DONRE	
Mr. Huynh Phu Nam,	Deputy Director of Waste Recycling Fund
Ms. Ngo Nguyen Ngoc Thanh	Head of Recycling Activity Promotion Division
Mr. Nguyen Dang Hai,	Vice Head of Recycling Activity Promotion Division
Ms. Pham Minh Chi,	Vice Head of Recycling Activity Promotion Division
Ms. Pham Thi Kim Ngan,	Expert
Ms. Vu Thuy Linh,	Expert of Solid Management Division

SSC PoA VALIDATION CHECKLIST

Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.

"Installing Solar Water Heating Systems in the South of Viet Nam"

Project No. JQA-C0115

(1812000136)

08 June 2012

Japan Quality Assurance Organization

Appendix A

Ref. No.	Documents
1	GUIDELINES FOR COMPLETING THE PROJECT DESIGN DOCUMENT (CDM-PDD) AND THE PROPOSED NEW BASELINE AND MONITORING METHODOLOGIES (CDM-NM) Version 07. (Annex12 of the EB41 report)
2	CLEAN DEVELOPMENT MECHANISM VALIDATION AND VERIFICATION MANUAL Version 01.2 dated 30/07/2010 (Annex 1 of the EB55 report)
3	CLARIFICATIONS ON THE CONSIDERATION OF NATIONAL AND/OR SECTORAL POLICIES AND CIRCUMSTANCES IN BASELINE SCENARIOS Version 02 (Annex 3 of the EB22 report)
4	GUIDELINES ON THE DEMONSTRATION AND ASSESSMENT OF PRIOR CONSIDERATION OF THE CDM Version 04 (Annex 13 of the EB62 report)
5	Glossary of CDM terms Version 06 dated 02/03/2012
6	GUIDELINES ON THE ASSESSMENT OF INVESTMENT ANALYSIS Version 03.1. (dated 15/01/2010, EB51 Annex 58).
7	GUIDELINES FOR OBJECTIVE DEMONSTRATION AND ASSESSMENT OF BARRIERS Version 01(Annex13 of EB50 report)
8	GUIDELINES FOR COMPLETING THE SSC-PDD (Version 05) (EB 34, Annex 9, 14 September 2007)
9	Registration -Completeness Check checklist (Version 2.0) (EB59, Annex 12, 3 June 2011)
10	SMALL-SCALE PROGRAMME OF ACTIVITIES DESIGN DOCUMENT FORM (CDM SSC-PoA-DD) Version 01 (EB33, Annex 34)
11	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) (EB 55 Annex 38)
12	GUIDELINES FOR DEMONSTRATING ADDITIONALITY OF MICROSCALE PROJECT ACTIVITIES (Version 02) (EB 60 Annex 25)
13	GUIDELINES ON ASSESSMENT OF DEBUNDLING FOR SSC PROJECT ACTIVITIES (Version 03) (EB 54 Annex 13); II. GUIDANCE FOR DETERMINING THE OCCURRENCE OF DEBUNDLING UNDER A PROGRAMME OF ACTIVITIES (PoA)
14	STANDARD FOR SAMPLING AND SURVEYS FOR CDM PROJECT ACTIVITIES AND PROGRAMME OF ACTIVITIES (Version 02.0)
15	STANDARD FOR DEMONSTRATION OF ADDITIONALITY, DEVELOPMENT OF ELIGIBILITY CRITERIA AND APPLICATION OF MULTIPLE METHODOLOGIES FOR PROGRAMME OF ACTIVITIES (Version 01.0)
16	
19	Others

Appendix A

Remarks:

MoV : Means of Validation

DR : Desk review refers to CARs/CLs/FARs found out through the desk review for CDM-SSC-PoA-DD (Version 04, 04/06/201
Generic CDM-SSC-CPA-DD (Version XX, DD/MM/YYYY)
Regarding the reporting requirements, desk review for the validation report.

SV : Site-visit conducted from 01-03/02/2012

CAR : Corrective Action Request, in the case that one of the following occurs:

(a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reductions;

(b) The CDM requirements have not been met;

(c) There is a risk that emission reductions cannot be monitored or calculated.

CL : Clarification Request, in the case that information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.

FAR : Forward Action Request, during validation to highlight issues related to project implementation that require review during the first verification of the project activity.

NA : Not Applicable to the project activity

−− : Pending at the time of the checklist preparation

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Table 1 Comprehensive Checklist for Validation and CARs/CLs raised by the validation team

Section Seq. No.	Ref. No.	Requirement	Comments	Con clusion
1. Approval				
1.01	10	9. Did the coordinating/managing entity obtain LoA from each host Party and Annex I Party which wishes to be involved in the PoA?	ECC obtained LoA from Vietnamese DNA.	OK
1.02	10	10. Did the coordinating/managing entity obtain letters of authorization of its coordination of the PoA from each host Party?	Only one host Party is involved.	NA
1.03	2	44. Have all Parties involved approved the project activity?	Yes. Vietnamese and Japanese DNAs are the Parties of the PoA. LoA (Ref. 16/2010/DMHCC-BCD) issued by Vietnamese DNA on 30/07/2010, as well as LoA issued by Japanese DNA on 07/02/2012, indicate the approval for the PoA.	OK
1.04	2	45. Was it confirmed that the DNA of each Party indicated as being involved in the proposed CDM project activity in section A.3 of the PDD has issued a written letter of approval (LoA)? If yes, are the following clear? - who provided the LoA, the PP or the DNA; - when the LoA has been issued; - what the reference number of LoA is; - what supports the authenticity of LoA (e.g. DNA's Website, etc).	Yes, it was confirmed by the two LoAs. - The PP, Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., provided the LoAs; - Vietnamese DNA issued LoA on 30/07/2010 and Japanese DNA issued LoA on 07/02/2012; - Vietnamese DNA's LoA is Ref. 16/2010/DMHCC-BCD and Japanese DNA's LoA has no number. - Authenticity of the two LoAs are confirmed in 1.11 of this table.	OK
1.05	2	45. (a) Did each letter confirm that the Party is a Party to the Kyoto Protocol?	Yes. The Vietnamese DNA's LoA states "The government of Viet Nam has ratified the Kyoto Protocol on 25 September 2002". The Japanese DNA's LoA states "Japan has accepted the Kyoto Protocol on June 4, 2002."	OK

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Section Seq. No.	Ref. No.	Requirement	Comments	Con clusion
1.06	2	45. (b) Did each letter confirm that Participation is voluntary?	Yes. The Vietnamese DNA's LoA states "This is approval of voluntary participation in the proposed CDM Programme of Activities". The Japanese DNA's LoA states "Approval of a CDM project and authorization of voluntary participation under the Kyoto Protocol by the Government of Japan".	OK
1.07	2	45. (c) Did each letter confirm that in the case of the host Party, the proposed CDM project activity contributes to the sustainable development of the country? (This requirement is the same as Para. 126.)	Yes. The Vietnamese DNA's LoA states that the PoA contributes to sustainable development in Viet Nam.	OK
1.08	2	45. (d) Did each letter confirm that it refers to the precise proposed CDM project activity title in the PDD being submitted for registration?	Yes, both LoAs do. The Vietnamese DNA's LoA refers to "Installing Solar Water Heating Systems in the South of Viet Nam". The Japanese DNA's LoA refers to "Installing Solar Water Heating Systems in the South of Viet Nam".	OK
1.09	2	46. Is/Are the LoA(s) of approval unconditional with respect to (a) to (d) of para. 45?	Yes, the both LoAs state no conditions.	OK
1.1	2	47. Was it confirmed that the LoA(s) has/have been issued by the respective Party's DNA?	Yes. The Vietnamese LoA was issued by Ministry of Natural Resources and Environment of Viet Nam. The Japanese LoA was issued by Minister of Economy, Trade and Industry of Japan.	OK

Appendix A

Section Seq. No.	Ref. No.	Requirement	Comments	Con clusion
1.11	2	48. If in doubt of the authenticity of the LoA, was the authenticity of the LoA verified with the DNA?	No doubt is raised. JQA confirms that the PoA is included in "List of PoAs approved by Viet Nam DNA" provided on the website of the National Office for Climate Change & Ozone Protection (NOCCOP), the Ministry of Natural Resources and Environment of Viet Nam (MONRE). By reviewing the LoAs of CDM project activities already registered, JQA confirmed that there was no doubt about the authenticity of the Japanese LoA because the other LoAs had the quite same form, context and signature, except the reference number, name of the PP, project title and issuance date.	OK
1.12	2	49. The validation report shall, for each Party involved: (a) Indicate whether a letter of approval has been received, with clearly referencing the letter itself and any supporting documentation;	Refer to 1.03 of this table and Section 3.1. in the validation report.	OK
1.13	2	49. The validation report shall, for each Party involved: (b) Indicate whether the DOE received this letter from the project participants or directly from the DNA;	Refer to 1.04 of this table and Section 3.1. in the validation report.	OK
1.14	2	49. The validation report shall, for each Party involved: (c) Indicate the means of validation employed to assess the authenticity if paragraph 48 above applies;	Refer to 1.11 of this table and Section 3.1. in the validation report.	OK
1.15	2	49. The validation report shall, for each Party involved: (d) Contain a clear statement regarding whether the DOE considers the letters are in accordance with paragraphs 45-48 above.	Refer to 1.01 - 1.11 of this tabled and Section 3.1. in the validation report.	OK

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Section Seq. No.	Ref. No.	Requirement	Comments	Con clusion
1.16	2	50. If letters of approval contain additional specification of the project activity, such as the PDD version number, then the request for registration shall be made on the basis of the documents specified in the letter. If a letter of approval refers to a specific version of the validation report and the DOE therefore is unable to submit this precise version of the validation report, the DOE shall take one of the following options: (a) Insert a statement in the validation report to indicate that the final letter of approval has not been received and that a request for registration will not be submitted until it has been received; (b) Update the validation report to reflect the receipt of the letter of approval. If this option is chosen, validation report major number shall remain unchanged and the minor number shall be increased. The validation report shall contain confirmation that this is the only change that has been made to the version referred to in the letter of approval.	The LoAs contains no information such as specification of the project activity, specific version of the validation report	OK
2. Participation				
2.01	2	51. Have coordinating/managing entity and all PoA participants and been listed in a consistent manner in the project documentation?	Yes, in Section A.3. and Annex 1 of the PoA-DD and the generic CPA-DD.	OK
2.02	2	51. Has the coordinating/managing entity and the PoA participants in the project activity been approved by a Party to the Kyoto Protocol[10]?	Vietnamese DNA approves ECC as CME and PP, and Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. as PP for the PoA. Japanese DNA approves Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. as PP for the PoA.	OK

Appendix A

Section Seq. No.	Ref. No.	Requirement	Comments	Conclusion
2.03	2	52. Are the coordinating/managing entity and the PoA participants listed in tabular form in section A.3 of the CDM-SSC-PoA-DD? And has the participation been approved by at least one Party involved, either in a letter of approval or in a separate letter specifically to approve participation?	Yes, two project participants, ECC and Mitsubishi UFJ Morgan Stanley Securities Co., Ltd., are listed in tabular form in section A.3 of the PoA-DD. ECC is approved by Vietnamese DNA as a CME and a PoA participant. Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. is approved by both Vietnamese and Japanese DNA as a PoA participant.	OK
2.04	2	52. Are any other entities other than those approved as coordinating/managing entity and PoA participants included in these sections of the PDD?	Refer to 2.03 of this table.	OK
2.05	2	53. If in doubt of the participation approval, was it verified with the DNA that the approval of participation is valid for the proposed PoA participant?	Refer to 2.11 of this table.	OK
2.06	2	54. The validation report shall, for each PoA participant: (a) Indicate whether the participation has been approved by a Party to the Kyoto Protocol;	Refer to Section 3.1. in the validation report.	OK
2.07	2	54. The validation report shall, for each PoA participant: (b) Describe the means of validation employed to draw this conclusion.	Refer to Section 3.1. in the validation report.	OK
3. Global Stakeholder Consultation Process				

Appendix A

Section Seq. No.	Ref. No.	Requirement	Comments	Con clusion
3.01	2	40. Has (a) a completed CDM-SSC-POA-DD; (b) a PoA generic CDM-SSC-CPA-DD; and (c) a real case CDM-SSC-CPA-DD, made publicly available in accordance with the latest version of the "Procedures for processing and reporting on validation CDM project activities."[8]?	Yes, (a) a completed CDM-SSC-POA-DD; (b) a PoA generic CDM-SSC-CPA-DD; and (c) a real case CDM-SSC-CPA-DD was made publicly available on the UNFCCC website twice. In the first publication applied AMS-I.C. (Version 14), comments by Parties, stakeholders and NGOs were invited during 04/06/2009 – 03/07/2009 . On the other hand, in the second publication applies AMS-I.J. (Version 01) comments by Parties, stakeholders and NGOs were invited during 15/10/2011 – 13/11/2011. The validation is based on the second publication based on AMS-I.J.	OK
3.02	2	41. During the validation of the project activity, has the comments received been taken into account? Does the validation report include details of actions taken to take due account of the comments during the validation process?	Refer to Section 4.4. of the validation report.	OK
3.03	2	42. If comments are not sufficiently substantiated or if they indicate that the project activity does not comply with the CDM requirements, has further clarification from the entity providing the comment been requested by the DOE? (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.)	JQA did not request further clarification from the entity providing the comment.	NA
3.05	2	41. The validation report shall include details of actions taken to take due account of the comments during the validation process?	Refer to Section 4.4. of the validation report.	OK
4. Project Design Document				

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Section Seq. No.	Ref. No.	Requirement	Comments	Con clusion
4.01	2	56. Are the CDM-SSC-PoA-DD, the PoA Generic CDM-SSC-CPA-DD and the Real Case CDM-SSC-CPA-DD in accordance with the applicable CDM requirements for completing PDDs[12] as follows? - Fully completed; - Fully written in English language; - Using the latest template without modifying its format, font, headings or logo; - Using tables and their columns without modifying or deletion;	Yes, Appendix A of this report, "CDM Validation Checklist" includes the applicable CDM requirements for completing PoA-DD and CPA-DD. And all CARs/CLs were already resolved through the validation process. The PoA-DD and the generic CPA-SS was fully completed in English language using the latest template of CDM-SSC-PoA-DD form (Version 01.0) and CDM-SSC-CPA-DD form (Version 01.0) without any modifications and/or deletions mentioned in left column.	OK
4.02	2	55. Is the CDM-SSC-PoA-DD, the PoA Generic CDM-SSC-CPA-DD and the Real Case CDM-SSC-CPA-DD used as a basis for validation prepared in accordance with the latest template of CDM-PDD and guidance from the CDM Executive Board?	Refer to 4.01 of this table.	OK
4.03	2	57. The validation report shall contain a statement regarding the compliance of the CDM-SSC-PoA-DD, the PoA Generic CDM-SSC-CPA-DD and the Real Case CDM-SSC-CPA-DD with relevant forms and guidance.[13]	Refer to Section 3.2.1. in the validation report.	OK
5. Modalities and Communication				
5.01	5	Are the modalities of communication between project participants and the Executive Board indicated at the time of registration by submitting a statement signed by all project participants? (All official communication from and to project participants, after a request for registration is submitted by a DOE, shall be handled in accordance with these modalities of communication.)	Yes, MoC was signed by both PPs, Energy Conservation Center of Ho Chi Minh City and Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.	OK

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Section Seq. No.	Ref. No.	Requirement	Comments	Con clusion
5.02	10	11. Is the latest version of "Procedures for modalities of communication between project participants and the Executive Board" applied with the exception that the coordinating/managing entity shall be either sole or joint focal point for each area of communication?	The latest version of "Procedures for modalities of communication between project participants and the Executive Board" (Version 01) is applied.	OK
5.03	10	11. Is the number of joint focal points for the programme less than or equal to 5, or equal to the number of host Parties if greater than 5?	The number of joint focal points for the programme is two, less than 5.	OK

Appendix A

Table 2 Validation Requirements and CARs/CLs/FARs raised by the validation team

Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.		E. Validation requirements based on paragraph 37 of the CDM modalities and procedures				
VVM E.2.		Participation <SSC-PoA>				
VVM E.2.01	2	52. Are the project participants listed in tabular form in section A.3 of the PDD?	DR	The Energy Conservation Center, Ho Chi Minh City and Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. are listed in tabular form in section A.3 of the SSC-PoA-DD.	OK	OK
VVM E.2.02	2	52. Is the information consistent with the contact details provided in annex 1 of the PDD?	DR	Yes.	OK	OK
VVM E.4.		Project description <SSC-PoA>				
VVM E.4.01	2	59. Does the description of the proposed CDM project activity as contained in the PDD sufficiently cover all relevant elements? Is it accurate? And Does the description provide the reader with a clear understanding of the nature of the proposed CDM project activity?	DR/SV	Through the review of the following documents provided by CME/PPs and documents referred to in the PoA-DD, JQA confirmed that the description of the proposed PoA provided in Section A.2. and A.4.2.1. of the PoA-DD and that in Section A.2. of the generic CPA-DD is accurate. - Standard Operational Procedure for the PoA developed by the ECC composed of 15 documents (SWHPOA-01 to SWHPOA-15). - Database of the PoA developed by the ECC (SWHPOA-DATA) - Catalogue of SWH systems produced by Gia Nam Co. Ltd. (MEGASUN), SONHA (Thai Duong Nang) and PLK - Test Report by QUATEST3 regarding the compliance of MEGASUN produced by Gia Nam Co. Ltd. (SWH provider of CPA-1) with TCVN8251:2009	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.4.02	2	60. In case of proposed CDM project activities in existing facilities or utilizing existing equipments, was a physical site inspection conducted to confirm that the description in the PDD reflects the proposed CDM project activity for the following types of CDM project activities unless other means are specified in the methodology? (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.	SV	JQA was conducted physical site inspection on 01/02/2012 - 03/02/2012.	OK	OK
VVM E.4.03	2	61. For other individual proposed small scale CDM project activities with emission reductions not exceeding 15,000 tonnes per year, is a physical site visit conducted as appropriate?	SV	Ditto.	OK	OK
VVM E.4.04	2	62. If DOE does not undertake a physical site inspection, is this appropriately justified? (For all other proposed CDM project activities not referred to in paragraphs 59-61, DOE shall undertake the validation by reviewing available designs and feasibility studies and may conduct comparison analysis to equivalent projects, as appropriate. The DOE may conduct physical site visit to assess the plan.)	SV	Ditto.	NA	NA
VVM E.4.05	2	63. In case of the proposed CDM project activity involving the alteration of an existing installation or process, does the project description clearly state the differences resulting from the project activity compared to the pre-project situation?	DR/SV	CME/PPs are requested to determine whether the programme involves projects which replace existing electric water heating (EWH) systems in existing households with SWH systems, and to describe the finally decided target population in the PoA-DD.	CL01	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.4.06	2	64. The **validation report** shall: (a) Describe the process undertaken to validate the accuracy and completeness of the project description; (b) Contain the DOE's opinion on the accuracy and completeness of the project description.	DR/SV	Refer to Section 3.2.2. of the validation report. Through the document review, interview with stakeholders and physical site inspection, JQA confirmed that the accuracy and completeness of the project description.	--	OK
VVM E.5.		Baseline and monitoring methodology <Typical SSC-CPAs>				
VVM E.5.b.		Applicability of the selected methodology to the project activity <Typical SSC-CPAs>				
VVM E.5.b.01	2	70. Is the methodology correctly quoted and applied?	DR/SV	"Technology/measure" in AMS-I.J. is correctly quoted and applied in E.2 of the PoA-DD.	OK	OK
VVM E.5.b.02	2	71. By validating the documentation referred to in the PDD and by verifying that its content is correctly quoted and interpreted in the PDD, is it confirmed that each of the applicability conditions of the methodology or any tool or other methodology component referred to therein is met?	DR/SV	1) Regarding item 1 in the table in section E.2. of the PoA-DD, it is not clear how CPAs under the PoAs satisfies "residential" SWH systems defined by AMS-I.J. (footnote 1). 2) Regarding item 1 and 3 in the table in section E.2. of the PoA-DD, it is not clear how the ECC ensures a CPA involves only "residential" SWH systems and excluded "commercial" SWH systems. 3) Regarding item 2 in the table in section E.2. of the PoA-DD, it is not clear how the ECC ensures a CPA involves only (b) new construction projects under which SWH systems installed in (i) newly-built residences, and excludes (ii) existing residences that prior to the project implementation, do not have installed water heating systems. 4) Regarding item 5 in the table in section E.2. of the PoA-DD, the basis of the justification is not clear.	CL02 CL03 CL04 CL05	

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.b.03	2	71. If the DOE, based on local and sectoral knowledge, aware that comparable information is available from sources other than that used in the PDD, was the PDD cross checked against the information to confirm that the project activity meets the applicability conditions of the methodology?	DR/SV	JQA confirmed that a CPA in the proposed PoA meets all applicability conditions of AMS-I.J. through the check of the design of the programme.	--	OK
VVM E.5.b.04	2	72. If the DOE cannot make a determination regarding the applicability of the selected methodology to the proposed CDM project activity then the DOE shall request clarification of the methodology in accordance with the guidance provided by the CDM Executive Board.18	DR/SV	JQA confirmed that a request for clarification of the methodology is not necessary.	--	NA
VVM E.5.b.05	2	73. If the DOE determines that the proposed CDM project activity does not comply with the applicability conditions of the methodology the DOE may proceed by means of requesting revision to or deviation from the methodology in accordance with the guidance provided by the CDM Executive Board.19	DR/SV	JQA confirmed that a request for revision to or deviation from the methodology is not necessary.	--	NA
VVM E.5.b.06	2	74. If the DOE has requested clarification of, revision to or deviation from a methodology, the DOE shall not submit a request for registration until the CDM Executive Board has approved the proposed deviation or revision.	DR/SV	JQA has not requested for clarification of, revision to or deviation from a methodology,	NA	NA
VVM E.5.b.07	2	75. Under no circumstance shall the DOE consider the submission of a request for registration as a means of seeking clarification from the CDM Executive Board on the applicability of a methodology.	DR/SV	JQA does not consider the submission of a request for registration as a means of seeking clarification from the CDM EB on the applicability of a methodology.	OK	OK
VVM E.5.b.08	2	76. The **validation report** shall include an unambiguous validation opinion regarding the applicability of the selected methodology to the proposed CDM project activity.	DR/SV	Refer to Section 3.3.1. of the validation report. A CPA in the proposed PoA satisfies all applicability conditions of AMS-I.J.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.b.09	2	77. The **validation report** shall indicate whether emission sources, which are not addressed by the applied methodology and are expected to contribute more than 1% of the overall expected average annual emissions reductions, have been identified.	DR/SV	Refer to Section 3.3.1. of the validation report. JQA confirmed through on-site assessment there are no emission sources, which are not addressed by the applied methodology and are expected to contribute more than 1% of the overall expected average annual emissions reductions.	--	OK
VVM E.5.c.		Project boundary <Typical SSC-CPAs>				
VVM E.5.c.01	2	79. Does the delineation in the PDD of the project boundary meet the requirements of the selected baseline methodology? (Based on documented evidence and corroborated by a site visit)	DR	The description provided in Section E.3. of the PoA-DD does not clearly mention whether the physical project boundary includes the national electricity grid or not, although it is included in the table of sources and gases included in the CPA boundary.	CL06	OK
VVM E.5.c.02	2	79. Have all sources and GHGs required by the methodology been included within the project boundary?	DR	Based on Para 9 of AMS-I.J., CO2 emissions from displacement of grid electricity are included in the boundary	OK	OK
VVM E.5.c.03	2	79. If the PDD chooses the choices provided by the methodology, is the justification provided reasonable based on assessment of supporting documented evidence provided by the project participants and corroborated by observations?	DR	Regarding the project boundary, no choices are provided by AMS-I.J.	NA	NA
VVM E.5.c.04	2	80. In the **validation report**, the DOE shall describe how the validation of the project boundary has been performed, by detailing the documentation assessed (e.g., a commissioning report) and by describing its observations during any site visit undertaken in accordance with paragraphs 59-62 above (i.e., observations of the physical site or equipment used in the process).	DR/SV	Refer to Section 3.3.2. of the validation report. Through the document review and on-site assessment, JQA confirmed that the project boundary for a CPA under the PoA includes the physical site of each SWH system as well as the houses which consume the heated water generated by the SWH systems. The project boundary for a CPA under the PoA also includes the national electricity grid from which electricity is sourced in the baseline scenario.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.c.05	2	80. The DOE shall provide a **statement** whether the identified boundary and the selected sources and gases are justified for the project activity.	DR	Refer to Section 3.3.2. of the validation report. The selected source and gas, CO2 from electricity consumption, are justified for the project activity.	--	OK
VVM E.5.d.		Baseline identification <Typical SSC-CPAs>				
VVM E.5.d.01	2	83. Based on financial expertise and local and sectoral knowledge, are all scenarios that are considered by the project participants and are supplementary to those required by the methodology, reasonable in the context of the proposed CDM project activity? And have all reasonable alternative scenarios been included?	DR/SV	It is not clear why a water heater sourced by fossil fuels, such as LPG, is excluded from alternative scenarios. Evidences (studies or surveys, statistics, market data, etc.) for the statement that "Other than SWH systems, electric water heaters are the only available technology in the market of Viet Nam to heat water for household showering which is the predominant usage of the heated water generated by the SWH systems at household." described in Section E.4. of the PoA-DD, are to be provided.	CL07	OK
VVM E.5.d.02	2	84. By validating the assumptions, calculations and rationales used, as described in the PDD, is the baseline scenario identified reasonable?	DR	JQA assessed on-site through interview with stakeholders including local residents, SWH providers, local governmental officers, whether the statement that "The use of solar water heating systems, ... , is hampered by lack of public awareness of the economic and environmental benefits provided by SWH system units, barriers due to the installation, maintenance and after care of the systems and the upfront cost of the systems." described in E.4. of the PoA-DD, was correct. JQA was informed that the use of SWH was hampered mainly by lack of public awareness of the economic and environmental benefits provided by SWH. The relevant description in E.4. of the PoA-DD was revised to improve correctness. JQA confirmed that the baseline scenario, EWH systems, was identified reasonable.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.d.03	2	84. Are documents and sources referred to in the PDD correctly quoted and interpreted?	DR	1) The data regarding the domestic sector electricity use of 44.5%, based on Electricity of Viet Nam (EVN) 2005 in Section E.4. of the PoA-DD, is rather outdated. It is requested to use more recent data. 2) According to the data from Jyukankyo Research Institute Inc. based on the survey conducted by EVN, which is quoted in footnote 9 in Section E.4. of the PoA-DD, the electricity consumed for water heating accounts for about 13% and 7% of the total electricity consumption of urban and rural household, respectively. The information is not consistent with the information provided in the PoA-DD (15%). 3) It is described in Section E.4. of the PoA-DD that "As explained in A.4.3, due to its reasonable price range and easy installation, the electric water heater is the most commonly used technology in Viet Nam". Nevertheless, such information is not provided in A.4.3.	CL08 CL09 CL10	OK OK OK
VVM E.5.d.04	2	84. Was the information (the assumptions, calculations and rationales) provided in the PDD cross checked with other verifiable and credible sources, such as local expert opinion, if available?	DR/SV	Refer to VVM E.5.d.02. JQA also cross checked the information of the baseline provided in the PoA-DD with the information of the website of the giz wind energy project (http://www.windenergy.org.vn/index.php?page=solar-energy; "Although the solar energy resource in Vietnam has been recognized with huge potential, there has been not much attention on its development yet. Most projects throughout the country are at small scale and focused on harvesting heat solar energy. Huge up-front investment cost is the key reasons hindering solar development in Vietnam.") and confirmed that the baseline is credible.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.d.05	2	85. Have all applicable CDM requirements been taken into account in the identification of the baseline scenario for the proposed CDM project activity, including "relevant national and/or sectoral policies and circumstances."[20]?	DR	CME/PPs are requested to identify and discuss all 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, on the identification of the baseline scenario.	CL11	OK
VVM E.5.d.06	2	85. Have all relevant policies and circumstances been identified and correctly considered in the PDD, taking into consideration its knowledge of the sector and/or advice from local experts?	DR/SV	CME/PPs are requested to identify and discuss all 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, on the identification of the baseline scenario.	CL11	OK
VVM E.5.d.07	2	86. Does the PDD provide a verifiable 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 CDM project activity?	DR	The electric water heater is identified as the baseline system in the PoA-DD.	--	OK
VVM E.5.d.14	2	87. The DOE shall clearly describe in the **validation report** the steps taken to assess the requirement given in paragraphs 81 and 82 above and shall provide an opinion as to whether: (a) All the assumptions and data used by the project participants are listed in the PDD, including their references and sources;	DR/SV	Refer to Section 3.3.3. of the validation report. All the assumptions and data used by CME/PPs are listed in the PoA-DD, including their references and sources.	--	OK
VVM E.5.d.15	2	87. (b) All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD;	DR/SV	Refer to Section 3.3.3. of the validation report. All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PoA-DD.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.d.16	2	87. (c) Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;	DR/SV	Refer to Section 3.3.3. of the validation report. Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable.	--	OK
VVM E.5.d.17	2	87. (d) Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;	DR/SV	Refer to Section 3.3.3. of the validation report. Relevant national and/or sectoral policies and circumstances are considered and listed in the PoA-DD.	--	OK
VVM E.5.d.18	2	87. (e) The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.	DR/SV	Refer to Section 3.3.3. of the validation report. AMS-I.J. has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed PoA.	--	OK
VVM E.5.d.19	2	88. The **validation report** shall clearly describe other steps taken, and sources of information used, by the DOE to cross check the information contained in the PDD on this matter.	DR/SV	Refer to Section 3.3.3. of the validation report. JQA used the following sources for cross check: - "Viet Nam electricity survey 2011" (June 2011) published by JETRO Hanoi - "Viet Nam – Expanding Opportunities for Energy Efficiency" (March 2010) published by The World Bank - Website of the giz wind energy project (http://www.windenergy.org.vn/index.php?page=solar-energy)	--	OK
VVM E.5.e.		Algorithms and/or formulae used to determine emission reductions <Typical SSC-CPAs>				

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.e.01	2	90. Were the equations and parameters in the PDD correctly applied by comparing them to those in the selected approved methodology?	DR	The version of "Tool to calculate the Emission Factor for an electricity system" is not the latest. The tool is not correctly applied regarding the following issues: - Titles of the steps (Step 1 -6) are different with those provided in the tool. - Step-wise analysis to determine the sample group of power unit m used to calculate the BM in Step 5 is not presented.	CL12	OK
				The equation (1) provided in E.6.1 of the PoA-DD does not include the monitoring parameter required by Para 14 of AMS-I.J., namely, the number of systems that are demonstrated to be operational and in compliance with manufacturer-required maintenance procedures, planned to be checked by annual inspection. CME/PPs are requested to clarify how the monitoring data obtained through the annual inspection is used in the calculation of emission reductions.	CL13	OK
VVM E.5.e.02	2	90. Does the methodology provide for selection between different options for equations or parameters? If yes, has adequate justification been provided (based on the choice of the baseline scenario, context of the proposed CDM project activity and other evidence provided)?	DR	Regarding Table A 3.1 in Annex 3 of the PoA-DD, the following information is to be described: 1) Equations and parameters (e.g. SWH efficiency, conversion factors, etc.) used to estimate the amount of water can be heated by the SWH systems in a transparent manner. 2) Correct URL for the footnote 1 since the URL currently provided does not show the numbers described in Table A 3.1. 3) Equations and parameters used to estimate the water temperature, which is based on ASHRAE psychometric analysis CD - psychart 1, in a transparent manner.	CL14	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.e.03	2	90. If yes, have the correct equations and parameters been used in accordance with the methodology selected?	DR	Based on the justification, the stipulated energy saving method is applied correctly in calculation of emission reductions.	--	OK
VVM E.5.e.04	2	91. If data and parameters will not be monitored throughout the crediting period of the proposed CDM project activity but have already been determined and will remain fixed throughout the crediting period, are all sources and assumptions of these data and parameters appropriate and calculations are correct?	DR	Some figures provided in Table A 3.3. and Table A 3.4. of the PoA-DD are not consistent with its source, Official Letter No.151/KTTVBDKH dated 26 March 2010.	CL15	OK
VVM E.5.e.05	2	91. If so, are all sources and assumptions of these data and parameters applicable to the proposed CDM project activity?	DR	According to Para 11 of AMS-I.J., a default value of 10% shall be used for average annual technical grid losses (ly) if no recent data are available or data cannot be regarded accurate and reliable. It is requested to demonstrate that no recent data are available or data cannot be regarded accurate and reliable.	CL16	OK
VVM E.5.e.06	2	91. If so, will all data sources, assumptions and calculations result in a conservative estimate of the emission reductions?	DR	Data sources, assumptions and calculations will result in a conservative estimate of the emission reductions.	--	OK
VVM E.5.e.07	2	91. If data and parameters will be monitored on implementation and hence become available only after validation of the project activity, are the estimates provided in the PDD for these data and parameters reasonable?	DR	This is not applicable to the PoA and the generic CPA.	NA	NA
VVM E.5.e.08	2	92. The DOE shall clearly describe in the **validation report** the steps taken to assess the requirement outlined in paragraph 89 above and shall provide an opinion as to whether: (a) All assumptions and data used by the project participants are listed in the PDD, including their references and sources;	DR/SV	Refer to Section 3.3.4. of the validation report. JQA confirmed that the all assumptions and data used by the project participants were listed in the PoA-DD, including their references and sources.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.5.e.09	2	92. (b) All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD;	DR/SV	Refer to Section 3.3.4. of the validation report. JQA confirmed that the all documentation used by CME as the basis for assumptions and source of data was correctly quoted and interpreted in the PoA-DD.	--	OK
VVM E.5.e.10	2	92. (c) All values used in the PDD are considered reasonable in the context of the proposed CDM project activity;	DR/SV	Refer to Section 3.3.4. of the validation report. JQA confirmed that the all values used in the PoA-DD were considered reasonable in the context of the proposed PoA.	--	OK
VVM E.5.e.11	2	92. (d) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions;	DR/SV	Refer to Section 3.3.4. of the validation report. JQA confirmed that AMS-I.J. was applied correctly to calculate emission reductions.	--	OK
VVM E.5.e.12	2	92. (e) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the PDD.	DR/SV	Refer to Section 3.3.4. of the validation report. JQA confirmed that the all estimates of the baseline emissions can be replicated using the data and parameter values provided in the PoA-DD.	--	OK
VVM E.5.e.13	2	93. The **validation report** shall clearly describe how the DOE has verified the data and parameters used in the equations, including references to any other data sources used.	DR/SV	Refer to Section 3.3.4. of the validation report. JQA verified the data and parameters used in the equations by reviewing the quoted documents including AMS-I.J., AMS-I.D., “Tool to calculate the emission factor for an electricity system”, data published by DNA of Viet Nam.	--	OK
VVM E.6.		Additionality of a project activity <SSC-PoA & Typical SSC-CPAs>				
VVM E.6.01	2	95. Were the reliability and credibility of all data, rationales, assumptions, justifications and documentation provided by project participants assessed by using local knowledge and sectoral and financial expertise?	DR/SV	Additionality of the proposed PoA is demonstrated based on "Guidelines for demonstrating additionality of microscale project activities”. Data, rationales, assumptions, justifications and documentation provided by CME/PPs were checked against the guideline.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.02	2	96. Were tools and documents provided by the CDM Executive Board to demonstrate the additionality of proposed CDM project activities considered, as well as specific complementary or alternative requirements included in approved CDM methodology?	DR	"Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0) is not addressed in demonstration of additionality in Section A.4.3 of the PoA-DD.	CL17	OK
VVM E.6.03	5	A PoA is additional if it can be demonstrated that in the absence of the CDM (i) the proposed voluntary measure would not be implemented, or (ii) the mandatory policy/regulation would be systematically not enforced and that noncompliance with those requirements is widespread in the country/region, or (iii) that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation. This shall constitute the demonstration of additionality of the PoA as a whole.	DR/SV	Additionality of the proposed PoA is demonstrated based on "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0).	--	OK
		Additionality of a micro-scale project activity				

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.04	12	2. Type I SSC Project activities up to 5MW are additional if any one of the conditions below is satisfied:2 (a) The geographic location of the project activity is LDCs/SIDs or in a special underdeveloped zone of the host country identified by the Government before 28 May 2010; (b) The project is an off grid activity supplying energy to households / communities (less than 12 hrs grid availability per 24 hrs day is also considered as "off grid"); (c) The project is designed for distributed energy generation (not connected to a national or regional grid)3 with both conditions (i) and (ii) satisfied; (i) Each of the independent subsystems/measures in the project activity is smaller than or equal to 1500kW electrical installed capacity; (ii) End users of the subsystems or measures are households / communities / SMEs. (d) The project employs specific renewable energy technologies/measures recommended by the host country DNA and approved by the Board to be additional in the host country (the total installed capacity of the technology/measure shall be less than or equal to 5% to national annual electricity generation).	DR/SV	PPs are requested to demonstrate why not “distributed energy generation" (Para 2(c)) but “an off grid activity" (Para 2(b)) is applied to a typical CPA under the PoA among types of activities provided in Para 2 of “Guidelines for demonstrating additionality of microscale project activities”.	CL18	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.05	12	3. Type II SSC project activities4 that aim to achieve energy savings no more than 20 GWh/yr are additional if any one of the conditions below is satisfied: (a) The geographic location of the project activity is in LDC/SID or special underdeveloped zone of the host country identified by the Government before 28 May 2010; (b) The project activity is an energy efficiency activity with both conditions (i) and (ii) satisfied; (i) Each of the independent subsystems/measures in the project activity achieves an estimated annual energy savings equal to or smaller than 600 megawatt hours; and (ii) End users of the subsystems or measures are households/communities/SMEs.	DR/SV	A typical SSC-CPA under the SSC-PoA is Type I SSC project activities.	NA	NA
VVM E.6.06	12	4. Type III SSC project activities5 that aim to achieve emissions reductions at a scale of no more than 20 ktCO2e/yr are additional if any one of the following conditions is satisfied: (a) The geographic location of the project activity is a LDC/SID or special underdeveloped zone of the host country as identified by the Government before 28 May 2010; (b) The project activity is an emission reduction activity with both conditions (i) and (ii) satisfied (see below); (i) Each of the independent subsystems/measures in the project activity achieves an estimated annual emission reduction equal to or less than 600 tCO2e per year; and (ii) End users of the subsystems or measures are households/communities/SMEs.	DR/SV	Ditto.	NA	NA

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.07	2	97. The **validation report** shall clearly describe all steps taken, and sources of information used, by the DOE to cross-check the information contained in the PDD on this matter.	DR/SV	Refer to Section 3.4.1. of the validation report. JQA confirmed that the additionality of the PoA is demonstrated based on “Guidelines for demonstrating additionality of microscale project activities” as required by "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities". The steps taken, and sources of information used, are also described in Section 3.4.1. of the validation report.	--	OK
VVM E.6.08	2	97. The **validation report** shall contain information regarding how the DOE has determined that the documentation assessed is authentic, where appropriate.	DR/SV	Any specific documentation is used to demonstration of the additionality of the PoA since as “Guidelines for demonstrating additionality of microscale project activities” is applied.	--	NA
VVM E.6.a.		Prior consideration of the clean development mechanism <SSC-PoA>				

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.a.01	5	Starting date of the project activity The starting date of a CDM project activity is the earliest date at which either the implementation or construction or real action of a project activity begins. In light of the above definition, the start date shall be considered to be the date on which the project participant has committed to expenditures related to the implementation or related to the construction of the project activity. This, for example, can be the date on which contracts have been signed for equipment or construction/operation services required for the project activity. Minor pre-project expenses, e.g. the contracting of services /payment of fees for feasibility studies or preliminary surveys, should not be considered in the determination of the start date as they do not necessarily indicate the commencement of implementation of the project.	DR	The evidence of starting date of the PoA, the approval of PoA by the Peoples' Committee of HCMC on 09/11/2009, is to be provided. A timeline including major events are to be described in A.4.3 of the PoA-DD, and relevant and documentary evidences for major events are to be provided.	CL19	OK
VVM E.6.a.02	2	99. If the reported date is not in accordance with the "Glossary of CDM terms"[22], Was a CAR raised?		CME/PPs are requested to demonstrate that the defined starting date of the PoA, 09/11/2009, is the earliest date at which either the implementation or construction or real action of a project activity begins.	CL20	OK
VVM E.6.a.03	2	100. Is it a new project activity (project activities with staring date on or after 02 August 2008) or an existing project activity (project activities with a start date before 02 August 2008), in accordance with "GUIDELINES ON THE DEMONSTRATION AND ASSESSMENT OF PRIOR CONSIDERATION OF THE CDM"[23]?		The SSC-PoA is a new project activity (project activities with staring date on or after 02 August 2008). As per Para 3 of "Clarifications regarding the "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"", "Guidelines for the demonstration and assessment of prior consideration of the CDM" do not apply to the PoA.	NA	NA

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.a.04	2	101. For a new project activity, for which PDD has not been published for global stakeholder consultation or a new methodology proposed to the CDM Executive Board before the project activity start date, was it confirmed by means of confirmation from the UNFCCC secretariat whether the PPs had informed the host Party DNA and the UNFCCC secretariat in writing of the commencement of the project activity and of their intention to seek CDM status[24]? If such a notification has not been provided by the project participants within six months of the project activity start date, was it determined that the CDM was not seriously considered in the decision to implement the project activity? (Refer to Para 2-5 of "GUIDELINES .... PRIOR CONSIDERATION OF THE CDM")		Ditto.	NA	NA
VVM E.6.a.05	2	102. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, was the project participant's prior consideration of the CDM assessed through document reviews and does it satisfy following requirements: (a) Evidence that must indicate that 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 would include, inter alia, minutes and/or notes related to the consideration of the decision by the Board of Directors, or equivalent, of the project participant, to undertake the project as a proposed CDM project activity? (Refer to Para 6 (a) of "GUIDELINES .... PRIOR CONSIDERATION OF THE CDM")	DR	Ditto.	NA	NA

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.a.06	2	102. For an existing project activity, for which the start date is prior to the date of publication of the PDD for global stakeholder consultation, was the project participant's prior consideration of the CDM assessed through document reviews and does it satisfy following requirements: (b) Reliable evidence from project participants that must indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation. Evidence to support this should include, inter alia, contracts with consultants for CDM/PDD/methodology services, Emission Reduction Purchase Agreements or other documentation related to the sale of the potential 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 to the CDM Executive Board, publication in newspaper, interviews with DNA, earlier correspondence on the project with the DNA or the UNFCCC secretariat? (Refer to Para 6 (b) of "GUIDELINES .... PRIOR CONSIDERATION OF THE CDM")	DR	Ditto.	NA	NA
VVM E.6.a.07	2	103. If evidence to support the serious prior consideration of the CDM as indicated above is not available, is it determined that the CDM was not considered in the decision to implement the project activity? (Refer to Para 9 of "GUIDELINES .... PRIOR CONSIDERATION OF THE CDM")	DR	Ditto.	NA	NA
VVM E.6.a.16	2	104. The **validation report** shall: (a) Describe the DOE's validation of the project activity start date provided in the PDD;	DR	Refer to Section 3.4.2. of the validation report. JQA confirmed that the defined starting date complied with "Glossary of CDM terms".	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.a.17	2	104. (b) Describe the evidence for prior consideration of the CDM (if necessary) that was assessed;	DR	As per Para 3 of "Clarifications regarding the "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"", "Guidelines for the demonstration and assessment of prior consideration of the CDM" do not apply to the PoA.	--	NA
VVM E.6.a.18	2	104. (c) Provide a clear validation opinion regarding whether the proposed CDM project activity complies with the requirements of "GUIDELINES ON THE DEMONSTRATION AND ASSESSMENT OF PRIOR CONSIDERATION OF THE CDM".	DR	Ditto.	--	NA
VVM E.6.b.		Identification of alternatives				
VVM E.6.b.01	2	106. Regarding the list of alternatives given in the PDD, (a) Does the list of alternatives include as one of the options that the project activity is undertaken without being registered as a proposed CDM project activity? (b) Does the list contain all plausible alternatives that are considered to be viable means of supplying the outputs or services that are to be supplied by the proposed CDM project activity, on the basis of its local and sectoral knowledge?; (c) Do the alternatives comply with all applicable and enforced legislation?	DR	As per "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0), additionality for the proposed SSC-PoA and a typical SSC-CPA are demonstrated based on "Guidelines for demonstrating additionality of micro scale project activities" (version 03). Therefore, this step is not applicable.	NA	NA
VVM E.6.b.02	2	107. The **validation report** shall describe whether the DOE considers the listed alternatives to be credible and complete.	DR/SV	Ditto.	NA	NA
VVM E.6.d.		Barrier analysis[29]				

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.d.16	2	116. Issues that have a clear direct impact[31] 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.	DR	As per "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0), additionality for the proposed SSC-PoA and a typical SSC-CPA are demonstrated based on "Guidelines for demonstrating additionality of microscale project activities" (version 03). Therefore, this step is not applicable.	NA	NA
VVM E.6.d.17	2	117. By applying a two-step process to assessing the barrier analysis performed in the PDD, (a) Is it confirmed that the barriers are real? Is/are assessment of available evidence and/or interviews with relevant individuals (including members of industry associations, government officials or local experts if necessary) conducted to determine whether the barriers listed in the PDD exist?	DR	Ditto.	NA	NA
VVM E.6.d.18	2	117. (a) Is existence of barriers 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, this barrier is not considered to be adequately substantiated. If on the basis of its sectoral or local expertise, 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.)	DR	Ditto.	NA	NA

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.d.19	2	117. (b) Is it determined by using the local and sectoral expertise that 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, is the local and sectoral expertise applied 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?)	DR	Ditto.	NA	NA
VVM E.6.d.20	2	118. The **validation report** shall: (a) Provide an assessment of each barrier listed in the PDD, which describes how the DOE has undertaken validation of the barrier;	DR/SV	Ditto.	NA	NA
VVM E.6.d.21	2	118. The **validation report** shall: (b) Provide an overall determination of the credibility of the barrier analysis performed.	DR/SV	Ditto.	NA	NA
VVM E.6.e.		Common practice analysis				
VVM E.6.e.06	2	120. (a) Was it assessed 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 activity's technology or industry type, by using its local and sectoral expertise? (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 explanation why this region is more appropriate is assessed.);	DR	As per "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0), additionality for the proposed SSC-PoA and a typical SSC-CPA are demonstrated based on "Guidelines for demonstrating additionality of microscale project activities" (version 03). Therefore, this step is not applicable.	NA	NA

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.6.e.07	2	120. (b) Was it determined to what extent similar and operational projects (e.g., using similar technology or practice), other than CDM project activities, have been undertaken in the defined region by using official sources and local and industry expertise?;	DR	Ditto.	NA	NA
VVM E.6.e.08	2	120. (c) If similar and operational projects, other than CDM project activities, are already "widely observed and commonly carried out" in the defined region, was it assessed whether there are essential distinctions between the proposed CDM project activity and the other similar activities, by using its local and sectoral expertise?	DR	Ditto.	NA	NA
VVM E.6.e.09	2	121. The **validation report** shall provide details regarding: (a) How the geographical scope of the common practice analysis has been validated;	DR/SV	Ditto.	NA	NA
VVM E.6.e.10	2	121. (b) How the DOE has undertaken an assessment of the existence of similar projects;	DR/SV	Ditto.	NA	NA
VVM E.6.e.11	2	121.(c) How the DOE has assessed the essential distinctions between the proposed CDM project activity and any similar projects that are widely observed and commonly carried out;	DR/SV	Ditto.	NA	NA
VVM E.6.e.12	2	121. (d) Confirmation by the DOE that the proposed CDM project activity is not common practice.	DR/SV	Ditto.	NA	NA
VVM E.7.		Monitoring plan <SSC-PoA / Typical SSC-CPAs>				

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.7.01	2	123. Is a two-step process to assess compliance with this requirement applied, as follows: (a) Compliance of the monitoring plan with the approved methodology. (i) By means of document review, is the list of parameters required by the selected approved methodology identified?	DR	<SSC-PoA> Methodology is not applicable to the monitoring of PoA and thus NA. <Typical SSC-CPAs> The list of parameters required by AMS-I.J. is identified.	OK	OK
VVM E.7.02	2	123. (a) (ii) Does the monitoring plan contain all necessary parameters? And are they clearly described in the monitoring plan?	DR	<SSC-PoA> Regarding the monitoring of PoA, the specific parameter/system/procedure in order to ensure that 1) no double accounting occurs and 2) status of verification can be determined anytime for each CPA, are to be described. <Typical SSC-CPAs> Parameters required by Para 10(c), 13 and 14 of AMS-I.J., which applicable to SSC-CPAs under the SSC-PoA, are included in the monitoring plan.	CL21	OK
VVM E.7.03	2	123. (a) (ii) Do the means of monitoring described in the plan comply with the requirements of the methodology?;	DR	<SSC-PoA> Methodology is not applicable to the monitoring of PoA and thus NA. <Typical SSC-CPAs> The means of monitoring described in the plan comply with the requirements of the methodology.	OK	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.7.04	2	123. (b) Implementation of the plan. By means of review of the documented procedures, interviews with relevant personnel, project plans and any physical inspection of the proposed CDM project activity site in accordance with paragraphs 59-62: (i) Are the monitoring arrangements described in the monitoring plan feasible within the project design?;	DR/SV	The monitoring plan for the PoA and a CPA is described in detail in the Standard Operational Procedure (SOP) for the PoA and is considered to be feasible within the project design.	--	OK
VVM E.7.05	2	123. (b) Implementation of the plan. (ii) Are the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, sufficient to ensure that the emission reductions achieved by/resulting from the proposed CDM project activity can be reported ex post and verified?	DR/SV	SOP for the PoA includes the data management and quality assurance and quality control procedures. It is sufficient to ensure that the emission reductions achieved by a CPA in the proposed PoA can be reported *ex post* and verified.	--	OK
	14	Sampling Plan; Appendix 5: Recommended evaluation criteria for DOE Validation				
VVM E.7.06	14	(a) Does the sampling plan present a reasonable approach for obtaining unbiased, reliable estimates of the variables?	DR/SV	According to E.7.2 of the PoA-DD, the target population is all SWH systems included in a CPA. Simple random sampling is to be used for the project. The sample size (n) is calculated using the equation for each CPA to meet a 90/10 confidence/precision.	OK	OK
VVM E.7.07	14	(a)(i) In terms of assessing reliability, are the elements of Objectives and Reliability Requirements complete?	DR/SV	According to E.7.2 of the PoA-DD, the objective is determining the rate of SWH systems “Ry” that are demonstrated to be operational and in compliance with manufacture-required maintenance procedures during the crediting period, and with a 90/10 confidence/precision.	OK	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.7.08	14	(a)(i) Do the requirements specified agree with those stated in the appropriate standards? If not, is there a reason why they are not met?	DR/SV	The 90/10 confidence/precision agrees with the requirement in Para 15 of AMS-I.J (when project proponent chooses to inspect annually, a 90% confidence interval and 10% margin of error shall be achieved for the sampling parameter).	OK	OK
VVM E.7.09	14	(a)(ii) From all the different elements of the Design, is there any reason to suspect that the results from the activity will be biased? For instance, is the population under consideration only urban households? What about rural households? Might this cause a bias when the data are extrapolated to emission reductions?	DR/SV	According to E.7.2 of the PoA-DD, the target population is all SWH systems included in a CPA and simple random sampling is to be used for the project. Since "Ry" is considered to be relatively homogeneous, the sampling design would not likely to make the result of monitoring activity biased.	OK	OK
VVM E.7.10	14	(b) Is the population clearly defined, and how well does the proposed approach to developing the sampling frame represent that population?	DR/SV	It is described that the sampling frame is the database.	OK	OK
VVM E.7.11	14	(b)(i) The population should be clear from the Target Population description.	DR/SV	The population is all SWH systems included in a CPA.	OK	OK
VVM E.7.12	14	(b)(i) Whether or not the sampling frame is possible or appropriate will depend on the detail and the particular situation, for example if a map is going to be used, a question would be whether a map already exists, and how reliable it is. If a map does not exist, then who is going to create it?	DR/SV	The sampling frame is the database developed by the ECC and considered to be possible and appropriate.	OK	OK
VVM E.7.13	14	(c) Is the proposed sampling approach clear?	DR/SV	It is clearly described that simple random sampling is to be used for the project.	OK	OK
VVM E.7.14	14	(c) (i) Is it clear which sampling method is being proposed? For example, is it simple random sampling, or some other method of sampling?	DR/SV	According to E.7.2 of the PoA-DD, simple random sampling is to be used.	OK	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.7.15	14	(c) (ii) Does the method agree with the description of the population? Are there clusters or strata, and if so does it state what they are? For example, are they buildings, villages, etc.?	DR/SV	The target population is all SWH systems included in a CPA and simple random sampling is to be used.	OK	OK
VVM E.7.16	14	(d) Is the proposed sample size adequate to achieve the minimum confidence/precision requirements? Is the ex ante estimate of the population variance needed for the calculation of the sample size adequately justified?	DR/SV	The sample size which will be calculated by the equation and parameters provided in E.7.2 of the PoA-DD is considered to be adequate to achieve a 90/10 confidence/precision required by AMS-I.J. Since the parameter of interest is a percentage, then there is no need to specify a variance estimate.	OK	OK
VVM E.7.17	14	(d) (i) All of the information set out in the sampling plans should help answer this question. If not all information is provided then the question cannot be answered;	DR/SV	All information to estimate adequate sample size is provided.	OK	OK
VVM E.7.18	14	(d) (ii) Is the target value for the population parameter reasonably anticipated?	DR/SV	The target value for the population parameter will be determined by each CPA for every monitoring period.	NA	NA
VVM E.7.19	14	(d) (iii) Does the estimate of variability seem reasonable?	DR/SV	Since the parameter of interest is a percentage, then there is no need to specify a variance estimate.	NA	NA
VVM E.7.20	14	(e) Is the sample representative?	DR/SV	The sample selected randomly from the database is considered to be representative.	OK	OK
VVM E.7.21	14	(e) (i) Is it clear how the sample is to be selected? For example, is it to be selected randomly?	DR/SV	The sample will be selected randomly.	OK	OK
VVM E.7.22	14	(e) (ii) Does the Plan indicate that the sampling frame will be kept (e.g. in hard copy or a computer file of screen shot copy), and that random numbers will be generated and these random numbers will then be used to select the sample?	DR/SV	The sampling plan for Ry does not indicate whether the sampling frame will be kept, and that random numbers will be generated and these random numbers will then be used to select the sample.	CL22	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.7.23	14	(f) Is the data collection/measurement method likely to provide reliable data given the nature of the parameters of interest and project, or is it subject to measurement errors?	DR/SV	The data collection method likely to provide reliable data given the nature of the parameters of interest and project.	--	OK
VVM E.7.24	14	(f) (i) Are the methods of data collection clear and unambiguous?	DR/SV	It is not clear how the staff of the ECC confirm whether: 1) SWH is operational; and 2) SWH is in compliance with manufacture-required maintenance procedures with respect to the monitoring of Ry.	CL23	OK
VVM E.7.25	14	(f) (i) Are there questions which could be subject to respondent error due to sensitivity (e.g. "How much money do you spend on heating?"), lack of recall (e.g. "How many times did you buy fuel last year?"), and the like?	DR/SV	It is not clear what questions the staff of the ECC will make when they visit the randomly selected households for monitoring of Ry. It is also to be confirmed whether the questions could be subject to respondent error, measurement error or bias in answers.	CL24	OK
VVM E.7.26	14	(f) (ii) Are there questions that could be subject to measurement error? For example, is a particular measurement method known to under-record key data, such as the weight of bricks?	DR/SV	It is not clear what questions the staff of the ECC will make when they visit the randomly selected households for monitoring of Ry. It is also to be confirmed whether the questions could be subject to respondent error, measurement error or bias in answers.	CL24	OK
VVM E.7.27	14	(g) Are the procedures for the data measurements well defined and do they adequately provide for minimizing non-sampling errors?	DR/SV	No measurements are made for monitoring of Ry.	--	NA
VVM E.7.28	14	(g) (i) Is the quality control and assurance strategy adequate?	DR/SV	QA/QC strategy for sampling of Ry including a procedure for defining outliers and under what circumstances outlier data/measurements may be excluded and/or replaced is to be clarified.	CL25	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.7.29	14	(g) (ii) Are there mechanisms22 for avoiding bias in the answer?	DR/SV	It is not clear what questions the staff of the ECC will make when they visit the randomly selected households for monitoring of Ry. It is also to be confirmed whether the questions could be subject to respondent error, measurement error or bias in answers.	CL24	OK
VVM E.7.30	14	(h) Does the frame contain the information necessary to implement the sampling approach?	DR/SV	Sampling will be implemented every 12 months	OK	OK
VVM E.7.31	14	(h) (i) Are the proposed skill sets, qualifications and experience of the personnel to be engaged to conduct sampling adequate?	DR/SV	The proposed skill sets, qualifications and experience of the personnel to be engaged to conduct sampling are to be confirmed.	CL26	OK
VVM E.7.32	2	124. The **validation report** shall: (a) State the DOE's opinion of the compliance of the monitoring plan with the requirements of the methodology;	DR/SV	Refer to Section 3.5.2. of the validation report. JQA verified the monitoring plan complied with AMS-I.J.	--	OK
VVM E.7.33	2	124. The **validation report** shall: (b) Describe the steps undertaken to assess whether the monitoring arrangements described in the monitoring plan are feasible within the project design;	DR/SV	Refer to Section 3.5.1. and Section 3.5.2. of the validation report. JQA confirmed that the monitoring arrangements described in the monitoring plan were feasible within the project design.	--	OK
VVM E.7.34	2	124. The **validation report** shall: (c) State the DOE's opinion of the project participants ability to implement the monitoring plan.	DR/SV	Refer to Section 3.5.1. and Section 3.5.2. of the validation report. JQA considers that the ECC has sufficient ability to implement the monitoring plan.	--	OK
VVM E.8.		Sustainable development				
VVM E.8.01	2	125. Does the DOE 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?	DR/SV	LoA by the Vietnamese DNA confirms that the PoA contributes to sustainable development in Viet Nam.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.8.02	2	127. The **validation report** shall indicate whether the host Party's DNA confirmed the contribution of the project to the sustainable development of the host Party. This may be reported together with the DOE's assessment of the validity of the host Party's approval (refer to paragraphs 49 and 50 above).	DR/SV	Refer to Section 3.1. of the validation report. The validity of the host Party's approval is 24 months from 30/07/2010.	--	OK
VVM E.9.		Local stakeholder consultation <SSC-PoA>				
VVM E.9.01	2	128. Were local stakeholders (the public, including individuals, groups or communities affected, or likely to be affected, by the proposed CDM project activity or actions leading to the implementation of such an activity) invited by the PPs to comment on the proposed CDM project activity prior to the publication of the PDD on the UNFCCC website?	DR	Local stakeholders were invited by the ECC to comment on the PoA from August to December 2008, which is prior to the publication of the PDD on the UNFCCC website.	--	OK
VVM E.9.02	2	129. (a) Was it determined whether comments by local stakeholders that can reasonably be considered relevant for the proposed CDM project activity, have been invited, by means of document review and interviews with local stakeholders as appropriate?	DR/SV	The following documentary evidences regarding local stakeholder consultation were provided: - Media used for promotion of the pilot project for PoA - Questionnaire and details of respondents Through the review of these documents, JQA confirmed that the comments by local stakeholders was considered relevant to the PoA.	--	OK
VVM E.9.03	2	129. (b) Was it determined whether the summary of the comments received as provided in the PDD is complete, by means of document review and interviews with local stakeholders as appropriate?;	DR/SV	Through the review of the questionnaire, JQA confirmed that the only 55 people answered among 60 people asked in the local stakeholder consultation. Correct information is to be provided in Section D of the PoA-DD.	CL27	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM E.9.04	2	129. (c) Was it determined whether the project participants have taken due account of any comments received and described this process in the PDD, by means of document review and interviews with local stakeholders as appropriate?	DR/SV	JQA confirmed that no negative comments were received and thus no further action was deemed necessary.	--	OK
VVM E.9.04	2	130. The **validation report** shall: (a) Describe the steps taken to assess the adequacy of the local stakeholder consultation;	DR/SV	Refer to Section 3.7. of the validation report. The adequacy of the local stakeholder consultation was assessed through the review of questionnaires and interview with households which participated in the pilot project in 2008.	--	OK
VVM E.9.04	2	130. (b) State the DOE's opinion on the adequacy of the local stakeholder consultation.	DR/SV	Refer to Section 3.7. of the validation report. JQA confirmed that the local stakeholder consultation was implemented adequately.	--	OK
VVM E.10.		Environmental impacts				
VVM E. 10.01	2	131. Have the project participants submitted documentation to the DOE on the analysis of the environmental impacts of the project activity?	DR	Analysis of the environmental impacts of the PoA is described in Section C of the PoA-DD. EIA is not required to the installation of residential SWH systems.	--	OK
VVM E. 10.02	2	132. By means of a document review and/or using local official sources and expertise, have the project participants undertaken an analysis of environmental impacts and, if required by the Host Party, an environmental impact assessment?		CME is request to describe the effective EIA legislation in the PoA-DD. Through the interview with the officers in DONRE, JQA confirmed that Circular No.490/1998/TT-BKHCNMT was replaced with new law and not valid.	CL28	OK
VVM E. 10.03	2	133. The **validation report** shall describe whether the project participants have undertaken an analysis of environmental impacts and, if required by the host Party, an environmental impact assessment in accordance with procedures as required by the host Party.	DR/SV	Refer to Section 3.8. of the validation report. EIA is not required to the installation of residential SWH systems.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F.		Specific validation activities				
VVM F.2.		Project design of small-scale clean development mechanism project activities <Typical SSC-CPAs>				
VVM F. 2. 12	2	135. The DOE shall determine whether a proposed small-scale CDM project activity meets the requirements of the simplified modalities and procedures for SSC CDM project activities.33	DR	CPAs under the PoA are planned not to exceed the limit of "microscale project activity", namely, 15MWth or 21,428m2 collector area. Therefore, it naturally does not exceed the SSC limit of 45MWth or 64,000m2.	OK	OK
VVM F. 2. 13	2	136. DOE shall confirm that: (a) The project activity qualifies within the thresholds of the three possible types of SSC 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;34	DR	CPAs under the PoA is qualified within the thresholds of Type I project activity, 15MW. The SSC-CPAs under the SSC-PoA include only one component activity (AMS-I.J).	OK	OK
VVM F. 2. 14	2	136. (b) The project activity conforms to one of the approved small-scale categories35 and applies the relevant tool or methodology. The DOE shall confirm that the small-scale methodologies are applied in conjunction with the general guidelines to SSC CDM methodologies36 37, which provides guidelines on equipment capacity, equipment performance/ lifetime, baseline identification for type-II/III Greenfield project activities, sampling and other monitoring-related issues;38		CPAs under the PoA conforms to Type I project activity and AMS-I.J. version 01 is applied. AMS-I.D., version 17 and the "Tool to calculate the Emission Factor for an electricity system", drawn upon by AMS-I.J., are also applied. "General Guidelines to SSC CDM Methodologies", version 17, is also taken into consideration.	OK	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 2. 15	2	136. (c) The project activity is not a debundled component of a large-scale project, in accordance with the rules defined in appendix C of the simplified modalities and procedures for small-scale CDM project activities;39	DR	According to "Guidelines on assessment of de-bundling for SSC project activities", version 03, Section II, "Guidance for determining the occurrence of de-bundling under a programme of activities (PoA)", Paragraph 10, SSC-CPAs under the SSC-PoA is exempted from performing de-bundling check as each of the independent subsystem/ measures included in SSC-CPAs is no larger than 1% of the small-scale thresholds defined by AMS-I.J. as described in Section A 4.4.1. of the SSC-PoA-DD.	NA	NA
VVM F. 2. 16	8	2. A proposed SSC project activity shall be deemed to be a debundled component of a large project activity if there is a registered SSC CDM project activity or an application to register another SSC CDM project activity: (a) With the same project participants; (b) In the same project category and technology/measure; and (c) Registered within the previous 2 years; and (d) Whose project boundary is within 1 km of the project boundary of the proposed small- scale activity at the closest point.	DR	Ditto.	NA	NA
VVM F. 2. 17	8	3. If a proposed SSC project activity is deemed to be a debundled component in accordance with paragraph 2 above, but total size of such an activity combined with the previous registered SSC CDM project activity does not exceed the limits for SSC CDM project activities as set in paragraph 6 (c) of the decision 17/CP.7,3 the project activity can qualify to use simplified modalities and procedures for SSC CDM project activities.	DR	Ditto.	NA	NA

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 2. 18	13	8. For the purposes of registration of a PoA,6 a proposed small-scale CPA of a PoA shall be deemed to be a de-bundled component of a large scale activity if there is already an activity,7 which satisfies both conditions (a) and (b) below: (a) Has the same activity implementer as the proposed small scale CPA or has a coordinating or managing entity, which also manages a large scale PoA of the same technology/measure, and; (b) The boundary is within 1 km of the boundary of the proposed small-scale CPA, at the closest point.	DR	Ditto.	NA	NA
VVM F. 2. 19	13	9. If a proposed small-scale CPA of a PoA is deemed to be a debundled component in accordance with paragraph 2 above, but the total size of such a CPA combined with a registered small-scale CPA of a PoA or a registered CDM project activity does not exceed the limits for small-scale CDM and small-scale A/R project activities as set out in Annex II of the decision 4/CMP.18 and 5/CMP.1 respectively, the CPA of a PoA can qualify to use simplified modalities and procedures for small-scale CDM and small-scale A/R CDM project activities.	DR	Ditto.	NA	NA
VVM F. 2. 20	13	10. If each of the independent subsystems/measures (e.g., biogas digester, solar home system) included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the methodology applied,9 then that CPA of PoA is exempted from performing de-bundling check i.e., considering as not being a de-bundled component of a large scale activity.	DR	Ditto.	OK	OK
VVM F. 2. 21	2	136. (d) Whether an assessment of the environmental impacts of the proposed CDM project activity is required by the host Party.	DR	Refer to VVM E.10.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 2. 22	2	137. In assessing the additionality of SSC CDM project activities, the DOE shall refer to the specific requirements on demonstration of additionality for small scale project activities40 41 together with the guidance in chapter V, section E, subsection 6 and "Non-binding best practice examples to demonstrate additionality for SSC project activities".42	DR	A CPA under the PoA is microscale project activity and thus "Non-binding best practice examples to demonstrate additionality for SSC project activities" is not applicable. Additionality of a CPA under the PoA is demonstrated as per Para 2 of "Guidelines for demonstrating additionality of microscale project activities", version 03.	NA	NA
VVM F. 5.		Programme of activities				
VVM F. 5. 01	2	165. The CDM EB has provided guidance and procedures for registering a PoA as a single CDM project activity52. In validating a PoA and any CPAs proposed to be included in the PoA, the DOE shall, in general, apply the means of validation and reporting requirements described in this Manual. However there are a number of requirements unique to PoAs for which additional instructions are provided below, the precise extent of validation required in each of these areas will need to be determined by the DOE based on the type or PoA being validated.53	DR/SV	JQA applies the means of validation and reporting requirements described in VVM for validation of the PoA and typical CPAs. Requirements unique to PoAs are also assessed as shown below.	OK	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 02	2	(a) Operational and management arrangements for the PoA 166. The DOE shall assess the operational and management arrangements which have been established by the coordinating/managing entity in order to determine whether these arrangements are suitable for the PoA being validated. The arrangements shall be sufficient to ensure that the coordinating/managing entity will have control of all records and information related to the implementation of individual CPAs and will be in a position to ensure each CPA is being operated in accordance with the specific requirements of the programme. Where the DOE considers the arrangements to be unsatisfactory or insufficient a CAR shall be raised and a request for registration shall not be submitted until the CAR has been resolved to the satisfaction of the DOE.	DR/SV	1) Regarding "(i) A record keeping system for each CPA under the PoA", the following information is to be provided: - Documents/agreement between the ECC and SWH system providers which show the role and responsibilities of them with respect to the PoA - List of the SWH system providers registered under the PoA. - Measure/procedure to invite participants of the programme. - Procedure (flowchart) of application of subsidy for SWH system installation. - Guidelines, forms, tickets, etc. used by the ECC and residents for application/receipt of subsidy for SWH system installation. Regarding "(ii) A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA", the specific system/procedure adopted by the ECC is to be confirmed. 2) Name of the organization and the roles and responsibilities described in Section A.4.4.1 of the PoA-DD is not consistent with "SWHPOA-02: Role and Responsibility".	CL29 CL30	OK OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 03	2	(b) Eligibility criteria for CPAs 167. The DOE shall assess the specified eligibility criteria in the POA-DD in order to determine whether or not these criteria are sufficient to ensure that all CPAs would comply with the CDM requirements applicable to the PoA, these requirements will include inter alia the means of demonstrating the additionality of the CPA and the applicability of the applied methodology. The eligibility criteria represent an essential element of ensuring the smooth functioning or programmatic CDM, therefore the DOE may raise CARs which ensure the ease of application of the eligibility criteria.		Refer to VVM F. 5. 04 - F. 5. 28.	--	OK
	15	B. Development and update of eligibility criteria				
VVM F. 5. 04	15	14. The eligibility criteria shall cover as a minimum the following:2 (a) The geographical boundary of the CPA including any time-induced boundary3 consistent with the geographical boundary set in the PoA;	DR	This requirement is covered by the following eligibility criterion: - Criterion 1. A CPA is located in the south of Viet Nam composed of Ho Chi Minh City and 21 provinces described in the Section A.4.1.2. of CDM-SSC-PoA-DD.	OK	OK
VVM F. 5. 05	15	14. The eligibility criteria shall cover as a minimum the following:2 (b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	DR	Regarding the requirement for eligibility criteria “(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)”, CME is requested to clarify the registration number is labeled also on installed SWHs or only recorded in the database, and how the stated measures effectively prevent double counting.	CL31	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 06	15	14. The eligibility criteria shall cover as a minimum the following:2 (c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications;	DR	1) Regarding the requirement for eligibility criteria “(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications”, CME is requested to clarify why the stated criteria in the PoA-DD do not include conditions specified in (ii), (iv) and (v), Para 10 (c) of AMS-I.J., while the remaining (i), (iii) and (vi) are included. 2) Regarding the eligibility criterion “The SWH systems under a CPA comply with technical requirements for SWH systems TCVN8251:2009 announced by the Ministry of Science and Technology, Viet Nam” provided in A.4.2.2. of the PoA-DD, TVCN 8251:2009 could not be considered as equivalent criteria of OG100 because its requirements includes only thermal absorber efficiency, thermal storage capacity and durability.	CL32 CL33	OK OK
VVM F. 5. 07	15	14. The eligibility criteria shall cover as a minimum the following:2 (d) Conditions to check the start date of the CPA through documentary evidence;	DR	Regarding the requirement for eligibility criteria “(d) Conditions to check the start date of the CPA through documentary evidence”, CME is requested to specify what kind of "documentary evidence” is used to determine the start date of a CPA.	CL34	OK
VVM F. 5. 08	15	14. The eligibility criteria shall cover as a minimum the following:2 (e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	DR	Regarding the applicability criterion “A CPA to be included in the PoA shall meet the applicability conditions of the methodology AMS-I.J. The compliance with applicability conditions is justified in the Section B.5.2 of the CPA-DD of a CPA.”, the reference to Section B.5.2 of the CPA-DD is not correct because only the conditions to apply "stipulated energy saving method" for calculation of emission reductions are described in Section B.5.2 of the CPA-DD.	CAR01	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 09	15	14. The eligibility criteria shall cover as a minimum the following:2 (f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A above;	DR	Refer to the comment provided under VVM E.6.04. (CL18). The eligibility criteria were revised based on Para 2 (c) of "Guidelines for demonstrating additionality of microscale project activities" (Version 03.0) (Criteria 4, 7-10, 12, 13 and 15).	--	OK
VVM F. 5. 10	15	14. The eligibility criteria shall cover as a minimum the following:2 (g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;4	DR	This requirement is not covered by the eligibility criteria as local stakeholder consultation as well as environmental analysis were done at PoA level only and not implemented at each SSC-CPA included in the SSC-PoA.	NA	NA
VVM F. 5. 11	15	14. The eligibility criteria shall cover as a minimum the following:2 (h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	DR	Regarding the requirement for eligibility criteria "(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance", CME is requested to demonstrate that a CPA under the proposed PoA will not receive any public funding from Annex I parties. Source of funding of subsidy for the PoA is also to be explained.	CL35	OK
VVM F. 5. 12	15	14. The eligibility criteria shall cover as a minimum the following:2 (i) Where applicable, target group (e.g. domestic/ commercial/ industrial, rural/ urban, grid connected/ off-grid) and distribution mechanisms (e.g. direct installation);5	DR	Regarding the requirement for eligibility criteria "(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid connected/off-grid) and distribution mechanisms (e.g. direct installation)", there is no criterion to exclude residences that are temporary or seasonal housing from the target group. Such residences are required to apply 300 kW/yr as stipulated energy savings and are inconsistent with the description of E.6.3. of the PoA-DD.	CL36	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 13	15	14. The eligibility criteria shall cover as a minimum the following:2 (j) Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/ standard from the Board pertaining to sampling and surveys;	DR	This requirement is not covered by the eligibility criteria as each SSC-CPA will be verified individually	NA	OK
VVM F. 5. 14	15	14. The eligibility criteria shall cover as a minimum the following:2 (k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria6 and remains within those thresholds throughout the crediting period of the CPA;	DR	This requirement is covered by Criteria 4, 7, 8, 9, 10, 12 and 15.	--	OK
VVM F. 5. 15	15	14. The eligibility criteria shall cover as a minimum the following:2 (l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.7	DR	This requirement is not addressed by the eligibility criteria since CPAs under the proposed PoA is exempted from debundling check based on "Guidelines on assessment of debundling for SSC project activities"(version 03), Section II, "Guidance for determining the occurrence of de-bundling under a programme of activities (PoA)", Paragraph 10.	NA	NA
VVM F. 5. 16	15	15. The eligibility criteria shall be verifiable.		JQA considers that the defined fourteen eligibility criteria are verifiable.	--	OK
VVM F. 5. 17	15	16. The validating DOE shall determine whether the eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.		JQA considers that the fourteen eligibility criteria are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 18	15	17. The CME shall have the competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA.		According to “SWHPOA-5: Training procedures”, before starting a new CPA, training is provided to staff of the Training and Communication Center and the R&D Department. The contents of the training are sufficient to develop competencies to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in the registered PoA.	--	OK
VVM F. 5. 19	15	17. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: (a) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;		The Manager of the R&D Department has overall responsibility to ensure that a CPA meets eligibility criteria. Training will be provided annually to personnel who involve in the process of inclusion of CPAs.	--	OK
VVM F. 5. 20	15	17. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: (b) Records of arrangements for training and capacity development for personnel;		According to “SWHPOA-5: Training procedures”, before starting a new CPA, training is provided to staff of the Training and Communication Center and the R&D Department. Training records shall be completed by the Manager of the R&D Department and sent to the Director of the ECC.	--	OK
VVM F. 5. 21	15	17. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: (c) Procedures for technical review of inclusion of CPAs;		The Manager of the R&D Department double-check the records in the database.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 22	15	17. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: (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);		The database for a CPA includes detailed information on each customer / SWH system and thus double accounting among CPAs in the PoA would not likely to occur. Inclusion of a SWH system that has been already registered either as a CDM project activity or as a CPA of another PoA also would not likely to occur because only the SWH systems which received subsidy from the ECC are included in the database.	--	OK
VVM F. 5. 23	15	17. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: (e) Records and documentation control process for each CPA under the PoA;		The staff of the Training and Communication Center input the data in the database after the cross-check between the result of the acceptance testing and the receipt of the subsidy. The Manager of R&D Department double check the database record. All monitoring data including all documents received from the SWH distributors and SWH system owners, the result of annual inspection, and database will be kept for a period of at least two years after the crediting period of each CPA.	--	OK
VVM F. 5. 24	15	17. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: (f) Measures for continuous improvements of the PoA management system;		The internal audit to check the procedures, archived documents, and records in the database will be conducted at least once a year by the project manager.	--	OK
VVM F. 5. 25	15	17. The CME shall develop and implement a management system that includes the following made available to the DOE at the time of validation of the PoA: (g) Any other relevant elements.		There are no any other elements.	--	NA

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 26	15	18. The DOE shall assess the elements of the management system referred to in paragraph 17 as part of the validation of the PoA or as part of the validation of the CPA inclusion.		JQA assessed the elements of the management system of the ECC as part of the validation of the PoA.	--	OK
VVM F. 5. 27	15	19. The CPAs shall be included in the PoA on the basis that the DOE has confirmed the eligibility of CPAs where applicable undertaking sample-based checks in accordance with the approved guidelines/standard from the Board.		The ECC opts for a verification method that does not use sampling. JQA confirmed CPA-1 complied with the eligibility criteria specified in the PoA-DD. Refer to the validation report for inclusion of CPA-1.	--	OK
VVM F. 5. 28	15	20. For PoAs that include combinations of technologies/measures and/or methodologies, distinct eligibility criteria shall be developed per combination as specified in paragraph 29(a) to 29(d), in Section C below.		The PoA does not include combinations of technologies/ measures and/or methodologies and thus NA.	NA	NA
VVM F. 5. 29	2	(c) Validation of CPAs 168. The DOE shall assess any proposed CPA, which a coordinating/managing entity wishes to include in the PoA, to determine whether or not it complies with the eligibility criteria specified in the POA-DD. The means of validation to determine compliance with this requirement will be specific to the PoA. The DOE may consider a desk review of the documentation sufficient to determine compliance in certain instances and may also consider follow-up interviews and/or site visits necessary for other types of PoA.	DR/SV	Refer to the validation report for CPA-1.	NA	NA

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 30	11	15. The validation by the DOE shall address the following issues: (a) Additionality of the PoA A PoA is a voluntary coordinated action by a private or public entity which coordinates and implements any policy/measure or stated goal (i.e. incentive schemes and voluntary programmes), which leads to anthropogenic GHG emission reductions or net anthropogenic greenhouse gas removals by sinks that are additional to any that would occur in the absence of the PoA, via an unlimited number of CPAs.)	DR/SV	Refer to VVM E.6.	--	OK
VVM F. 5. 31	11	15. The validation by the DOE shall address the following issues: (b) Eligibility criteria for inclusion of a proposed CPA in the registered PoA, including criteria to be used for demonstration of additionality of a CPA;	DR/SV	Refer to VVM F. 5. 04 - VVM F. 5. 28.	--	OK
VVM F. 5. 32	11	15. The validation by the DOE shall address the following issues: (c) Operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA. (Description of the operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA, including a record keeping system for each CPA under the PoA, a system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another PoA, the provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA)		Refer to VVM F. 5. 02.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM F. 5. 33	10	15. The validation by the DOE shall address the following issues: (d) Consistency between CDM-POA-DD and the PoA generic CDM-CPA-DD to be used for inclusion of a CPA in the registered PoA;		The information provided in the generic CPA-DD shall be consistent with the information provided in the final PoA-DD.	CAR02	OK
VVM F. 5. 34	11	15. The validation by the DOE shall address the following issues: (e) In cases where more than one approved methodology will be applied to each CPA, confirmation that the application of multiple methodologies has been approved in accordance with "Procedures for approval of the application of multiple methodologies to a programme of activities".		Only one approved methodology will be applied to each SSC-CPA.	NA	NA
VVM G.		Validation report				
VVM G.01	2	173. The **validation report** shall: (a) State the DOE's conclusions regarding the proposed CDM project activity's conformity with applicable CDM requirements; (b) Give an overview of the validation activities carried out by the DOE in order to arrive at the final validation conclusions and opinion, including a general discussion of details captured by the validation protocol and conclusions related to CDM requirements; (c) Reflect the results of the dialogue between the DOE and the project participants, as well as any adjustments made to the project design following stakeholder consultation. It shall reflect the responses to CARs and CLs, and discussions on and revisions to project documentation.	DR/SV	(a) Refer to Section 5 of the validation report. (b) Refer to Section 2 of the validation report. (c) Refer to Appendix A of the validation report.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM G.02	2	174. The **validation report** shall provide at least the following: (a) A summary of the validation process and its conclusions; (b) All the DOE's applied approaches, "findings and conclusions, especially on: baseline selection, additionality, emission factors and monitoring",[57] (c) Information on the global stakeholders consultation carried out by the DOE prior to submitting the project for validation, including dates and how comments received have been taken into consideration by the DOE; (d) A list of interviewees and documents reviewed; (e) Details of the validation team; (f) Information on quality control within the team/of the validation process; (g) Appointment certificates or curricula vitae of the DOE's validation team members.	DR/SV	(a) Refer to the summary of the validation report. (b) Refer to Section 3 of the validation report. (c) Refer to Section 4 of the validation report. (d) Refer to Section 7 of the validation report. (e) Refer to Section 1.4. and Appendix C of the validation report. (f) Refer to Section 2.2.5. of the validation report. (g) Refer to Appendix B of the validation report.	--	OK
VVM H.		Validation opinion				

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM H.01	2	175. The DOE shall provide either: (a) A **positive validation opinion** in its validation report that is submitted as a request for registration;[58] or (b) A **negative validation opinion** in its validation report explaining the reason for its opinion if the DOE determines that the proposed CDM project activity does not fulfill applicable CDM requirements. If such negative opinion is issued prior to the submission of the request for registration of the project activity, in accordance with paragraph 40 (e) (ii) of the CDM Modalities and Procedures, the DOE shall provide this validation report to the project participants, and in accordance with paragraph 18 of the "Procedures for processing and reporting on validation of CDM project activities" (EB 50, annex 48) the DOE shall notify the CDM Executive Board that such a validation report has been issued. If the negative opinion is issued after the request for registration of the project activity has been submitted by the DOE to the Board, the DOE may request for the withdrawal of the request for registration in accordance with the "Procedures for withdrawal of a request for registration". [59]	DR/SV	JQA provided: (a) A positive validation opinion in its validation report that is submitted as a request for registration.	--	OK

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Section Seq. No.	Ref. No.	Requirement	MoV	Comments	Draft Conc.	Final Conc.
VVM H.02	2	176. The **validation opinion** shall include at least the following: (a) A summary of the validation methodology and process used and the validation criteria applied; (b) A description of project components or issues not covered by the validation process; (c) A summary of the validation conclusions; (d) A statement on the validation of the expected emission reductions; (e) A statement whether the proposed CDM project activity meets the stated criteria.	DR/SV	The validation opinion includes (a) - (e).	--	OK

Table 3 PoA-DD Requirements and CARs/CLs/FARs raised by the validation team

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A		General description of small-scale programme of activities			
A.1		Title of the small-scale programme of activities (PoA)			
A.1.01	1	The title of the PoA	Installing Solar Water Heating Systems in the South of Viet Nam	OK	OK
A.1.02	1	The current version number of the document	Version 04	OK	OK
A.1.03	1	The date when the document was completed	04/06/2012	OK	OK
A.2		Description of the small-scale programme of activities (PoA)			
A.2.01	4	1. General operating and implementing framework of PoA	The ECC will promote the use of SWH systems by providing information regarding the economic and environmental benefits of SWH systems and explain the support structure of the subsidy programme and SWH system distributors. Under the programme, the ECC will receive applications from prospective users and select applicants who are eligible for the subsidy. Consumers will receive the subsidy from the ECC only after the ECC have confirmed installation of the SWH system.	OK	OK
A.2.02	4	2. Policy/measure or stated goal of the PoA	The goal of this PoA is to promote energy saving in the southern region of Viet Nam.	OK	OK
A.2.03	4	3. Confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity.	This project is a voluntary initiative coordinated by the Energy Conservation Center (ECC) of Ho Chi Minh City.	OK	OK
A.3		Coordinating/managing entity and participants of SSC-POA			
A.3.01	4	1. Coordinating or managing entity of the PoA as the entity which communicates with the Board	Energy Conservation Center of Ho Chi Minh City	OK	OK
A.3.02	4	2. Project participants being registered in relation to the PoA.	- The Energy Conservation Center of Ho Chi Minh City - Mitsubishi UFJ Morgan Stanley Securities Co., Ltd.	OK	OK
A.4		Technical description of the small-scale programme of activities			
A.4.1		Location of the programme of activities			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.4.1.1	4	Host Party(ies)	Socialist Republic of Viet Nam	OK	OK
A.4.1.2		Physical/ Geographical boundary			
A.4.1.2.01	4	Definition of the boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all SSC-CPAs included in the PoA will be implemented.	South of Viet Nam: Ho Chi Minh City (HCMC) and 21 provinces (Ninh Thuan, Binh Thuan, Lam Dong, Binh Duong, Binh Phuoc, Ba Ria Vung Tau, Dong Nai, Long An, Tien Giang, Ben Tre, Tay Ninh, Hau Giang, Bac Lieu, Can Tho, Ca Mau, Dong Thap, An Giang, Kien Giang, Vinh Long, Tra Vinh, Soc Trang).	OK	OK
A.4.1.2.02	4	Consideration of the requirement that all applicable national and/or sectoral policies and regulations of each host country within that chosen boundary.	The PoA is within a single host country and thus NA.	NA	NA
A.4.1.2.03	3	Are the geographical coordinates of the project site(s) provided in the PDD for a clear identification of the site(s)?	Latitude: 8°33'N and 12°26'N Longitude: 103°49E and 109°40E.	OK	OK
A.4.2		Description of a typical small-scale CDM programme activity (CPA)			
A.4.2.1		Technology or measures to be employed by the SSC-CPA			
A.4.2.1.01	1	Please specify the type and category of the project activity using the categorization of Appendix B to the simplified modalities and procedures for SSC CDM project activities	Type and category of typical SSC-CPA is not required to be reported by PoA-DD and CPA-DD.	NA	NA
A.4.2.1.02	1	If none of the approved categories under Appendix B are applicable to the proposed project activity, new project categories can be proposed for the consideration of the EB.	Ditto.	NA	NA

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.4.2.1.03	1	This section should also include a description of how environmentally safe and sound technology and know how is being applied by the project activity interalia technology transfer to the Host Party(ies) for application in the project activity.	SWH systems employ water heating technology using solar energy. SWH systems to be installed by a typical CPA under the proposed PoA have following specifications: - The SWH systems under a CPA have either flat plate or evacuated tube collectors. - The typical sizes of storage tank of SWH systems under a CPA range from 120 to 300liters. - The typical sizes of collector area of SWH systems under a CPA range from 1.0 to 3.0m2. - All SWH systems will be passive systems without a forced circulation system or auxiliary heat source, so that all systems installed under a typical CPA do not consume energy sources other than solar energy.	OK	OK
A.4.2.2		Eligibility criteria for inclusion of a SSC-CPA in the PoA			
A.4.2.2.01	1	Is only a description of criteria for enrolling the CPA described?	Eligibility criteria required by Para 14 of "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0) are described.	OK	OK
A.4.2.2.02		Are criteria for demonstrating additionality of CPA described in section E.5.?	Eligibility criteria for demonstrating additionality of CPA is described in section E.5.2.	OK	OK
A.4.3		Description of how the anthropogenic emissions of GHG by sources are reduced by a SSC-CPA below those that would have occurred in the absence of the registered PoA (assessment and demonstration of additionality)			
A.4.3.01	4	The following shall be demonstrated here: (i) The proposed PoA is a voluntary coordinated action;	The proposed PoA is a voluntary coordinated action with the goal to promote energy saving in the south of Viet Nam by installing a large number of SWH systems.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.4.3.02	4	(ii) If the PoA is implementing a voluntary coordinated action, it would not be implemented in the absence of the PoA;	The PoA is implementing a voluntary coordinated action.	OK	OK
A.4.3.03	4	(iii) If the PoA is implementing a mandatory policy/regulation, this would/is not enforced;	The proposed PoA is not implementing a mandatory policy/regulation that would/is not enforced; hence not applicable.	NA	NA
A.4.3.04	4	(iv) If mandatory a policy/regulation is enforced, the PoA will lead to a greater level of enforcement of the existing mandatory policy/regulation.	The proposed PoA is not lead to a greater level of enforcement of the existing mandatory policy/regulation; hence not applicable.	NA	NA
A.4.3.05	4	Is the information presented here constitute the demonstration of additionality of the PoA as a whole?	The information presented here constitute the demonstration of additionality of the PoA as a whole based on "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (Version 01.0).	OK	OK
A.4.4		Operational, management and monitoring plan for the programme of activities (PoA)			
A.4.4.1		Operational and management plan			
A.4.4.1.01	4	Description of the operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA, including: (i) A record keeping system for each CPA under the PoA,	A database will be set up by the ECC for each CPA and for the PoA.	OK	OK
A.4.4.1.02	4	(ii) A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA,	It is not clear why parameters included in the database set up by the ECC described in A.4.4.1, A.4.4.2 and E.7.2 of the PoA-DD are different (e.g., crediting period of a CPA, result of acceptance testing, etc.)	CL37	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.4.4.1.03	4	(iii) The SSC-CPA included in the PoA is not a de-bundled component of another CDM programme activity (CPA) or CDM project activity.	According to "general guidelines to SSC CDM methodologies" (Version 17), a CPA of the PoA is exempt from performing a de-bundling check and is not considered a de-bundled component of a large scale activity.	OK	OK
A.4.4.1.04	4	(iv) The provisions to ensure that those operating the CPA are aware of and have agreed that their activity is being subscribed to the PoA;	The ECC is the sole coordinating entity of this PoA and also implementer of all CPAs under the PoA, hence the ECC is aware that all CPAs are subscribed to the PoA.	OK	OK
A.4.4.2		Monitoring plan			
A.4.4.2.01	4	The following information shall be provided here: (i) Description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of reductions of anthropogenic emissions by sources or removals by sinks of greenhouse gases achieved by CPAs under the PoA.	CME will verify each CPA individually and thus NA.	NA	NA
A.4.4.2.02	4	(ii) In case the coordinating/managing entity opts for a verification method that does not use sampling but verifies each CPA (whether in groups or not, with different or identical verification periods) a transparent system is to be defined and described that ensures that no double accounting occurs and that the status of verification can be determined anytime for each CPA;	1) The difference of the following two parameters described in A.4.4.2 of the PoA-DD is not clear: - Data from the sample group indicating the proportion of SWHs that were operating during the monitoring period; - Data from the sample group indicating the number of systems operating; 2) The description "The figure in Annex 4 shows the monitoring structure for a typical CPA" in A.4.4.2 of the PoA-DD is to be reviewed as Annex 4 does not include any figure.	CL38 CL39	OK OK
A.4.5		Public funding of the programme of activities (PoA)			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.4.5.01	1	In case public funding from Annex 1 Parties is involved, provide in Annex 2 information, which includes an affirmation information that such funding does not result in a diversion of ODA, and is separated from and is not counted towards the financial obligations of those parties.	The proposed PoA will not receive any public funds resulting from official development assistance from Parties included in Annex I to the Convention.		
B		Duration of the programme of activities (PoA)			
B.1.		Starting date of the programme of activities (PoA)			
B.1.01	1	Please state the dates in the following format: (DD/MM/YYYY).	09/11/2009	OK	OK
B.2.		Length of the programme of activities (PoA)			
B.2.01	1	Please state the length of the first crediting period in years and months	28 Years	OK	OK
B.2.02	5	Does' t the length of the PoA not exceed 28 years?	No.	OK	OK
C.		Environmental Analysis			
C.1.		Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken:			
C.1.01	1	Is the level of environmental analysis ("1. Environmental Analysis is done at PoA level" or "2. Environmental Analysis is done at SSC-CPA level") indicated?	"1. Environmental Analysis is done at PoA level" is selected.	OK	OK
C.1.02	1	Is the choice of level at which the environmental analysis is undertaken justified?	Environmental analysis is undertaken at the PoA level since the impact of all CPAs will be similar.	OK	OK
C.2.		Documentation on the analysis of the environmental impacts, including transboundary impacts			
C.2.01	4	Describe the analysis of the environmental impacts, including transboundary impacts.	There are not expected to be any environmental impacts due to the implementation of the project.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
C.3.		Please state whether in accordance with the host Party laws/regulations, an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA)			
C.3.01	4	State whether an EIA is required for a typical CPA included in the PoA in accordance with the host Party laws/regulations.	CME is request to describe the effective EIA legislation in the PoA-DD. Through the interview with the officers in DONRE, JQA confirmed that Circular No.490/1998/TT-BKHCNMT was replaced with new law and not valid.	CL28	OK
C.3.02	10	Describe whether there are any requirements for an EIA in the host country. If yes, describe whether an EIA have been approved by local/central government.	EIA is not required and thus NA.	NA	NA
C.3.03	1	If applicable, please provide a short summary and attach documentation.	Ditto.	NA	NA
D.		Stakeholders' comments			
D.1.		Please indicate the level at which local stakeholder comments are invited. Justify the choice			
D.1.01	4	Is the level of local stakeholder consultation ("1. Local stakeholder consultation is done at PoA level" or "2. Local stakeholder consultation is done at SSC-CPA level") indicated?	"1. Local stakeholder consultation is done at PoA level" is selected.	OK	OK
D.1.02	4	Justify the choice of level at which the stakeholder consultation is undertaken.	The geographical boundary of the PoA is the south of Viet Nam. Each CPA consists of a group of SWH systems installed in a same year across the south of Viet Nam. The ECC determined that there would be no significant difference in the comments toward this project depending on the year of installation. Therefore, it is considered appropriate to carry out the local stakeholder consultation at PoA level.	OK	OK
D.2.		Brief description how comments by local stakeholders have been invited and compiled			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
D.2.01	1	Describe the process by which comments by local stakeholders have been invited and compiled. (An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilities comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. In this regard, project participants shall describe a project activity in a manner which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.)	A pilot project to install SWH systems for the purpose of a feasibility study was implemented from August to December in 2008. Information including the purpose and description of the project, and the application process to join the project were promoted during the pilot project. Respondents who registered under the pilot project were interviewed after the installation of SWH. The ECC staff randomly interviewed 55 people out of 865 who came to the ECC office to receive subsidies from the ECC. Each respondent spent enough time to answer each question in a questionnaire provided and also ask question to the ECC staff if they have any.	OK	OK
D.2.02	10	Describe whether there are any laws/requirements for a stakeholders consultation process in the host country. If yes, describe whether the stakeholders consultation process has been carried out in accordance with such laws/requirements.	There are no laws/requirements for a stakeholders' consultation process in Viet Nam.	OK	OK
D.3.		Summary of the comments received			
D.3.01	1	Identify stakeholders that have made comments and provide a summary of these comments.	97% of respondents commented that their electricity cost was reduced after installing SWH systems and they were happy about this saving, while the remaining 3% had no comments. Comments indicating the safety and convenience of the SWH systems were also received.	OK	OK
D.4.		Report on how due account was taken of any comments			
D.4.01	1	Explain how due account have been taken of comments received.	No negative comments were received, thus no further action was deemed necessary.	OK	OK
E		Application of a baseline and monitoring methodology			
E.1		Title and reference of the approved SSC baseline and monitoring methodology applied to a SSC-CPA included in the PoA:			
E.1.01	1	Is the most recent list of the small-scale CDM project activity categories contained in Appendix B referred?	AMS-I.J. "Solar water heating systems" (Version 01)	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.1.02	4	Is the approved SSC baseline and monitoring methodology approved for use in a PoA by the Board?	The approved baseline and monitoring methodology AMS-I.J. version 01 was approved at EB60, and thus this is applied to a CPA included in the PoA.	OK	OK
E.2		Justification of the choice of the methodology and why it is applicable to a SSC-CPA			
E.2.01	1	justify the choice of project type and category for the proposed project activity.	Justification of the choice of project type and category for the proposed project activity, compliance with Para 1-5 of AMS-I.J., is provided in a tabler form.	OK	OK
E.2.02	1	Demonstrate that the project activity qualifies as a small-scale project activity and that it will remain under the limits of small-scale project activity types (Type I: <= 15MW; Type II: <= 60GWh/yr; Type III: <= 60ktCO2e) during every year of the crediting period.	The aggregated installed thermal energy generation capacity of one CPA of the PoA is less than 45 MW thermal which is equivalent to the 64,000 m2 of the collector area using a conversion factor of 700Wth/m2 following the paragraph 4(d) in the “General guidelines to SSC CDM methodologies”.	OK	OK
E.2.03	4	In the case of CPAs which individually do not exceed the SSC threshold, SSC methodologies may be used once they have first been reviewed and, as needed, revised to account for leakage in the context of a SSC-CPA.	Leakage in the context of a SSC-CPA is addressed by Para 20 of AMS-I.J. (Version 01). Therefore, AMS-I.J. can be used.	OK	OK
E.3		Description of the sources and gases included in the SSC-CPA boundary			
E.3.01	2	Describe which emission sources and gases are included in the project boundary for the purpose of calculation project emissions and baseline emissions (using the table).	Emission sources and gases are included in the project boundary for the purpose of calculation project emissions and baseline emissions are described using the table.	OK	OK
E.3.02	2	In cases where the methodology allows project participants to choose whether a source or gas is to be included in the project boundary, explain and, where necessary, justify the choice.	AMS-I.J. does not allows CME to choose whether a source or gas is to be included in the project boundary and thus not applicable.	NA	NA

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.4		Description of how the baseline scenario is identified and description of the identified baseline scenario			
E.4.01	1	Specify the baseline for the proposed project activity with reference to the chosen project category.	The electric water heater is identified as the baseline system.	OK	OK
E.4.02	1	Explain and justify the key assumptions and rationale.	Other than SWH systems, electric water heaters are the only available technology in the market of Viet Nam to heat water for household showering which is the predominant usage of the heated water generated by the SWH systems at household. In fact, the electricity consumed for water heating accounts for 13% and 7%of the total electricity consumption of one family in the urban and the rural area respectively. Due to its reasonable price range (USD100-160) compared to the price of solar water heaters (USD400- 700), and easy installation, the electric water heater is the most commonly used technology in Viet Nam.	OK	OK
E.4.03	1	Illustrate in a transparent manner all data used to determine the baseline emissions (variables, parameters, data sources etc.) preferably in a tabular form.	Data used to determine the baseline emissions are provided in Annex 3 in a tabular form.	OK	OK
E.5		Description of how the anthropogenic emissions of GHG by sources are reduced below those that would have occurred in the absence of the SSC-CPA being included as registered PoA (assessment and demonstration of additionality of SSC-CPA)			
E.5.1		Assessment and demonstration of additionality for a typical SSC-CPA			
E.5.1.01	4	Demonstrate additionality of a typical CPA using the procedure provided in the baseline and monitoring methodology applied.	Additionality is demonstrated based on "Guidelines for demonstrating additionality of microscale project activities" (Version 02)	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.5.1.02	1	Demonstrate that the proposed project activity is additional as per options provided under attachment A to Appendix B of the simplified M&P for SSC-CDM project activities.	Ditto.	NA	NA
E.5.1.03	1	National policies and circumstances relevant to the baseline of the proposed project activity shall be summarized here.	Ditto.	NA	NA
E.5.1.04	6	Type I SSC Project activities up to 5MW are additional if any one of the conditions below is satisfied:2 (a) The geographic location of the project activity is LDCs/SIDs or in a special underdeveloped zone of the host country identified by the Government before 28 May 2010; (b) The project is an off grid activity supplying energy to households / communities (less than 12 hrs grid availability per 24 hrs day is also considered as "off grid"); (c) The project is designed for distributed energy generation (not connected to a national or regional grid)3 with both conditions (i) and (ii) satisfied; (i) Each of the independent subsystems/measures in the project activity is smaller than or equal to 1500kW electrical installed capacity; (ii) End users of the subsystems or measures are households / communities / SMEs. (d) The project employs specific renewable energy technologies/measures recommended by the host country DNA and approved by the Board to be additional in the host country (the total installed capacity of the technology/measure shall be less than or equal to 5% to national annual electricity generation).	Ditto.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.5.1.05	6	Type II SSC project activities4 that aim to achieve energy savings no more than 20 GWh/yr are additional if any one of the conditions below is satisfied: (a) The geographic location of the project activity is in LDC/SID or special underdeveloped zone of the host country identified by the Government before 28 May 2010; (b) The project activity is an energy efficiency activity with both conditions (i) and (ii) satisfied; (i) Each of the independent subsystems/measures in the project activity achieves an estimated annual energy savings equal to or smaller than 600 megawatt hours; and (ii) End users of the subsystems or measures are households/communities/SMEs.	A CPA under the PoA is Type I SSC project activities; hence not applicable.	NA	NA
E.5.1.06	6	Type III SSC project activities5 that aim to achieve emissions reductions at a scale of no more than 20 ktCO2e/yr are additional if any one of the following conditions is satisfied: (a) The geographic location of the project activity is a LDC/SID or special underdeveloped zone of the host country as identified by the Government before 28 May 2010; (b) The project activity is an emission reduction activity with both conditions (i) and (ii) satisfied (see below); (i) Each of the independent subsystems/measures in the project activity achieves an estimated annual emission reduction equal to or less than 600 tCO2e per year; and (ii) End users of the subsystems or measures are households/communities/SMEs.	Ditto.	NA	NA
E.5.2		Key criteria and data for assessing additionality of a SSC-CPA			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.5.2.01	4	Here the PPs shall provide the key criteria for assessing additionality of a CPA when proposed to be included in the registered PoA.	A CPA of the PoA is additional if the total collector area installed under a CPA is less than 21,428 m2.	OK	OK
E.5.2.02	4	The criteria shall be based on additionality assessment undertaken in section E.5.1.	The criteria is based on additionality assessment undertaken in section E.5.1.	OK	OK
E.5.2.03	4	The project participants shall justify the choice of criteria based on analysis in section E.5.1.	CME justifies the choice of criteria based on analysis in section E.5.1.	OK	OK
E.5.2.04	4	It shall be demonstrated how these criteria would be applied to assess the additionality of a typical CPA at the time of inclusion.	The ex-ante estimation of total collector area size of each CPA is examined in the CPA-DD.	OK	OK
E.5.2.05	4	Information provided here shall be incorporated into the PoA specific CDM-SSC-CPA-DD that shall be included in documentation submitted by project participants at registration of PoA.	Information provided here is incorporated into B.3. of the PoA specific CPA-DD.	OK	OK
E.6		Estimation of Emission reductions of a CPA			
E.6.1.		Explanation of methodological choices, provided in the approved baseline and monitoring methodology applied, selected for a typical SSC-CPA			
E.6.1.01	1	Explain how the procedures, in the approved project category to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity.	The procedures to calculate project emissions, baseline emissions, leakage emissions and emission reductions in AMS-I.J. is described.	OK	OK
E.6.1.02	1	Clearly state which equations will be used in calculating emission reductions.	It is clearly stated which equations will be used in calculating emission reductions.	OK	OK
E.6.1.03	1	Explain and justify all relevant methodological choices, including: (a) where the category provides different options to choose from (e.g. “combined margin” under AMS I.D);	The following different options are explained: - "stipulated energy saving method" under AMS-I.J. - “combined margin” under AMS-I.D.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.6.1.04	1	(b) where the category provides for different default values (e.g. values for MCF under AMS III.E)	The default value of 450kWh/m2/year for the stipulated energy saving method is explained and justified.	OK	OK
E.6.2.		Equations, including fixed parametric values, to be used for calculation of emission reductions of a SSC-CPA			
E.6.2.01	1	Clearly state which equations will be used in calculating baseline emissions, including fixed parametric values, to be used for calculation of baseline emissions.	Emission reductions are directly calculated.	OK	OK
E.6.2.02	1	Clearly state which equations will be used in calculating project emissions, including fixed parametric values, to be used for calculation of project emissions.	No project emissions.	OK	OK
E.6.2.03	1	Clearly state which equations will be used in calculating leakage emissions, including fixed parametric values, to be used for calculation of leakage emissions.	No leakage emissions.	OK	OK
E.6.2.04	1	Clearly state which equations will be used in calculating be emission reductions, including fixed parametric values, to be used for calculation of emission reductions.	Equation used in calculating emission reductions is described.	OK	OK
E.6.2.05	1	Where relevant, provide additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets).	Information on data used for calculation of grid emission factor is provided in Annex 3.	OK	OK
E.6.2.06	1	If the project activity involves more than one component activity, equations for each of the component shall be provided separately in a transparent manner.	The project activity involves only one component activity.	OK	OK
E.6.3.		Data and parameters that are to be reported in CDM-SSC-CPA-DD form			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.6.3.01	1	This section shall include a compilation of the data and parameters NOT monitored but determined upfront so as to be available for validation. Data from monitoring (e.g. measurements after the implementation of the project activity) should not be included here but in the table in section E.7.1.	The following parameters that are not monitored but determined upfront so as to be available for validation are included: - $EF_{EL,y}$ (tCO2/MWh): Emission factor for electricity grid in year y - ESy (kWh/m2/year): The stipulated energy saving values	OK	OK
E.6.3.02	1	This may includes data that is measured, if relevant with sample thereof, and data that is collected from sources such as official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature.	$EF_{EL,y}$ is collected from the data published by DNA of Viet Nam. ESy is sourced by AMS-I.J.	OK	OK
E.6.3.03	1	Data that is calculated with equations provided in the approved category or default values specified in the category should not be included in the compilation.	Data that is calculated with equations provided in the approved category or default values specified in the category are not included in the compilation.	OK	OK
E.6.3.04	1	Provide for each parameter the chosen value or, where relevant, the qualitative information, using the table.	Chosen value and qualitative information are provided for each parameter.	OK	OK
E.6.3.05	1	Provide the actual value applied. Where time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Annex 3.	The following values are applied: - $EF_{EL,y}$: 0.5764 tCO2/MWh - ESy: 450 kWh/m2/year	OK	OK
E.6.3.06		Explain and justify the choice for the source of data. Provide clear and transparent references or additional documentation in Annex 3.	The choice for the source of data are explain and justified.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.6.3.07	1	Where values have been measured, include a description of the measurement methods and procedures that comply with the guidance provided under general guidance to indicative SSC methodologies (e.g. which standards have been used), indicate the responsible person / entity having undertaken the measurement, the date of measurement(s) and the measurement results. More detailed information can be provided in Annex 3.	There are no values have been measured and thus not applicable.	OK	OK
E.7.		Application of the monitoring methodology and description of the monitoring plan			
E.7.1.		Data and parameters to be monitored by each SSC-CPA			
E.7.1.01	1	Data that becomes available only after validation of the project activity (e.g. measurements after the implementation of the project activity) should be included here.	The following data becomes available only after the validation is provided: - N (unit): The number of SWH systems installed - Ax,y (m2): The collector area of the SWH system x verified to have been installed by the - project activity in year y - Result of acceptance test (-): Result of acceptance test - Dx,y (-): The proportion of days in which SWH system x is being installed in year y - Ry (-): The proportion of SWH systems that are operational and in compliance with manufacture-required maintenance procedures in year y - ly (-): Average annual technical grid losses during year y	OK	OK
E.7.1.02	1	Provide information for each parameter using the table.	Information for each parameter is provided using the table.	OK	OK
E.7.1.03	1	Provide for each parameter the following information: (a) The source(s) of data that will be actually used for the proposed project activity (e.g. which exact national statistics, actual measurement etc.).	Yes.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.7.1.04	1	(b) Where the parameters are to be measured in accordance with the guidance of the approved project category or the general guidance to the indicative methodologies, specify the measurement methods and procedures including - accepted industry standards or national or international standards which will be applied; - which measurement equipment is used; - how the measurement is undertaken; - which calibration procedures are applied; - what is the accuracy of the measurement method; - who is the responsible person / entity that should undertake the measurements; and - what is the measurement interval.	Yes.	OK	OK
E.7.1.05	4	In the section "Description of measurement methods and procedures to be applied", the project participants shall provide description of equipment used for measurement, if applicable, and its accuracy class.	Measurement equipment is not used and thus not applicable.	NA	NA
E.7.1.06	1	A description of the QA/QC procedures (if any) that should be applied.	Yes.	OK	OK
E.7.1.07	1	Where relevant: any further comment.	No further comment is provided.	NA	NA
E.7.1.08	1	Provide any relevant further background documentation in Annex 4.	No further background documentation is provided in Annex 4.	NA	NA
E.7.2.		Description of the monitoring plan for a SSC-CPA			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
E.7.2.01	1	Provide a detailed description of the monitoring plan. Describe the operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity.	The operational and management structure is provided as a figure in this section.	OK	OK
E.7.2.02	1	Clearly indicate the responsibilities for and institutional arrangements for data collection and archiving.	The responsibilities for and institutional arrangements for data collection and archiving is provided in this section as well as A.4.4.1.	OK	OK
E.7.2.03	1	The monitoring plan should reflect good monitoring practice appropriate to the type of project activity.	The monitoring plan reflects good monitoring practice appropriate to the type of project activity. Sampling plan for Ry is also described.	OK	OK
E.7.2.04	1	Provide any relevant further background documentation in Annex 4.	No relevant further background documentation in Annex 4.	NA	NA
E.8.		Date of completion of the application of the baseline study and monitoring methodology and the name of the responsible person(s)/entity(ies)			
E.8.01	1	Provide date of completion of the application of the methodology to the project activity study in DD/MM/YYYY.	04/06/2012	OK	OK
E.8.02	1	Provide contact information of the person(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity.	Clean Energy Finance Committee Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. (MUMSS) 5th Floor, Toyosu Front, 3-2-20 Toyosu, Koto-ku, Tokyo, 135-0061, Japan kurokawa-ayato@sc.mufg.jp	OK	OK
E.8.03	1	Indicate if the person/entity is also a project participant listed in Annex 1.	MUMSS is a project participant listed in Annex 1.	OK	OK
Annex 1		Contact information on Coordinating/managing entity and PPs in the PoA			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
Annex 1.01	1	Fill for each organization listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail.	Mandatory fields are filled for the ECC and MUMSS (note that postfix/ZIP is not used in Viet Nam).	OK	OK
Annex 2		Information regarding public funding			
Annex 2.01	1	Provide information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties.	The PoA will not receive any public funds resulting from official development assistance from Parties included in Annex I to the Convention.	OK	OK
Annex 3		Baseline information			
Annex 3.01	1	Provide any further background information used in the application of the baseline methodology. This may include tables with time series data, documentation of measurement results and data sources, etc.	1) The units of daily solar radiation (kWh/day) and Heat Absorption (kJ) in the Table A3.1 in Annex 3 are to be reviewed. 2) Calculation result of OM emission factor is not provided in Table A.3.3. of Annex 3 of the PoA-DD.	CL40 CL41	OK OK
Annex 4		Monitoring information			
Annex 4.01	1	Provide any further background information used in the application of the monitoring methodology. This may include tables with time series data, additional documentation of measurement equipment, procedures, etc.	No relevant further background documentation in Annex 4.	NA	NA

Table 4 Generic CPA-DD Requirements and CARs/CLs/FARs raised by the validation team

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A		General description of small scale CDM programme activity			
A.1		Title of the small-scale CPA			
A.1.01	1	The title of the CPA	Installing Solar Water Heating Systems in the South of Viet Nam - XX	OK	OK
A.1.02	1	The current version number of the document	Version XX	OK	OK
A.1.03	1	The date when the document was completed	DD/MM/YYYY	OK	OK
A.2		Description of the small-scale CPA			
A.2.01	1	Include the description: (1) The purpose of the project activity	The purpose of the proposed small-scale Component Project Activity “Installing Solar Water Heating Systems in the South of Viet Nam-XX” (hereafter referred to as “CPA-XX”) is to install new residential solar water heating (SWH) systems under a programme, Installing Solar water Heating Systems in the South of Viet Nam (hereafter referred to as “PoA”), coordinated by the Energy Conservation Center of Ho Chi Minh City (ECC).	OK	OK
A.2.02	1	(2) explain how the proposed project activity reduces greenhouse gas emissions (i.e. what type of technology is being employed, what measures are undertaken as part of the project activity, etc.)	The SWH systems will reduce demand for electricity used for heating water, thereby reducing emissions of greenhouse gases (GHGs).	OK	OK
A.2.03	1	(3) The view of the project participants on the contribution of the project activity to sustainable development	This CPA-XX will contribute to the sustainable development of Viet Nam in economic, environmental and social dimensions.	OK	OK
A.3		Entity/individual responsible for the small-scale CPA			
A.3.01	1	CPA implementer(s) and Parties involved	The implementer for the CPA is the Energy Conservation Center of Ho Chi Minh City.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.3.02	1	Provide contact information in Annex 1	It is not clear why Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. is included in annex 1 although it is not listed as a entity/individual responsible for the SSC-CPA.	CL42	OK
A.3.03	4	CPA implementers can be project participants of the PoA, under which the CPA is submitted, provided their name is included in the registered PoA.	The ECC is included in the PoA as a project participant.	OK	OK
A.4		Technical description of the small-scale CPA			
A.4.1		Identification of the small-scale CPA			
A.4.1.1	4	Host Party	Socialist Republic of Viet Nam	OK	OK
A.4.1.2		Geographic reference or other means of identification allowing the unique identification of the small-scale CPA			
A.4.1.2.02	4	Name/contact details of the entity/individual responsible for the CPA	The implementer for the CPA-XX is the ECC. Contact details of the entity / individual responsible for the CPA-XX is provided in Annex1.	OK	OK
A.4.1.2.03	4	In case of stationary CPA, geographic reference	The information for SWH systems kept by the ECC is to be consistent with the information provided in the final PoA-DD.	CAR02	OK
A.4.1.2.04	4	In case of mobile CPAs, means such as registration number, GPS devices, etc.	The CPA is stationary CPA and thus NA.	NA	NA
A.4.1.2.05	3	Are the geographical coordinates of the project site(s) provided in the PDD for a clear identification of the site(s)?	The geographical coordinates of the project site(s) are provided in the CPA-DD for a clear identification of the site(s)	OK	OK
A.4.2		Duration of the small-scale CPA			
A.4.2.1		Starting date of the small-scale CPA			
A.4.2.1.01	4	Starting date of the small-scale CPA	The starting date of the CPA-XX is DD/MM/YYYY.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.4.2.1.02	1	The starting date of a CDM project activity is the date on which the implementation or construction or real action of a project activity begins.	This is the【date or expected date】on which the contract with the first SWH distributor who will participate in the CPA-XX and the ECC【was or will be signed】.	OK	OK
A.4.2.2		Expected operational lifetime			
A.4.2.2.01	1	State the expected operational lifetime in years and months.	15 years and 0 month	OK	OK
A.4.3		Choice of the crediting period and related information			
A.4.3.01	4	Is "Renewable crediting period" or "Fixed crediting period", which is not applicable, deleted?	Yes. Only "Renewable crediting period" remains.	OK	OK
A.4.3.1		Starting date of the crediting period			
A.4.3.1.01	1	State the dates in DD/MM/YYYY.	The starting date of the crediting period is DD/MM/YYYY or the date of inclusion of the CPA-XX into the registered PoA, whichever occurs later.	OK	OK
A.4.3.2		Length of the crediting period, first crediting period if the choice is renewable CPA			
A.4.3.2.01	1	State the length of the crediting period or the first crediting period in years and months	7 years.	OK	OK
A.4.3.2.02	1	Fixed crediting period shall be at most 10 years.	Renewable crediting period is selected.	NA	NA
A.4.3.2.03	1	The first crediting period shall be at most 7 years.	7 years.	OK	OK
A.4.3.2.04	1	The duration of crediting period of any CPA shall be limited to the end date of the PoA regardless of when the CPA was added.	The duration of crediting period of the CPA-XX shall be limited to the end date of the PoA regardless of when the CPA-XX was added.	OK	OK
A.4.4		Estimated amount of emission reductions over the chosen crediting period			
A.4.4.01	1	Indicate the chosen crediting period	7 years.	OK	OK
A.4.4.02	1	Provide the estimation of total emission reductions as well as annual estimates for the chosen crediting period.	To be filled in each CPA ("XX").	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.4.4.03	1	Information on the emission reductions shall be in indicated using the tabular format.	Yes.	OK	OK
A.4.4.04	2	Use internationally accepted standard format for values where 1,000 represents one thousand and 1.0 represents one.	Yes.	OK	OK
A.4.5		Public funding of the CPA			
A.4.5.01	1	In case public funding from Annex 1 Parties is involved, provide in Annex 2 information, which includes an affirmation information that such funding does not result in a diversion of ODA.	The CPA-XX will not receive any public funds resulting from official development assistance from Parties included in Annex I to the Convention.	OK	OK
A.4.6		Information to confirm that the proposed small-scale CPA is not a de-bundled component			
A.4.6.01	4	Describe if there is already an activity* which has the same activity implementer as the proposed SSC-CPA. *(i) registered SSC-CPA of a PoA, (ii) an application to register another SSC-CPA of a PoA or (iii) another registered CDM project activity.	De-bundling check is based on "Guidelines on assessment of the de-bundling for SSC project activities" (version 03), Section II, "Guidance for determining the occurrence of de-bundling under a programme of activities (PoA)"; hence, not applicable.	NA	NA
A.4.6.02	4	Describe if there is already an activity*, which has a coordinating or managing entity, which also manages a large scale PoA of the same sectoral scope. *(i) registered SSC-CPA of a PoA, (ii) an application to register another SSC-CPA of a PoA or (iii) another registered CDM project activity.	Ditto.	NA	NA
A.4.6.03	4	Describe if the boundary is within 1 km of the boundary of the proposed SSC-CPA, at the closest point.	Ditto.	NA	NA

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
A.4.6.04	4	If a proposed small-scale CPA of a PoA is deemed to be a debundled component, but the total size of such a CPA combined with a registered small-scale CPA of a PoA or a registered CDM project activity does not exceed the limits for SSC-CDM, the CPA of a PoA can qualify to use simplified modalities and procedures for SSC-CDM project activities.	Ditto.	NA	NA
A.4.6.05	7	If each of the independent subsystems/measures (e.g., biogas digester, solar home system) included in the CPA of a PoA is no larger than 1% of the small-scale thresholds defined by the methodology applied (i.e., 15kW installed capacity or 0.6GWh/yr energy savings or 0.6 ktCO2e/yr emission reductions), then that CPA of PoA is exempted from performing de-bundling check i.e., considering as not being a de-bundled component of a large scale activity	The CPA of the PoA is exempted from performing de-bundling check based on "Guidelines on assessment of the de-bundling for SSC project activities" (version 03), Section II, "Guidance for determining the occurrence of de-bundling under a programme of activities (PoA)".	OK	OK
A.4.7		Confirmation that small-scale CPA is neither registered as an individual CDM project activity or is part of another Registered PoA			
A.4.7.01	4	Confirmation that SSC-CPA is not registered as an individual CDM project activity.	The CPA-XX is neither registered as or part of an individual CDM project activity, nor is it part of any other registered PoA. All SWH systems in the CPA-XX will be uniquely identified and recorded in the database developed by the ECC. The ECC will confirm that each SWH system in the CPA-XX is not a part of an individual CDM project or a part of any other registered PoA.	OK	OK
A.4.7.02	4	Confirmation that small-scale CPA is not part of another Registered PoA.	Ditto.	OK	OK
B		Eligibility of small-scale CPA and Estimation of emissions reductions			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
B.1		Title and reference of the Registered PoA to which small-scale CPA is added			
B.1.01	4	Title of the Registered PoA to which small-scale CPA is added	Installing Solar Water Heating Systems in the South of Viet Nam.	OK	OK
B.1.02	4	Reference of the Registered PoA to which small-scale CPA is added.	Version X	OK	OK
B.2		Justification of the why the small-scale CPA is eligible to be included in the Registered PoA			
B.2.01	4	Provide justification of the why the small-scale CPA is eligible to be included in the Registered PoA	The relevant description of the CPA-XX will be provided in the column of "Analysis of the CPA-XX".	OK	OK
B.2.02	10	Do eligibility criteria provided in this section is consistent with those provided in SSC-PoA to which the proposed SSC-CPA is included?	The eligibility criteria provided in this section shall be consistent with those provided in the final PoA-DD.	CAR02	OK
B.3		Assessment and demonstration of additionality of the small-scale CPA , as per eligibility criteria listed in the Registered PoA			
B.3.01	4	Assessment and demonstration of additionality of the small-scale CPA , as per eligibility criteria listed in the Registered PoA	The CPA-XX is additional if the total collector area installed under the CPA is less than 21,428 m2, and the end users of SWH systems installed under the CPA are households. The ex-ante estimation of total collector area size of the CPA-XX is estimated to be XXX m2, and the end users of SWH systems installed under the CPA-XX will be households. Therefore, the CPA-XX is additional.	OK	OK
B.3.02	10	Do eligibility criteria provided in this section is consistent with those provided in SSC-PoA to which the proposed SSC-CPA is included?	The description provided in this section is consistent with Criteria 12 and 15.	OK	OK
B.4		Description of the sources and gases included in the project boundary and proof that the small-scale CPA is located within the geographical boundary of the registered PoA.			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
B.4.01	2	Describe which emission sources and gases are included in the project boundary for the purpose of calculation project emissions and baseline emissions (using the table).	The gas reduced through the CPA-XX is CO2. The CPA-XX reduces electricity consumption by providing energy via SWH systems.	OK	OK
B.4.02	2	In cases where the methodology allows project participants to choose whether a source or gas is to be included in the project boundary, explain and, where necessary, justify the choice.	AMS-I.J. does not allows CME to choose whether a source or gas is to be included in the project boundary; hence, not applicable.	NA	NA
B.4.03	1	Define the project boundary of the project activity based on the guidance of the applicable project category.	The defined project boundary of the CPA-XX shall be consistent with those in the final PoA-DD.	CAR02	OK
B.4.04	4	Proof that the small-scale CPA is located within the geographical boundary of the registered PoA.	All the SWH systems in the CPA-XX are installed in XXX and XXX【name of the province or city】, which【is or are】located within the geographical boundary of the registered PoA. Therefore, the CPA-XX is located within the geographical boundary of the registered PoA.	OK	OK
B.5		Emission reductions			
B.5.1.		Data and parameters that are available at validation			
B.5.1.01	1	This section shall include a compilation of the data and parameters NOT monitored but determined upfront so as to be available for validation. Data from monitoring (e.g. measurements after the implementation of the project activity) should not be included here but in the table in section E.7.1.	The compilation of the data and parameters shall be consistent with those in the final PoA-DD ("ly" shall be included in section E.7.1.).	CAR02	OK
B.5.1.02	1	This may includes data that is measured, if relevant with sample thereof, and data that is collected from sources such as official statistics, expert judgment, proprietary data, IPCC, commercial and scientific literature.	$EF_{EL,y}$ is collected from the data published by DNA of Viet Nam. ESy is sourced by AMS-I.J.	OK	OK
B.5.1.03	1	Data that is calculated with equations provided in the approved category or default values specified in the category should not be included in the compilation.	Data that is calculated with equations provided in the approved category or default values specified in the category are not included in the compilation.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
B.5.1.04	1	Provide for each parameter the chosen value or, where relevant, the qualitative information, using the table.	Chosen value and qualitative information are provided for each parameter.	OK	OK
B.5.1.05	1	Provide the actual value applied. Where time series of data is used, where several measurements are undertaken or where surveys have been conducted, provide detailed information in Annex 3.	The following values are applied: - $EF_{EL,y}$: 0.5764 tCO2/MWh - ESy: 450 kWh/m2/year	OK	OK
B.5.1.06		Explain and justify the choice for the source of data. Provide clear and transparent references or additional documentation in Annex 3.	The choice for the source of data are explain and justified.	OK	OK
B.5.1.07	1	Where values have been measured, include a description of the measurement methods and procedures that comply with the guidance provided under general guidance to indicative SSC methodologies (e.g. which standards have been used), indicate the responsible person / entity having undertaken the measurement, the date of measurement(s) and the measurement results. More detailed information can be provided in Annex 3.	There are no values have been measured and thus not applicable.	NA	NA
B.5.2.		Ex-ante calculation of emission reductions			
B.5.2.01	1	Provide a transparent ex-ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations.	Justification of the choice of the stipulated energy saving method, the equation for calculation of the emission reductions and the steps of calculation of grid emission factor shall be consistent with those in the final PoA-DD.	CAR02	OK
B.5.2.02	1	Document how each equation is applied, in a manner that enables the reader to reproduce the calculation.	How each equation is applied is documented in a manner that enables the reader to reproduce the calculation.	OK	OK
B.5.2.03	1	Where relevant, provide additional background information and or data in Annex 3, including relevant electronic files (i.e. spreadsheets).	Information on data used for calculation of grid emission factor is provided in Annex 3.	OK	OK

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
B.5.2.04	1	If the project activity involves more than one component activity, emission reduction calculations for each of the component shall be provided separately in a transparent manner.	The project activity involves only one component activity and thus not applicable.	NA	NA
B.5.3.		Summary of the ex-ante estimation of emission reductions			
B.5.3.01	1	Summarize the results of the ex-ante estimation of emission reductions for all years of the crediting period, using the table specified in the form.	The results of the ex-ante estimation of emission reductions ("XX") for all years of the crediting period are provided using the table specified in the form.	OK	OK
B.5.3.02	1	If the project activity involves more than one component, a separate table shall be included for each of the component or each of the approved project category that is applied.	The project activity involves only one component activity and thus not applicable.	NA	NA
B.5.3.03	1	A table showing the aggregate emission reductions of the project activity shall also be included.	Ditto.	NA	NA
B.6.		Application of the monitoring methodology and description of the monitoring plan			
B.6.1.		Description of the monitoring plan			
B.6.1.01	1	Provide a detailed description of the monitoring plan. Describe the operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity.	The description regarding the monitoring procedure, the sampling plan for Ry, the list of information included in the database and the data compilation tables for monitoring parameters shall be consistent with those in the final PoA-DD.	CAR02	OK
B.6.1.02	1	Clearly indicate the responsibilities for and institutional arrangements for data collection and archiving.	The responsibilities for and institutional arrangements for data collection and archiving is provided in this section.	OK	OK
B.6.1.03	1	The monitoring plan should reflect good monitoring practice appropriate to the type of project activity.	The monitoring plan reflects good monitoring practice appropriate to the type of project activity. Sampling plan for Ry is also described.	OK	OK
B.6.1.04	1	Provide any relevant further background documentation in Annex 4.	No relevant further background documentation in Annex 4.	NA	NA

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
C.		Environmental Analysis			
C.1.		Please indicate the level at which environmental analysis as per requirements of the CDM modalities and procedures is undertaken. Justify the choice of level at which the environmental analysis is undertaken			
C.1.01	4	Is it ticked if this information is provided at the PoA level? If yes, sections C.2. and C.3. need not be completed in this form.	This information is provided at the PoA level.	OK	OK
C.1.02	4	Justify the choice of level at which the environmental analysis is undertaken	Environmental analysis is undertaken at the PoA level since the impact of all CPAs will be similar. In addition, the relevant impacts are the ones from all the SWH systems installed under the PoA together rather than the impacts of a certain group of SWH systems of an individual CPA.	OK	OK
C.2.		Documentation on the analysis of the environmental impacts, including transboundary impacts			
C.2.01	4	Describe the analysis of the environmental impacts, including transboundary impacts.	The environmental analysis is undertaken at PoA level and thus not applicable.	NA	NA
C.3.		Please state whether an environmental impact assessment is required for a typical CPA, included in the programme of activities (PoA), in accordance with the host Party laws/regulations			
C.3.01	4	State whether an environmental impact assessment is required for a typical CPA, included in the PoA, in accordance with the host Party laws/regulations	The environmental analysis is undertaken at PoA level and thus not applicable.	NA	NA
C.3.02	10	Describe whether there are any requirements for an Environmental Impact Assessment (EIA) in the host country. If yes, describe whether an EIA have been approved by local/central government.	Ditto.	NA	NA
C.3.03	1	If applicable, please provide a short summary and attach documentation.	Ditto.	NA	NA

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
D.		Stakeholders' comments			
D.1.		Please indicate the level at which local stakeholder comments are invited. Justify the choice			
D.1.01	4	Is it ticked if this information is provided at the PoA level? If yes, sections D.2. to D.4. need not be completed in this form.	This information is provided at the PoA level.	OK	OK
D.1.02	4	Justify the choice of level at which the stakeholder consultation is undertaken.	The geographical boundary of the PoA is the south of Viet Nam. Each CPA consists of a group of SWH systems installed in a same year across the south of Viet Nam. The ECC determined that there would be no significant difference in the comments toward this project depending on the year of installation. Therefore, it is considered appropriate to carry out the local stakeholder consultation at PoA level.	OK	OK
D.2.		Brief description how comments by local stakeholders have been invited and compiled			
D.2.01	1	Describe the process by which comments by local stakeholders have been invited and compiled. (An invitation for comments by local stakeholders shall be made in an open and transparent manner, in a way that facilities comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted. In this regard, project participants shall describe a project activity in a manner which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM M&P.)	The stakeholders consultation is undertaken at PoA level and thus not applicable.	NA	NA
D.2.02	10	Describe whether there are any laws/requirements for a stakeholders consultation process in the host country. If yes, describe whether the stakeholders consultation process has been carried out in accordance with such laws/requirements.	Ditto.	NA	NA
D.3.		Summary of the comments received			

Section Seq. No.	Ref. No.	Requirement	Comments	Draft Conc.	Final Conc.
D.3.01	1	Identify stakeholders that have made comments and provide a summary of these comments.	The stakeholders consultation is undertaken at PoA level and thus not applicable.	NA	NA
D.4.		Report on how due account was taken of any comments			
D.4.01	1	Explain how due account have been taken of comments received.	The stakeholders consultation is undertaken at PoA level and thus not applicable.	NA	NA
Annex 1		Contact information on entity/individual responsible for the SSC-CPA			
Annex 1.01	1	Fill for each organization listed in section A.3 the following mandatory fields: Organization, Name of contact person, Street, City, Postfix/ZIP, Country, Telephone and Fax or e-mail.	Mandatory fields are filled for the ECC (note that postfix/ZIP is not used in Viet Nam).	OK	OK
Annex 2		Information regarding public funding			
Annex 2.01	1	Please provide information from Parties included in Annex I on sources of public funding for the project activity which shall provide an affirmation that such funding does not result in a diversion of official development assistance and is separate from and is not counted towards the financial obligations of those Parties.	The CPA-XX will not receive any public funds that would be result of official development assistance from Parties included in Annex I to the Convention.	OK	OK
Annex 3		Baseline information			
Annex 3.01	1	Provide any further background information used in the application of the baseline methodology. This may include tables with time series data, documentation of measurement results and data sources, etc.	The errors in numbers provided in Tables in Annex 3 shall be revised to be consistent with those in the final PoA-DD.	CAR02	OK
Annex 4		Monitoring information			
Annex 4.01	1	Provide any further background information used in the application of the monitoring methodology. This may include tables with time series data, additional documentation of measurement equipment, procedures, etc.	No relevant further background documentation in Annex 4.	NA	NA

Table 5 Resolution of CARs and CLs

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CAR01	Regarding the applicability criterion “A CPA to be included in the PoA shall meet the applicability conditions of the methodology AMS-I.J. The compliance with applicability conditions is justified in the Section B.5.2 of the CPA-DD of a CPA.”, the reference to Section B.5.2 of the CPA-DD is not correct because only the conditions to apply "stipulated energy saving method" for calculation of emission reductions are described in Section B.5.2 of the CPA-DD.	The relevant criterion was revised to “Criterion 12. The SWH systems installed under a CPA are residential SWH systems.” and the wrong reference was removed.	OK
CAR02	The information provided in the generic CPA-DD shall be consistent with the information provided in the final PoA-DD.	The generic CPA-DD was revised based on final design of the PoA.	OK
CL01	CME/PPs are requested to determine whether the programme involves projects which replace existing EWH systems in existing households with SWH systems, and to describe the finally decided target population in the PoA-DD.	The PoA design was changed to involve both retrofit and new construction, namely, the types of projects described in Para 2 (a), 2 (b) (i) and 2 (b) (ii) of AMS-I.J. According to Para 102 of EB 65 Meeting Report, CDM-EB agreed to remove the requirement in Type I methodologies, when applied to PoAs, that the replaced energy-generating equipment should be scrapped and that this scrapping should be independently monitored. This is applicable to CPAs included in the proposed PoA and thus leakage is not necessary to be considered. Relevant descriptions in the PoA-DD were also revised.	OK
CL02	Regarding item 1 in the table in section E.2. of the PoA-DD, it is not clear how the CPAs under the PoAs satisfies "residential" SWH systems defined by AMS-I.J. (footnote 1).	The definition of the residential SWH systems, namely, one that (a) Heats water to be used for domestic purposes only (e.g. bathing, cooking, clothes washing, etc.); (b) Is installed to serve one or more residences; and (c) Has a maximum stand alone (independent) collector area of 100 m2, were added in E.2. of the PoA-DD. According to the SOP for the PoA, (a) and (b) is checked by acceptance testing as well as pre-installation check, and (c) is ensured by Criterion 4, as described in E.2. of the PoA-DD.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL03	Regarding item 1 and 3 in the table in section E.2. of the PoA-DD, it is not clear how the ECC ensures a CPA involves only "residential" SWH systems and excluded "commercial" SWH systems.	As determined in “SWHPOA-10 Checklist for SWH system installation (pre-installation check by SWH distributors)”, commercial users/buildings are excluded at the stage of pre-installation check by registered SWH system providers, and again confirmed at the stage of acceptance testing.	OK
CL04	Regarding item 2 in the table in section E.2. of the PoA-DD, it is not clear how the ECC ensures a CPA involves only (b) new construction projects under which SWH systems installed in (i) newly-built residences, and excludes (ii) existing residences that prior to the project implementation, do not have installed water heating systems.	The PoA design was changed to involve both retrofit and new construction, namely, the types of projects described in Para 2 (a), 2 (b) (i) and 2 (b) (ii) of AMS-I.J. (Refer to CL01 in section 3.2.2. of this report). The final design , namely, SWH projects in new facilities and SWH projects installed in existing facilities that, prior to the project implementation, do not have installed water heating systems, is reflected in “SWHPOA-10 Checklist for SWH system installation (pre-installation check by SWH distributors)” and checked by SWH system providers at the stage of pre-installation check.	OK
CL05	Regarding item 5 in the table in section E.2. of the PoA-DD, the basis of the justification is not clear.	Reference to item (iv) of the table in E.6.1. of the PoA-DD was added for clearer demonstration.	OK
CL06	The description provided in Section E.3. of the PoA-DD does not clearly mention whether the physical project boundary includes the national electricity grid or not, although it is included in the table of sources and gases included in the CPA boundary.	The sentence "The project boundary for a CPA under the PoA also includes the national electricity grid from which electricity is sourced in the baseline scenario." was added in Section E.3. of the PoA-DD.	OK
CL07	It is not clear why a water heater sourced by fossil fuels, such as LPG, is excluded from alternative scenarios. Evidences (studies or surveys, statistics, market data, etc.) for the statement that "Other than SWH systems, electric water heaters are the only available technology in the market of Viet Nam to heat water for household showering which is the predominant usage of the heated water generated by the SWH systems at household." described in Section E.4. of the PoA-DD, are to be provided.	Through the review of survey reports such as “Viet Nam electricity survey 2011” (June 2011) published by Japan External Trade Organization (JETRO) Hanoi and “Viet Nam – Expanding Opportunities for Energy Efficiency” (March 2010) published by The World Bank and information available from website such as the giz wind energy project , and the interview with local governmental officers, local SWH providers and local residents during on-site assessment, JQA has confirmed that water heater sourced by fossil fuel is not commonly used in Viet Nam and thus it is reasonable to excluded it from alternative scenarios.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL08	The data regarding the domestic sector electricity use of 44.5%, based on Electricity of Viet Nam (EVN) 2005 in Section E.4. of the PoA-DD, is rather outdated. It is requested to use more recent data.	The information is updated to 40 % based on the report published by JETRO in 2011.	OK
CL09	According to the data from Jyukankyo Research Institute Inc. based on the survey conducted by EVN (Ref. 17), which is quoted in footnote 9 in Section E.4. of the PoA-DD, the electricity consumed for water heating accounts for about 13% and 7% of the total electricity consumption of urban and rural household, respectively. The information is not consistent with the information provided in the PoA-DD (15%).	The description of the Section E.4. of the PoA-DD was corrected to be consistent with the information provided in the data from Jyukankyo Research Institute Inc.	OK
CL10	It is described in Section E.4. of the PoA-DD that "As explained in A.4.3, due to its reasonable price range and easy installation, the electric water heater is the most commonly used technology in Viet Nam". Nevertheless, such information is not provided in A.4.3.	The information about the price range of SWH systems and that of EWH systems and its source were added in E.4. of the PoA-DD. Through the review of information source, “Feasibility Study Report of ECC” (2008), JQA confirmed that the information was correctly quoted. JQA also cross-checked the information with other sources, such as catalogues of SHW systems obtained on-site, report by Jyukankyo Research Institute Inc. and the interview with local residents, and confirmed that the information provided in the PoA-DD was correct and reliable.	OK
CL11	CME/PPs are requested to identify and discuss all 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, on the identification of the baseline scenario.	Information regarding national policies and initiatives regarding the energy efficiency were added in E.4. of the PoA-DD. Through the review of the national policies and initiatives and information from other sources such as the website of National Energy Efficiency Programme (VNEEP), JQA confirmed that there were no policies and circumstances to oblige households to install SWH systems. Through the review of documentary evidences including “Viet Nam electricity survey 2011” (June 2011) published by JETRO Hanoi and “Viet Nam – Expanding Opportunities for Energy Efficiency” (March 2010) published by The World Bank, JQA has also confirmed that domestic electricity consumption has been skyrocketing in recent years and thus the description in E.4. of the PoA-DD is correct.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL12	The version of "Tool to calculate the Emission Factor for an electricity system" is not the latest. The tool is not correctly applied regarding the following issues: - Titles of the steps (Step 1 -6) are different with those provided in the tool. - Step-wise analysis to determine the sample group of power unit m used to calculate the BM in Step 5 is not presented.	E.6.2 of the PoA-DD was revised based on the latest version of the tool (version 2.2.1).	OK
CL13	The equation (1) provided in E.6.1 of the PoA-DD does not include the monitoring parameter required by Para 14 of AMS-I.J., namely, the number of systems that are demonstrated to be operational and in compliance with manufacturer-required maintenance procedures, planned to be checked by annual inspection. CME/PPs are requested to clarify how the monitoring data obtained through the annual inspection is used in the calculation of emission reductions.	The equation (1) was revised so as to include the parameter Ry.	OK
CL14	Regarding Table A 3.1 in Annex 3 of the PoA-DD, the following information is to be described: 1) Equations and parameters (e.g. SWH efficiency, conversion factors, etc.) used to estimate the amount of water can be heated by the SWH systems in a transparent manner. 2) Correct URL for the footnote 1 since the URL currently provided does not show the numbers described in Table A 3.1. 3) Equations and parameters used to estimate the water temperature, which is based on ASHRAE psychometric analysis CD - psychart 1, in a transparent manner.	JQA has confirmed that Table A 3.1 in Annex 3 is revised appropriately as explained below. 1) Spreadsheet including equations and parameters used to estimate the amount of water can be heated by the SWH systems were provided. It also includes a list of longitude and latitude of HCMC and 21 provinces which is used to obtain the data of daily solar radiation and the average temperature from NASA's website (footnote 1 in Annex 3; refer to 2) below). Through the review of the spreadsheet, JQA confirmed that the sources of data were appropriate in the context of the PoA, the data were correctly quoted and the calculation was correct. 2) URL of footnote 1 is correct. The data of daily solar radiation and the average temperature shown in Table A 3.1. are obtained through inputting the longitude and latitude provided in the spreadsheet used as the basis for Table A3.1. 3) The source of the water temperature is revised from the wet bulb temperature calculated based on the atmospheric temperature and the humidity using ASHRAE psychometric analysis CD - psychart 1, to the air temperature obtained through inputting longitude and latitude in NASA's website provided in the footnote 1 in Annex 3. JQA considers this approach is conservative.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL15	Some figures provided in Table A 3.3. and Table A 3.4. of the PoA-DD are not consistent with its source, Official Letter No.151/KTTVBDKH dated 26 March 2010.	Wrong figures were corrected.	OK
CL16	According to Para 11 of AMS-I.J., a default value of 10% shall be used for average annual technical grid losses (ly) if no recent data are available or data cannot be regarded accurate and reliable. It is requested to demonstrate that no recent data are available or data cannot be regarded accurate and reliable.	The PoA-DD has changed to use data published by the Electricity of Viet Nam (EVN) instead of applying a default value of 10%. This parameter is included in E.7.1. of the PoA-DD to ensure that the recent data is applied throughout the monitoring period.	OK
CL17	"Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities" (version 01.0) is not addressed in demonstration of additionality in Section A.4.3 of the PoA-DD.	The description of Section A.4.3 of the PoA-DD was revised by applying “Guidelines for demonstrating additionality of microscale project activities”, based on “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities”.	OK
CL18	PPs are requested to demonstrate why not “distributed energy generation" (Para 2(c)) but “an off grid activity" (Para 2(b)) is applied to a typical CPA under the PoA among types of activities provided in Para 2 of “Guidelines for demonstrating additionality of microscale project activities”.	The demonstration of additionality has been revised based on Para2 (c) taking “SSC_576: Clarification on the eligibility of SWHs under microscale additionality guidelines” into consideration.	OK
CL19	The evidence of starting date of the PoA, the approval of PoA by the Peoples' Committee of HCMC on 09/11/2009, is to be provided. A timeline including major events are to be described in A.4.3 of the PoA-DD, and relevant and documentary evidences for major events are to be provided.	The approval from the People's Committee of HCMC as well as evidences for major events were provided. JQA confirmed that the timeline provided in A.4.3. of the PoA-DD is correct and complete.	OK
CL20	CME/PPs are requested to demonstrate that the defined starting date of the PoA, 09/11/2009, is the earliest date at which either the implementation or construction or real action of a project activity begins.	The justification of the selected starting date, namely, “no implementation or construction or real action of the project has been started before issuance of this approval” was added in B.1. of the PoA-DD. JQA considered the selected starting date complies with “Glossary of CDM Terms” (Version 06).	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL21	Regarding the monitoring of PoA, the specific parameter/system/procedure in order to ensure that 1) no double accounting occurs and 2) status of verification can be determined anytime for each CPA, are to be described.	Sequential registration number for SWH is used to ensure that no double accounting occurs. A parameter of "status of verification" was added as a parameter in the database. JQA reviewed "SWHPOA-DATA Database of the PoA" and confirmed the parameter was added.	OK
CL22	The sampling plan for Ry does not indicate whether the sampling frame will be kept, and that random numbers will be generated and these random numbers will then be used to select the sample.	The following descriptions were provided in E.7.2. of the PoA-DD: - The ECC will select samples randomly using random number tables. - The sampling frame which is the database including the information of all SWH systems under a CPA will be kept for a period of at least two years after the crediting period of the PoA.	OK
CL23	It is not clear how the staff of the ECC confirm whether: 1) SWH is operational; and 2) SWH is in compliance with manufacture-required maintenance procedures with respect to the monitoring of Ry.	The ECC staff will check the following items at the annual inspection by using checklist included in "SWHPOA-15: Procedure of annual inspection": - If the temperature of hot water generated by the SWH system is sufficient (through interview with the SWH system owner). - If the amount of hot water generated by the SWH system is sufficient (through interview with the SWH system owner). - If the SWH system has not had any problem during 1 year (through interview with the SWH system owner). - Annual maintenance records from the SWH distributor. - If the vacuum tube or flat plate is maintained clean. Through the check of above items, the ECC staff will be able to confirm 1) and 2) sufficiently. .	OK
CL24	It is not clear what questions the staff of the ECC will make when they visit the randomly selected households for monitoring of Ry. It is also to be confirmed whether the questions could be subject to respondent error, measurement error or bias in answers.	The ECC staff will make the following three questions to system owners at the time of annual inspection: - The temperature of hot water generated by the SWH system is sufficient - The amount of hot water generated by the SWH system is sufficient - The SWH system has not had any problem during 1 year. Since these questions are very simple, JQA considers that the questions are not subject to respondent error due to sensitivity or lack of recall, or subject to measurement error. Bias in the answers is also not expected.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL25	QA/QC strategy for sampling of Ry including a procedure for defining outliers and under what circumstances outlier data/measurements may be excluded and/or replaced is to be clarified.	The sampling of Ry is aiming to check if a SWH system is operational or not and thus no outlier is expected.	OK
CL26	The proposed skill sets, qualifications and experience of the personnel to be engaged to conduct sampling are to be confirmed.	The persons who conduct sampling are the employees of the ECC and will take training every year before the implementation of annual inspection. Details of training are specified in “SWHPOA -05 Training procedures”.	OK
CL27	Through the review of the questionnaire, JQA confirmed that the only 55 people answered among 60 people asked in the local stakeholder consultation. Correct information is to be provided in Section D of the PoA-DD.	The description is corrected to “55 people”.	OK
CL28	CME is request to describe the effective EIA legislation in the PoA-DD. Through the interview with the officers in DONRE, JQA confirmed that Circular No.490/1998/TT-BKHCNMT was replaced with new law and not valid.	The effective EIA legislation, Decree No. 21/2008/ND-CP, is described in C.1. of the PoA-DD instead of Circular No.490/1998/TT-BKHCNMT.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL29	Regarding "(i) A record keeping system for each CPA under the PoA", the following information is to be provided: - Documents/agreement between the ECC and SWH system providers which show the role and responsibilities of them with respect to the PoA - List of the SWH system providers registered under the PoA. - Measure/procedure to invite participants of the programme. - Procedure (flowchart) of application of subsidy for SWH system installation. - Guidelines, forms, tickets, etc. used by the ECC and residents for application/receipt of subsidy for SWH system installation. Regarding "(ii) A system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as a CDM project activity or as a CPA of another PoA", the specific system/procedure adopted by the ECC is to be confirmed.	The ECC provided the following information and JQA confirmed that the record keeping system for each CPA and the system/procedure to avoid double accounting developed by ECC were sufficient. (i) The "Standard Operational Procedures" (SOP) for the PoA developed by the ECC includes information regarding the record keeping system for each CPA under the PoA as follows: - "SWHPOA-02: Role and Responsibly" describes the organizational structure and the roles and responsibilities of the Director, the R&D Department (Manager and Staff), the Financial Department (Manager and Staff) and the Training and Communication Center of the ECC. The draft contract format between the ECC and a SWH system provider (Gia Nam Co., Ltd.) is also developed by the ECC and rights and responsibility of the ECC and a SWH system provider is also defined in it. - Registration of SWH system provider will be done at each CPA. For CPA-1, only Gia Nam Co., Ltd. is registered as a SWH provider. - "SWHPOA-09: Announcement of CPA-XX" defines the contents of announcement of a CPA. ECC plans to invite participants to a CPA through media campaign including newspaper, TV, radio and ECC's website. - "SWHPOA-03: Standard Operating Procedure" defines the procedure of subsidy application and provision. - "SWHPOA-11: Voucher" provides the voucher used for the application of subsidy. (ii) Double accounting is avoided by pre-installation check by SWH system provider according to "SWHPOA-10 Check list for SWH system installation (pre-check by SWH distributors)". The sequential registration number is also given to each SWH system installed under a CPA of the PoA in the database "SWHPOA-DATA: Database for the PoA".	OK
CL30	Name of the organization and the roles and responsibilities described in Section A.4.4.1 of the PoA-DD is not consistent with "SWHPOA-02: Role and Responsibility".	The descriptions in the A.4.4.1 in the PoA-DD as well as SWHPOA-02 were corrected so as to reflect the actual name of the organization and the roles and responsibilities in the ECC.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL31	Regarding the requirement for eligibility criteria "(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo)", CME is requested to clarify the registration number is labeled also on installed SWHs or only recorded in the database, and how the stated measures effectively prevent double counting.	The registration number will not be labeled. However, the ECC records detailed information of each SWH system as well as household in "SWHPOA-DATA: Database of the PoA" and thus double accounting would not likely to occur. The eligibility criterion was revised from "A CPA is uniquely identified and the SWH systems installed under each CPA are to be uniquely identified with a sequential registration number." to "Criterion 2. The database is set for a CPA and a sequential registration number will be assigned for the SWH systems under a CPA." to improve clarity.	OK
CL32	Regarding the requirement for eligibility criteria "(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications", CME is requested to clarify why the stated criteria in the PoA-DD do not include conditions specified in (ii), (iv) and (v), Para 10 (c) of AMS-I.J., while the remaining (i), (iii) and (vi) are included.	Para 10 (c) (ii) and (v) of AMS-I.J. were added as new eligibility criteria (Criteria 9 and 10). Para 10 (c) (iv) of AMS-I.J. is justified ex-ante in E.6.1 and Annex 3 of the PoA-DD.	OK
CL33	Regarding the eligibility criterion "The SWH systems under a CPA comply with technical requirements for SWH systems TCVN8251:2009 announced by the Ministry of Science and Technology, Viet Nam" provided in A.4.2.2. of the PoA-DD, TVCN 8251:2009 could not be considered as equivalent criteria of OG100 because its requirements includes only thermal absorber efficiency, thermal storage capacity and durability.	The following three criteria given in Para 10 (c) (vi) of AMS-I.J were added to the eligibility criterion in addition to the compliance with TVCN 8251:2009, in order to address the methodological requirement: - Unglazed collector must be stabilized against UV degradation; - Glazed collector must have at least one glass cover and be insulated on the sides and back to achieve a loss coefficient not more than 5 W/m2C; - Evacuated tube collector must maintain vacuum insulation between absorber and ambient.	OK
CL34	Regarding the requirement for eligibility criteria "(d) Conditions to check the start date of the CPA through documentary evidence", CME is requested to specify what kind of "documentary evidence" is used to determine the start date of a CPA.	The contract between the ECC and the SWH system distributors is used as the evidence. The relevant criterion is revised from "The start date of a CPA is presented through documentary evidence. The start date of a CPA is not prior to 04/06/2009 on which the validation of the PoA is commenced." to "Criterion 11. The start date of a CPA is presented through the contract between the ECC and the SWH system distributors who participate in a CPA." to improve clarity.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL35	Regarding the requirement for eligibility criteria "(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance", CME is requested to demonstrate that a CPA under the proposed PoA will not receive any public funding from Annex I parties. Source of funding of subsidy for the PoA is also to be explained.	Source of funding of subsidy for installation of SWH systems is the ECC's own budget. "Criterion 14. A CPA under the PoA will not receive any public funds resulting from official development assistance from Parties included in Annex I to the Convention." is newly created and is checked through the completing "SWHPOA-07: Eligibility Criteria Check List for the inclusion of CPA" at the planning stage of a CPA by the ECC. Since the cost of SWH systems not covered by the ECC's subsidy is paid by the households which participate in a CPA, there is no risk of the use of the ODA for such payment by households.	OK
CL36	Regarding the requirement for eligibility criteria "(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid connected/off-grid) and distribution mechanisms (e.g. direct installation)", there is no criterion to exclude residences that are temporary or seasonal housing from the target group. Such residences are required to apply 300 kW/yr as stipulated energy savings and are inconsistent with the description of E.6.3. of the PoA-DD.	To address this issue, "Criterion 13. The SWH systems under a CPA will be installed to the residential buildings which are not temporary or seasonal housings." was newly created.	OK
CL37	It is not clear why parameters included in the database set up by the ECC described in A.4.4.1, A.4.4.2 and E.7.2 of the PoA-DD are different (e.g., crediting period of a CPA, result of acceptance testing, etc.)	The descriptions have been revised to make them consistent.	OK
CL38	The difference of the following two parameters described in A.4.4.2 of the PoA-DD is not clear: - Data from the sample group indicating the proportion of SWHs that were operating during the monitoring period - Data from the sample group indicating the number of systems operating	The description is redundant and thus the description was revised.	OK

Appendix A

Draft Conc.	CARs/CLs raised by the Validation Team	Summary of CME / Project Participant Response	Final Conc.
CL39	The description "The figure in Annex 4 shows the monitoring structure for a typical CPA" in A.4.4.2 of the PoA-DD is to be reviewed as Annex 4 does not include any figure.	"Annex 4" was corrected to "E.7.2".	OK
CL40	The units of daily solar radiation (kWh/day) and Heat Absorption (kJ) in Table A3.1 in Annex 3 are to be reviewed.	The unit has been corrected as follows: - Daily solar radiation: kWh/m2/day - Heat Absorption: kJ/m2	OK
CL41	Calculation result of OM emission factor is not provided in Table A.3.3. of Annex 3 of the PoA-DD.	Calculation result of OM emission factor was added in Annex 3.	OK
CL42	It is not clear why Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. is included in Annex 1 although it is not listed as a entity/individual responsible for the SSC-CPA.	Mitsubishi UFJ Morgan Stanley Securities Co., Ltd. was removed from Annex 1.	OK

Certificate

Name	**Mr. Hiroshi Motokawa**
Assessor No.	**CDM-AS-102**
Date of registration	**22nd May 2009**

This is to certify that Mr. Hiroshi Motokawa
is registered as CDM Assessor
by Japan Quality Assurance Organization.

Date 16th April 2012

Japan Quality Assurance Organization

Senior Executive

Team Leader Qualification

The above mentioned assessor is qualified as Team Leader.

Date of qualification **12th August 2011**

Date 16th April 2012

Japan Quality Assurance Organization

Senior Executive

Appendix B

Grant of technical area within CDM/JI sectoral scope

Name: Mr. Hiroshi Motokawa

Sectoral Scope(SS)		Technical Area(TA)		Granted date
SS1	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	28th Dec. 2010
SS2	Energy distribution	TA 2.1:	Electricity distribution	
		TA 2.2:	Heat distribution	
SS3	Energy demand	TA 3.1:	Energy demand	
SS4	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)	
		TA 4.5:	Chemical industry (COMPLEX)	
		TA 4.6:	Other production	
SS5	Chemical industry	TA 5.1:	Chemical process industries (COMPLEX)	
SS6	Construction	TA 6.1:	Construction	
SS7	Transport	TA 7.1:	Transport	
SS8	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)	
SS9	Metal production	TA 9.1:	Metal production	
SS10	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)	
SS11	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	
SS12	Solvents use	TA 12.1:	Chemical process industries (COMPLEX)	
SS13	Waste handling and disposal	TA 13.1:	Waste handling and disposal	1st Feb.2011
		TA 13.2:	Animal waste management	
SS14	Afforestation and reforestation/Land-use, land-use change and forestry	TA 14.1:	Forestry	
SS15	Agriculture	TA 15.1:	Agriculture	
		TA 15.2:	Animal waste management	

This is to certify that Mr. Hiroshi Motokawa is granted the above technical areas within sectoral scopes by the Japan Quality Assurance Organization.

Date: 16th Apr. 2012

Director of the Global Environment Department
Japan Quality Assurance Organization

浅輪紀男

Norio Asawa

Certificate

Name	**Mr. Jun Takata**
Assessor No.	**CDM-AS-103**
Date of registration	**23rd June 2009**

This is to certify that Mr. Jun Takata

is registered as CDM Assessor

by Japan Quality Assurance Organization.

Date 16th April 2012

Japan Quality Assurance Organization

Senior Executive

Team Leader Qualification

The above mentioned assessor is qualified as Team Leader.

Date of qualification

Date

Japan Quality Assurance Organization

Senior Executive

Appendix B

Grant of technical area within CDM/JI sectoral scope

Name: Mr. Jun Takata

Sectoral Scope(SS)		Technical Area(TA)		Granted date
SS1	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	16th Apr.2012
SS2	Energy distribution	TA 2.1:	Electricity distribution	
		TA 2.2:	Heat distribution	
SS3	Energy demand	TA 3.1:	Energy demand	
SS4	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)	
		TA 4.5:	Chemical industry (COMPLEX)	
		TA 4.6:	Other production	
SS5	Chemical industry	TA 5.1:	Chemical process industries (COMPLEX)	
SS6	Construction	TA 6.1:	Construction	
SS7	Transport	TA 7.1:	Transport	28th Dec. 2010
SS8	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)	
SS9	Metal production	TA 9.1:	Metal production	
SS10	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)	
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		TA 11.2:	GHG capture and destruction	
SS12	Solvents use	TA 12.1:	Chemical process industries (COMPLEX)	
SS13	Waste handling and disposal	TA 13.1:	Waste handling and disposal	1st Feb. 2011
		TA 13.2:	Animal waste management	
SS14	Afforestation and reforestation/Land-use, land-use change and forestry	TA 14.1:	Forestry	
SS15	Agriculture	TA 15.1:	Agriculture	
		TA 15.2:	Animal waste management	

This is to certify that Mr. Jun Takata is granted the above technical areas within sectoral scopes by the Japan Quality Assurance Organization.

Date: 16th Apr. 2012

Director of the Global Environment Department
Japan Quality Assurance Organization

浅輪紀男 Norio Asawa

Certificate

Name	**Ms. Akiko Furuya**
Assessor No.	**CDM-AS-106**
Date of registration	**1st June 2011**

This is to certify that Ms. Akiko Furuya

is registered as CDM Assessor

by Japan Quality Assurance Organization.

Date 16th April 2012

Japan Quality Assurance Organization

Senior Executive

Team Leader Qualification

The above mentioned assessor is qualified as Team Leader.

Date of qualification

Date

Japan Quality Assurance Organization

Senior Executive

Appendix B

Grant of technical area within CDM/JI sectoral scope

Name: Ms. Akiko Furuya

Sectoral Scope(SS)		Technical Area(TA)		Granted date
SS1	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	1st June.2011
SS2	Energy distribution	TA 2.1:	Electricity distribution	
		TA 2.2:	Heat distribution	
SS3	Energy demand	TA 3.1:	Energy demand	
SS4	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)	
		TA 4.5:	Chemical industry (COMPLEX)	
		TA 4.6:	Other production	
SS5	Chemical industry	TA 5.1:	Chemical process industries (COMPLEX)	
SS6	Construction	TA 6.1:	Construction	
SS7	Transport	TA 7.1:	Transport	
SS8	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)	
SS9	Metal production	TA 9.1:	Metal production	
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		TA 10.2:	Oil and gas industry, coal mine methane recovery and use (COMPLEX)	
SS11	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	
SS12	Solvents use	TA 12.1:	Chemical process industries (COMPLEX)	
SS13	Waste handling and disposal	TA 13.1:	Waste handling and disposal	1st June.2011
		TA 13.2:	Animal waste management	1st June.2011
SS14	Afforestation and reforestation/Land-use, land-use change and forestry	TA 14.1:	Forestry	
SS15	Agriculture	TA 15.1:	Agriculture	
		TA 15.2:	Animal waste management	1st June.2011

This is to certify that Ms. Akiko Furuya is granted the above technical areas within sectoral scopes by the Japan Quality Assurance Organization.

Date: 16th Apr. 2012

Director of the Global Environment Department
Japan Quality Assurance Organization

浅輪紀男
Norio Asawa

Certificate

Name **Mr. Itaru Watanabe**

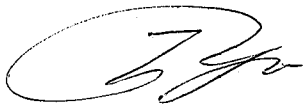
Reviewer No. **CDM-TR-207**

Date of registration **14th July 2010**

This is to certify that Mr. Itaru Watanabe is registered as CDM Technical Reviewer by Japan Quality Assurance Organization.

Date **16th April 2012**

Japan Quality Assurance Organization



Senior Executive

Appendix B

Grant of technical area within CDM/JI sectoral scope

Name: Mr. Itaru Watanabe

Sectoral Scope(SS)		Technical Area(TA)		Granted date
SS1	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	28th Dec. 2010
SS2	Energy distribution	TA 2.1:	Electricity distribution	
		TA 2.2:	Heat distribution	
SS3	Energy demand	TA 3.1:	Energy demand	28th Dec. 2010
SS4	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)	
		TA 4.5:	Chemical industry (COMPLEX)	28th Dec. 2010
		TA 4.6:	Other production	28th Dec. 2010
SS5	Chemical industry	TA 5.1:	Chemical process industries (COMPLEX)	28th Dec. 2010
SS6	Construction	TA 6.1:	Construction	
SS7	Transport	TA 7.1:	Transport	
SS8	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)	
SS9	Metal production	TA 9.1:	Metal production	
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		TA 10.2:	Oil and gas industry, coal mine methane recovery and use (COMPLEX)	
SS11	Fugitive emissions from production and consumption of halocarbons and sulphur hexafluoride	TA 11.1:	Chemical process industries (COMPLEX)	28th Dec. 2010
		TA 11.2:	GHG capture and destruction	28th Dec. 2010
SS12	Solvents use	TA 12.1:	Chemical process industries (COMPLEX)	
SS13	Waste handling and disposal	TA 13.1:	Waste handling and disposal	1st Feb. 2011
		TA 13.2:	Animal waste management	
SS14	Afforestation and reforestation/Land-use, land-use change and forestry	TA 14.1:	Forestry	
SS15	Agriculture	TA 15.1:	Agriculture	
		TA 15.2:	Animal waste management	

This is to certify that Mr. Itaru Watanabe is granted the above technical areas within sectoral scopes by the Japan Quality Assurance Organization.

Date: 16th Apr. 2012

Director of the Global Environment Department
Japan Quality Assurance Organization

浅輪紀男
Norio Asawa

Appendix C

Expertise and Experience of Assessors and Technical Reviewers

Hiroshi MOTOKAWA

He holds a Bachelor's degree in economics. Before joining JQA, he had been engaged in planning and management of the recycling facility, also engaged in the studies of Life Cycle Assessment at Consulting firm. His expertise is LCA study including ecological balances of the energy production systems such as thermal power, hydropower, etc. He has successfully completed GHG Validator/Verifier Training Program, also ISO 14001 Training Course to be qualified as a provisional auditor. He has participated in various CDM projects, both validation and verification in JQA.

Jun TAKATA

He holds a Master's Degree in Urban Environmental Engineering. Before joining JQA, he had been engaged in road network planning at Consulting firm. He gained the knowledge for assessment of the environmental impact such as CO2 and NOx from vehicles by road improvement. He has successfully completed GHG Validator/Verifier Training Program also ISO 14001 Training Course to be qualified as a provisional auditor. He has participated in various CDM projects, both validation and verification in JQA.

Akiko Furuya

She holds a Bachelor's degree in agriculture and Master's degree in environmental study. Before joining JQA, she had worked as an environmental consultant and engaged in environmental and social impact analysis of overseas large-scale development projects, survey of overseas environmental legislation and Official Development Assistance (ODA) projects, writing PDD and monitoring reports for CDM projects. She has successfully completed GHG Validator/Verifier Training Program, also ISO 14001 Training Course to be qualified as a provisional auditor. She has participated in various CDM projects, both validation and verification in JQA.

Itaru WATANABE

He holds a Bachelor's degree in Chemistry. Before joining JQA, he had been engaged in the production/research in the field of Acrylonitrile, Petro-chemical and Ion Exchange Membrane Plant for 9 years. He was a manager responsible for the salt manufacturing plant with 55 steam-ton/hr Fossil Fuel Boiler, 8.8 MW Steam Turbine, 200 KW Diesel Engine and triple effect Vaporizer for 3 years. He was a qualified ISO14001 Lead Assessor. He has successfully completed GHG Validator/Verifier

Training Program. He has participated in various CDM projects, both validation and verification as a team leader in JQA.