
VALIDATION REPORT (Rev. 3.1)

'The Programme to Introduce Renewable Energy System into Seoul" in Republic of Korea

REPORT No. : CDM-2011-012

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KSA KOREAN
STANDARDS
ASSOCIATION

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CDM-2011-012	15/10/2012	3.1	21/12/2012
Project Title : The programme to introduce renewable energy system into Seoul			

Executive Summary

Korean Standards Association (KSA) has performed a validation of the CDM PoA project "The programme to introduce renewable energy system into Seoul". The validation has been performed by document review based on the project design document, follow-up interviews with project stakeholder and resolution of outstanding issues and the issuance of the validation report.

The applied requirements for validation depend on *"the Article 12 of the Kyoto Protocol"*, *"the CDM modalities and procedures"*, *"the simplified modalities and procedures for small-scale CDM project activities"* and *"the subsequent decisions by the CDM Executive Board"*. A risk based approach was taken to conduct the validation and corrective action request and clarifications were raised for relevant actions by the project participants.

In summary, it is that KSA's opinion on the proposed CDM PoA project activity, as described in the PoA-DD (version 6.0, 11/12/2012), meet all relevant UNFCCC requirements for the small-scale CDM and correctly applied the approved baseline and monitoring methodology AMS- I .F. Hence, KSA requests the registration of the "The programme to introduce renewable energy system into Seoul" as a CDM PoA.

Project Participant: Managing Entity: Seoul Metropolitan Government (SMG) Project Participant : N/A	Applied Methodology/Version : AMS- I .F /version 02
	Scope(s) : 01 Technical Area(s) : 1.2

Team Leader Kyoo-II Sohn Team Member Seong-Yong Park Chung-kook Lee	Responsible Certification Body Member : Jin-Su Chun	First PoA-DD Version Date of issuance: 21/03/2011 Version No. :01
		Final PoA-DD Version Date of issuance: 11/12/2012 Version No.: 6.0

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Appendix A Validation Protocol

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Abbreviations

CAR	Corrective Action Request
CDM	Clean Development Mechanism
CEF	Carbon Emission Factor
CER	Certified Emission Reduction(s)
CL	Clarification Request
CO₂	Carbon dioxide
CO_{2e}	Carbon dioxide equivalent
CPA	Component Project Activity
DNA	Designated National Authority
EIA	Environmental Impact Assessment
GHG	Greenhouse gas(es)
GWP	Global Warming Potential
KSA	Korean Standards Association
FAR	Forward Action Request
IPCC	Intergovernmental Panel on Climate Change
ME	Ministry of Environment
MKE	Ministry of Knowledge Economy
MP	Monitoring Plan
MoV	Means of Verification
NGO	Non-Governmental Organization
ODA	Official Development Assistance
PDD	Project Design Document
PoA	Programme of Activities
PoA-DD	Programme of Activities Design Document
SEA	Strategic Environment Assessment.
SMG	Seoul Metropolitan Government
UNFCCC	United Nations Framework Convention on Climate Change

0. VALIDATION OPINION

Korean Standards Association (KSA) has carried out validation of the proposed CDM PoA project - "The programme to introduce renewable energy system into Seoul". The validation has performed on the basis of UNFCCC criteria for the Clean Development Mechanism and the Host country criteria.

The validation has been performed by document review based on the project design document, follow-up interviews with project stakeholder and resolution of outstanding issues and the issuance of the validation report.

Emission reductions attributable to the proposed PoA are additional to any that would occur in the absence of the project activity. Given that the PoA is implemented as designed, the CPA under the same are likely to achieve emission reductions.

Validation team also confirmed that monitoring and management plans are clearly defined and adequate.

In KSA's opinion, the project meets all relevant UNFCCC requirements for CDM, is eligible as category I.F small-scale CDM PoA project activity, and correctly applies the approved simplified baseline and monitoring methodology AMS- I.F. (version 02). Hence, KSA requests the registration of the project "The programme to introduce renewable energy system into Seoul" as a CDM PoA.

December 21, 2012



Jin-Su Chun

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Kyoo-Il Sohn

Validation Team Leader

1. INTRODUCTION

Seoul Metropolitan Government (hereafter, SMG), coordinating and managing entities (CME) of PoA, has contracted Korean Standards Association (hereafter, KSA) to carry out a validation of the proposed CDM PoA project "The programme to introduce renewable energy system into Seoul" (hereafter, the PoA project) and the associated specific CPA-DD. This report summaries the findings over the validation process that has been performed on the validation requirements of the Clean Development Mechanism (CDM).

1.1 Objective

The objective of validation process is to ensure a thorough and independent assesment of proposed project activities submitted for registration as a proposed Programme of Activities (PoA) and the related specific CPA-DD against the applicable CDM requirements.

In particular, the project's baseline, the monitoring plan and the project's compliance with relevant UNFCCC and host Party criteria are validated in order to confirm that the project design as documented is sound and reasonable and meets the stated requirements and identified criteria.

Also validation of the Programme of Activity (PoA) includes the completed CPA-DD for specific CPA with the title "The project to introduce photovoltaic system in public library of the Jamsil Rainwater pump station" (CPA-ID: 2011-Songpa-001-24kW).

The validation is seen as necessary to provide assurance to stakeholder of the quality of the project activity and its intended generation of certified emission reduction (CERs).

1.2 Scope

The scope of the validation is defined as an independent and objective review of the proposed Programme of Activities (PoA), the specific CPA-DD and the relevant documents. The information in these documents is reviewed against the criteria stated in

- Kyoto Protocol (decision 17/CP.7) : Article 12 and the CDM modalities and procedures
- the Marrakech Accords,
- the simplified modalities and procedures for small-scale CDM project activities
- the relevant decisions of the COP/MOP and the CDM Executive Board
- Clean Development Mechanism Validation and Verification Standard (version 3.0)
- the approved baseline and monitoring methodology AMS- I .F. version 02.

The KSA validation team follows a risk-based approach in the validation focusing on the identification of significant risks for project implementation and generation of certified emission

reductions (CERs). Validation is not meant to provide any consulting toward the PoA Entity, CPA implementer(s) and project participants. However, the corrective action requests (CARs) and clarifications (CLs) may have provided input for improvement of the project design.

1.3 Validation Team

The validation has been performed by the following personnel;

<i>Role/Qualification</i>	<i>Name</i>	<i>Document Review</i>	<i>Site Visit</i>	<i>Follow-up Actions</i>	<i>Reporting</i>	<i>Technical Review</i>
Team Leader CDM Validator	Mr. Kyoo-II Sohn	✓	✓	✓	✓	
Team Member CDM Validator	Mr. Seong-Yong Park	✓	✓	✓		
Team Member Technical Expert	Mr. Chung-kook Lee	✓	✓	✓		
Technical Reviewer	Mr. SeungKeun Choi					✓
Technical Reviewer	Mr. Woo-Jin Park					✓

1.4 Internal Quality Control

The final validation report including the validation findings were reviewed by a technical review team (Mr. SeungKeun Choi and Mr. Woo-Jin Park) prior to the submission of the validation report to the project participants and prior to requesting registration of the project activity during the period from 21/12/2012 to 25/12/2012. Also the technical reviewer is qualified by KSA's qualification scheme for CDM validation and verification. As a result of the internal technical review process, the validation opinion and the topic specific assessments as prepared by the validation team leader may be confirmed or revised. Furthermore reporting improvement might be achieved.

2. METHODOLOGY

To assess the correctness of the information provided by the project participants, the validation consists of the following three phases;

I . Review of Documents, including;

- Review of data and information to verify the correctness, credibility and interpretation of presented information;
- Cross checks between information provided in the PoA-DD, the real case CPA-DD and information from sources other than that used, if available, and if necessary independent background investigations.

II. Follow-up actions, including;

- Interview with relevant stakeholder in the host country, personnel with knowledge of the project design and implementation;
- Cross-check of information provided by interviewed personnel to ensure that no relevant information has been omitted the validation

III. The resolution of outstanding issues and the issuance of the final validation report and opinion.

Validation Protocol Table 1: Requirement checklist				
Checklist Question	Reference	Means of Verification (MoV)	Comments	Draft and/or Final Conclusion
The various requirements in Table 2 are linked to checklist questions the project should meet. The checklist is organised in five different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the checklist question or item is found.	Explains how conformance with the checklist question is investigated. Examples of means of verification are document review (DR) or interview (I). N/A means not applicable.	The section is used to elaborate and discuss the checklist question and/or the conformance to the question. It is further used to explain the conclusions reached.	This is either acceptable based on evidence provided (OK), or a Corrective Action Request (CAR) due to noncompliance with the checklist question (See below). Clarification Request (CL) is used when the validation team has identified a need for further clarification.

Validation Protocol Table 2: Resolution of Corrective Action and Clarification Requests			
Description of Corrective Action Requests and Clarification	Ref. to checklist table 2	Comments/Responses from project proponent	Final conclusion
If the conclusions from the draft Validation are either a Corrective Action Request or a Clarification Request, these should be listed in this section.	Reference to the checklist question number in Table 2 where the Corrective Action Request or Clarification Request is explained.	The responses given by the Client or other project participants during the communications with the validation team should be summarized in this section.	This section should summarise the validation team's responses and final conclusions. The conclusions should also be included in Table 2, under "Final Conclusion".

2.1 Review of Documents

The validation is performed by KSA primarily based on the review of the PoA-DD /1-01/, the real case CPA-DD and the other supporting documents. The PDD version 03(3rd GSC), dated 22/03/2012, was initially reviewed and KSA requested the project PoA Entity to present the supporting information and documents the related with the project design and such additional information and documents were also reviewed by KSA. Through the validation process, the PoA-DD/1-01/, the real case CPA-DD /1-02/, Excel Spreadsheet/1-03/ and the relevant documents were evaluated to confirm the actions taken by the CME and project participant to the CARs and CLs issued by KSA.

2.2 Follow-up Interviews

Follow-up interviews with the stakeholder and site visit were performed on 13/09/2012 and 08/11/2012. The schedule on site visit and interviewed personnel were as follows;

13/09/2012, SMG Office

- Audit team : Team Leader : Mr. Kyoo-II Sohn
Team member : Mr. Seong-Yong Park
Technical Expert : Mr. Chung-Kook Lee
- Interview with Coordinating/Managing Entity (SMG)

08/11/2012, the 1st CPA site for the planned Songpa-gu office.

- Site Name : The project to introduce photovoltaic system in public library of the Jamsil rainwater pump station (2011-Songpa-001-24kW)
- Audit team : Team Leader : Mr. Kyoo-II Sohn
Team member : Mr. Seong-Yong Park
Technical Expert : Mr. Chung-Kook Lee
- Interview with the local stakeholder, the project designer for the planned CPA and the operator of CPA

The list of person interviewed is included in the reference. The main topics of the interviews are summarized as follows;

Organization	Interview topics
<p>O&M service providers</p> <ul style="list-style-type: none"> - CPA implementer - Songpa-gu 	<ul style="list-style-type: none"> - Technology applied and operational lifetime - Provisions for training, operation and maintenance - Start date of CPA - Local Stakeholder Consultation - Environmental impacts - Resources, training needs and procedures for operation and maintenance.
<p>Coordinating/Managing Entity : SMG</p> <p>Consultant : Ecoeye Co., Ltd.</p>	<ul style="list-style-type: none"> - Clarification on technical details of the project. - Confirmation on non-involvement of ODA. - Monitoring and reporting procedures - Additionality - Baseline methodology. - Estimated emission reduction and emission factors applied - Stakeholder consultation process - Environmental impacts - Legal compliance. - Benefits from CDM registration. - Environmental impacts - stakeholder' comments - Monitoring and reporting procedures

2.3 Resolution of clarification and corrective action requests

As an outcomes of the validation process, the validation team can raise Corrective Action Requests (CAR) and Clarifications (CLs) in order to confirm that the proposed project activity meets the CDM requirements and can achieve credible emission reductions. CARs and CLs require the project participants to modify the project design, to rectify the PoA-DD /1-01/, the specific CPA-DD/1-02/, Excel Spreadsheet/1-03/ or to provide adequate additional explanations or evidence. Criteria for CARs and CLs are as follows and are based on the "Clean Development Mechanism Validation and Verification Standard"(ver 3.0, EB 70 Annex 3) /2-1/.

- A Corrective Action Request (CAR) shall be raised if one of the followings situation 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 applicable CDM requirements have not been met;
 - c) There is a risk that emission reduction cannot be monitored or calculated.
- A Clarification Request (CL) shall be raised if information is insufficient or not clear enough to determine whether the applicable CDM requirements have been met.
- A Forward Action Request (FAR) shall be raised during validation to identify issues related to project implementation that require review during the first verification of the project activity.

The validation by KSA identified 30 CARs and 4 CLs. The resolution of CARs and CLs raised by KSA are reflected in the revised PDD and submitted to KSA for validation conclusion.

3 Validation Findings

In the following sections the findings of the validation are stated. The validation requirements, the means of verification and the results from validating the identified criteria are documented in more detail in the validation protocols given in Appendix A.

3.1 Global Stakeholder Consultation

PoA-DD, generic CPA template and Real case CPA for this PoA was made available on the UNFCCC website and was open for comments from Parties, stakeholder and NGOs from 22/02/2011 to 23/03/2011(1st), from 26/03/2011 to 24/04/2011(2nd) and from 07/04/2012 to 06/05/2012(3rd). <Refer to section 3.5.1 of this Report> No comments were received during the global stakeholder consultation.

3.2 Approval and Authorization

According to the PoA-DD/1-1/, the project participant is SMG (Seoul Metropolitan Government) from Republic of Korea. The host Party, Republic of Korea meets all relevant participation requirements in the CDM. No Annex I Party has been identified and the proposed PoA is unilateral CDM. The DNA of Republic of Korea has issued LoA (No. 2012-32)/1-04/ on 05/12/2012 authorizing SMG (Seoul Metropolitan Government) as a project participant. KSA received the letter from the project participant and considers the submitted letters as authentic. The LoA was further confirmed by calling DNA of Republic of Korea.

From the LoA (No. 2012-32), KSA confirms that;

- Republic of Korea is a Party to the Kyoto Protocol.
- Participation is voluntary.
- The proposed CDM project activity contributes to the sustainable development of the Host Party.
- It refers to the precise proposed CDM project activity title in the PDD being submitted for registration.

Based on the information given in the LoA, KSA considers approval as unconditional with respect to these items. The LoA was issued by the Party's DNA and is valid for the proposed PoA. The LoA do not refer to a specific version of the validation report.

3.3 Contribution to Sustainable Development

The contribution to sustainable development by the proposed PoA was confirmed in a letter of approval from the DNA of Republic of Korea /1-04/.

3.4 Modalities of Communications

KSA used the written confirmation /1-09/ from the coordinating/managing entity (CME), Seoul Metropolitan Government (SMG), in order to perform due diligence on the Modalities of Communication (MoC) statement /1-10/. KSA ensures that the MoC statement is received from the coordinating/managing entity(CME), SMG, with whom KSA has a contractual relationship.

The written confirmation /1-09/ confirms the corporate identity of the coordinating/managing entity and the focal point included in the MoC statement, as well as the personal identities, including specimen signatures and employment status of their authorized signatories.

KSA confirms that the MoC statement complies with all relevant forms and requirements as follows;

- the latest version of the form "Modalities of Communication statement" (F-CDM-MoC) has been used;
- the information required as per the F-CDM-MOC, is correctly completed.
- the coordinating/managing entity's authorized signatories signing the (F-CDM-MoC) correspond to the coordinating/managing entity's authorized signatories;

3.5 PoA/CPA Project Design Documents

The PoA-DD and the specific CPA-DD are in compliance with relevant form (F-CDM-SSC-PoA-DD /2-15/ and F-CDM-SSC-CPA-DD /2-16/), and guidance (Guidelines for completing the programme design document form for small-scale CDM programmes of activities (version 2.0) /2-2/ and Guidelines for completing the component project activity design document form for small-scale component project activities (version 1.0) /2-14/) as provided by UNFCCC. The most recent version of the forms are used.

KSA confirms that the guideline for the completion of the PoA documents in their most recent version have been followed and the PoA-DD and the specific CPA-DD are in compliance with relevant forms and guidance.

3.5.1 Changes in the PoA-DD

The PoA-DD, Generic CPA-DD and the specific CPA-DD using methodology AMS-I.C.(version 18) and AMS-I.F.(version 01) were webhosted on the UNFCCC website for global stakeholder comments in accordance with the CDM Modalities and Procedures from 22/02/2011 to 23/03/2011 (1st).

The validation team carried out the desk review of the web-hosted PoA-DD published for global stakeholder comments and found an upload error. The revised PoA-DD, Generic CPA-DD and the specific CPA-DD were re-webhosted on the UNFCCC website for global stakeholder comments from 26/03/2011 to 24/04/2011 (2nd).

The coordinating/managing entity, SMG, has withdrawn "Geothermal heating/cooling system" and "Solar water heating system" using methodology AMS-I.C. (version 18).

Thus, the PoA-DD, Generic CPA-DD and the specific CPA-DD using methodology AMS-I.F. (version 02) were webhosted on the UNFCCC website for global stakeholder comments in accordance with §19 of "CDM Project Cycle Procedure"/2-17/, from 07/04/2012 to 06/05/2012 (3rd).

3.6 Application of the selected baseline and monitoring methodology

3.6.1 Applicability of the selected baseline and monitoring methodology to the PoA

The proposed PoA has been applied the baseline and monitoring methodology as mentioned in the approved methodology AMS- I .F Version 02 /2-6/ entitled "Renewable electricity generation for captive use and mini-grid" (version 02) and Methodological Tool entitled "Tool to calculate the emission factor for an electricity system"(version 3.0)/2-7/. The justification of the choice of the baseline and monitoring methodology AMS- I .F (Version 02) /2-6/ has been described at section B.3 of Part I and B.2. of Part II in the PoA-DD. The proposed PoA concerns to involve the renewable electricity from the solar photovoltaic power and the generated electricity will be supplied to the buildings or facilities displacing the electricity from the KEPCO grid that would have been supplied by at least one fossil fuel fired generating unit. The baseline selected for the project is the continuation of generation at current level of emission from the KEPCO grid system.

Validation team have checked for each applicability criterion including applicability condition in regard to baseline setting and eligible project technology/measures through relevant document review, on-site *assessment for CME and the initial CPA and follow-up interview for the followings*;

- The proposed PoA comprises of the renewable electricity generation by the PV power plant and displaces the electricity from the KEPCO grid that would have been supplied by at least one fossil fuel fired generating unit.
- The installed capacity by a single CPA is equal to or less than 15 MW.
- PoA will involve the newly installed PV power plant (greenfield) only.
- All records would be screened by CME. The records shall be authentic and no double counting has occurred.

Thus KSA confirms that the chosen baseline and monitoring methodology is applicable to the PoA.

Emissions sources, not address by the applied methodology and expected to contributed more than 1% of the overall expected average annual emission reductions, have not been identified.

3.6.2 Baseline scenario identification and description

The proposed the programme of activity (PoA) involves to introduce the renewable energy in Seoul

City based on solar photovoltaic power using methodology AMS-I.F. (version 02). The generated electricity by the CPA will displace the electricity from KEPCO grid that is or would have been supplied by at least one fossil fuel fired generating unit.

Emissions reductions are determined by the AMS-I.F (version 02) /2-06/ methodology mentioned in the PoA-DD /1-1/. This project activity is to generate electricity using solar energy and supplies the electricity to the building displacing the KEPCO grid that is or would have been supplied by at least one fossil fuel-fired generating unit. Thus, the baseline emission are the product of amount electricity displaced with the electricity produced by the PV power plant and an emission factor.

The information presented in the PoA-DD/1-1/ have been validated by the first desk review of all the data and further confirmation based on the on-site visit. The sources referenced in the PoA-DD/1-1/ have been correctly quoted. The information was cross-checked based on verifiable and credible source, such as;

1) Documents are provided by PPs

- PoA-DD /1-01/
- the specific CPA-DD /1-02/
- Excel Spreadsheet /1-03/

2) Documents for cross checking by KSA

- Guideline on the supporting, equipment installation & management of New and renewable energy by MKE (Ministry of Knowledge and Economy) /1-14/
- Guideline on the Supporting renewable energy equipment by MKE /1-45
- Rules on the operation of electric utility market - KPX (Korea Power Exchange) /1-16/
- Electric Utility Act /1-12/
- The Energy Act /1-17/
- Act on the promotion of the development, use and diffusion of new and renewable energy/1-18/
- Statistic of Electric Power in Korea by KEPCO for 2008, 2009 and 2010 /1-23/
- The status report of generation facility by KPX /1-24/
- Framework Act on Low Carbon Green Growth/1-11/
- Feasibility Study Report - Supporting System in Feed-in Tariffs of Electricity generation from New and Renewable Energy Source by MKE (Ministry of Knowledge and Economy) of Korea (<http://www.mke.go.kr>) /1-25/
- Korea Power Exchange (<http://www.kpx.or.kr>) /1-26/
- Korea Electric Power Corporation (<http://www.kepcoco.kr>) /1-29/

Based on the validated assumptions on calculations, KSA considered the identified baseline

scenario is reasonable. KSA confirms that all related CDM requirements, including relevant and/or sectoral policies and circumstances, have been correctly identified taken into account in the definition of the baseline scenario. A verifiable description of the baseline scenario has been included in the PDD/1-01/, KSA confirms that;

- All the assumptions and data used by the project participants are listed in the PDD /1-01/, including their references and sources;
- All documentation used is relevant for establishing the baseline scenario and correctly quoted and interpreted in the PDD /1-01/;
- Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- Relevant national and/or sectoral policies and circumstances are considered and listed in the PDD;
- The approved baseline methodology has been correctly applied to identify the most reasonable baseline scenario and the identified baseline scenario reasonably represents what would occur in the absence of the proposed CDM project activity.

3.6.3 Algorithm and/or formulae used to determine Emission Reductions

The procedures provided in the methodology AMS- I.F./2-06/ are correctly described in the PoA-DD.

KSA assessed the calculation of the baseline emission, project emissions and leakage and emission reductions. The corresponding calculations, parameters and equations are presented in Part II B.6.3 of the PoA-DD /1-01/. The parameters and equations presented in the PoA-DD/1-1/ and further documentation have been compared with the information and requirements presented in the methodology and respective tools.

The assumptions and data used to determine the emission reduction are listed in the PoA-DD /1-01/ and all sources have been checked and confirmed. Based on the information reviewed it can be confirmed that the sources used are correctly quoted and interpreted in the PoA-DD /1-01/.

The value presented in the PoA-DD/1-01/ are considered reasonable based on the documentation reviewed, further references and the results of the interviews. The baseline methodology has been correctly applied following requirements. The estimated baseline emissions can be confirmed as the same have been replicated by the audit team using the information provided. Detailed information on the verification of the parameters used in the equation can be found in the appendix A. The algorithms for the determination of the baseline, project and leakage are discussed in the following sections.

1) Baseline Emissions

Emissions reductions were calculated according to the methodology, AMS-I.F. version 02 /2-06/ and emission factor was also calculated based on the approved methodology of "Tool to calculate

the emission factor for an electricity system (version 3.0)" /2-07/

The information presented in the PoA-DD/1-01/ has been validated by the first desk review of all the data, further confirmation based on the website (<http://www.kepco.co.kr>)/1-29/ and a final step by cross-checking the information with similar PV power projects which are registered as CDM project.

The documents and information used to confirm baseline emission factor are as follows;

① Documents are provided by PPs

- Excel Spreadsheets for calculation of operating margin and build margin emission coefficient. /1-03/

② Documents for cross checking by KSA

- For 5 years (2006 ~ 2010), "Statistics of Electric Power in Korea" /1-23/
Those are available on the website (<http://www.kepco.co.kr>) /1-29/
- The Energy Act /1-17/
- IPCC guideline for national greenhouse gas inventories /2-04/ & /2-05/
- The status report of generation facility by KPX (Korea Power Exchange) /1-24/

Since the project activity is the installation of a new renewable power plant, the baseline scenario is correctly identified as an electricity delivered to the building displacing the KEPCO grid by the CPA multiplied by the combined margin (CM) calculation described in the "Tool to calculate the emission factor for an electricity system" /2-7/, namely "the net electricity amount by the project activity" * "CM factor". For this purpose it has been validated by KSA validation team that the project participant applied all the 6 steps as per the approved baseline methodology.

Step 1: Identify the relevant electric power system

The electricity by the proposed project activity is connected physically to KEPCO grid which is the only one in Korea. And the power plant in islands except Jeju Island are not connected to the national grid, so they are not considered. Thus, the relevant electric power system is KEPCO grid.

Step 2: Choose whether to include off-grid power plants in the project electricity system (optional)

"Option I . Only grid power plants are included in the calculation" was chosen.

Step 3: Select an Operation Margin (OM) Method.

As low-cost/must-run resources constitute less than 50% of total grid generation in average of the five most recent years, "Simple OM" method option has been chosen.

During the most recent 5 years (2006 ~ 2010), low-cost/must run resources constitute 37.78% of total grid generation which is less than 50%.

Step 4: Calculate the operating margin emission factor according to the selected method.

According to the selected method, simple OM is calculated as the generation-weighted average emission per electricity unit of all generating power plant within KEPCO grid, not including low-operating cost and must run power plants for the most recent three years (2008 ~ 2010).

Subsequently choosing Option A, the simple OM emission factor is determined as per formular of tool as $OM = 0.6933$

Step 5: Calculate the build margin (BM) emission factor.

The project participant has chosen option 1 to estimate the Build Margin (BM) ex-ante for the entire crediting period of the project activity. According to electricity data published by KEPCO, it is found that in year 2010 the electricity generation from the 5 power units (0.28%) that started to supply electricity to the grid most recently, excluding power units registered as CDM project activities, is less than the electricity generation (20.30%) from the set of power unit that started to supply electricity to the grid most recently and comprise 20% of the annual system generation, excluding power units registered as CDM project activities. In addition, none of the power units in the result group started to supply electricity to the grid more than 10 years, therefore the build margin (BM) is calculated from the sample group that started to supply electricity to the grid most recently and comprise 20% of the annual system generation which is deemed as appropriate.

Thus, the build margin (BM) is calculated using data of 2010. BM is calculated as the generation-weighted average emission factor of all generating power plant within KEPCO grid during the most recent year y for which power generation data is available. BM emission factor is determined as per formular 13 of tool as $BM = 0.6357$.

Step 6: Calculate the combined margin (CM) emission factor.

According to "Tool to calculate the emission factor for an electricity system /2-7/", the weighting factor is set to be respectively $W_{OM} = 75\%$ and $W_{BM} = 25\%$ for the first crediting period.

The combined margin (CM) of the project activity is calculated as 0.6789 tCO_{2-eq}/MWh. The baseline emission factor determined ex-ante will be used for calculation of emission reductions.

OM	BM	CM
0.6933 tCO _{2-eq} /MWh	0.6357 tCO _{2-eq} /MWh	0.6789 tCO _{2-eq} /MWh

All steps and formula mentioned in the methodology are properly applied in the PDD. There is

no transfer of energy generating equipment from another activity or the transfer of exiting equipment to another activity. The emission reduction by the project will be direct function of the net electricity fed to the KEPCO grid.

The power sector data used for the calculation has been cross checked as follows;

- Each power plant of the electric generation amount : "Statistics of Electric Power in Korea" /1-23/ and "The status report of generation facility by KPX /1-24/.

"Statistics of Electric Power in Korea" for 2008, 2009 and 2010 have been verified with KEPCO website (<http://www.kepcoco.kr>), i.e. those were issued by KEPCO (Korea Electric Power Corporation) May 2009, May 2010 and May 2011 respectively. The "Status Report on the Generation Facility" for 2010 by KPX was issued June 2011 and the fixed date is 31 Dec 2010.

The initial PoA-DD was prepared on 22/03/2011 and submitted to the DOE (KSA). The PDD was opened for stakeholders from 26/03/2011 to 24/04/2011 (2nd) and 07/04/2012 to 06/05/2012 (3rd). <Please refer to section 3.4 of this report>

Thus, Statistics of Electric Power in Korea" for 2008, 2009 and 2010 were the most recent available data sources at the time of PDD submission to DOE for validation as per "Tool to calculate the emission factor for an electricity system (version 3.0)" /2-7/

- Each Fuel of CGVs and NCVs : "The Energy Act" /1-17/ and IPCC guideline for national greenhouse gas inventories /2-04/ & /2-05/

As above, KSA confirmed that all data used for the calculation are not excessive and appropriate.

All the equations involved along with the KEPCO grid power sector data used for calculation were found by the validation team to be in line with the "Tool to calculate the emission factor for an electricity system, version 3.0" /2-7/. The ex-ante determined grid emission factor will be fixed for the selected crediting period. The grid emission factor value (CM) has been validated as 0.6789 tCO_{2-e}/MWh, the same value has properly been used in the emission reduction calculation as per the requirement of AMS-I.F version 02 /2-6/.

2) Project Emissions

As per the requirement of AMS-I.F(version 2.0), calculation of project is not applicable for the proposed project activity which is renewable energy project activity under consideration, $PE_y = 0$.

3) Leakage

As per the requirement of AMS-I.F.(version 2.0), calculation of leakage emission is not applicable for the project activity as the energy generating equipment is not transferred from another activity, $LE_y = 0$.

4) Emission Reductions

According to the approved methodology, emission reductions are calculated as follows;

$$ER_y = BE_y - PE_y - LE_y$$

where, ER_y : Emission reductions in year y (tCO_{2e}/y)

BE_y : Baseline emissions in year y (tCO_{2e}/y)

PE_y : Project emissions in year y (tCO_{2e}/y)

LE_y : Leakage emissions in year y (tCO_{2e}/y)

Baseline emission is the net annual electricity displaced by the renewable energy unit times an emission factor (EF_{CO_2} in tCO_{2eq}/MWh). No project emissions need to be considered, as a CPA is a renewable energy project. No leakage has to be considered for the proposed project activity.

KSA has assessed the calculation of emission reduction, the parameters and the applied data.

The parameters and equation described in the PoA-DD and other applicable documents have been compared with the information and requirements presented in the methodology. An equation comparison has been made to ensure consistency between all the formulae presented in the PoA-DD, template CPA-DD, methodologies and the tool.

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

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

- All the assumptions and data used by the project participants are listed in the PoA-DD /1-1/, including their references and sources;
- All documentation used by project participants as the basis for assumptions and sources of data is correctly quoted and interpreted in the PoA-DD /1-1/;
- All values used in the PoA-DD are considered reasonable in the context of the proposed PoA.
- The baseline methodology has been 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.

3.7 Programme of Activities(PoA)/Component Project Activities (CPA).

3.7.1 Coordinating/managing entity and participants in a PoA

SMG(CME) has established the management system (CDM operation Manual /1-5/ to check the features of potential CPA and ensure that each CPA meets all requirements and eligibility criteria before inclusion in a PoA and those are presented in the section C of PoA-DD.

This has been verified during on-site visit including interviews and could be confirmed based on the "CDM operational manual"/1-05/. After thorough review of the "CDM operational manual" and relevant documents, KSA confirms that SMG has established and implemented the management system that include the followings;

- (1) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;

This part is covered by Chapter 3 Roles, Responsibility and Competence of "CDM operation manual" /1-05/. This chapter contains roles, responsibilities and competence of personnel such as CME staffs, technical reviewer and CPA implementer.

- (2) Records of arrangements for training and capacity development for personnel

This part is covered by Chapter 6 Training of "CDM operation manual" /1-05/. This chapter contains the necessary competence for personnel performing PoA operation and management and the record-keeping of education, training, skills and experience. CME also provide training or take other actions to maintain the competence of personnel.

- (3) A procedure for technical review of inclusion of CPAs

This part is covered by Chapter 4 CPA inclusion and management of "CDM operation manual"/1-05/.. This chapter contains the procedure for technical review of inclusion of CPA including technical review member, subject documents, follow-up action by CPA inclusion team.

- (4) A procedure to avoid double counting.

This part is covered by Chapter 4 CPA inclusion and management and Annex 2 of "CDM operation manual"/1-05/.. CPA implementer shall participate in a contractual agreement with SMG, confirming that the CPA has not and will not be registered as a CDM project activity or as CPA of another PoA.

- (5) Records and documentation control process for each CPA under the PoA

This part is covered by Chapter 9 Document and Data Control of "CDM operation manual"/1-05/.Record keeping and documentation control process established for each CPA under the PoA. Each CPA will be kept in identification numbering system and will identify each solar PV power plant under a identification numbering system to uniquely identify its location in addition to its technical details, address and GPS coordinates.

(6) Measures for continuous improvements of the PoA management system

This part is covered by Chapter 11. Continuous Improvement of the PoA Management System of "CDM operation manual"/1-05/.. CME will continually improve the PoA management system through audit results (internal and external), periodic management review, updating eligibility criteria and so on.

Thus, KSA confirms that the established management system makes the CME to check the features of potential CPAs and ensure that each CPA meets all requirements and eligibility criteria before inclusion in a PoA. As a results, it can be confirmed that the CME has established and implemented the management system as per "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoA". /2-8/

3.7.2 CPA design document

The proposed specific CPA was assessed by KSA. It can be confirmed that it complies with the eligibility criteria specified in the PoA-DD. The detailed assessment for the compliance with the eligibility criteria are described in section 3.8.9 of this report. The validation of the specific CPA include a desk review as well as follow-up interviews and site visit.

Thus, KSA confirms that the specific CPA was appropriately assessed and complied with the eligibility criteria specified in the PoA-DD.

3.7.3 Description of a PoA/CPAs

The proposed the programme of activity (PoA) involves to introduce the renewable energy in Seoul City based on solar photovoltaic power using methodology AMS-I.F. (version 02) /2-06/.

The PoA, titled as "The programme to introduce renewable energy system into Seoul" has been developed by SMG (Seoul Metropolitan Government). The PoA will consist of CPAs that each represents one or more small PV power plants built in Seoul of the Republic of Korea with an installed capacity of up to 15MW which is not connected the grid.

The PoA will introduce the greenfield project only using AMS-I.F. (version 02)/2-06/. The PoA will reduce GHG emission by displacing electricity from the KEPCO grid that would have been supplied by at least one fossil fuel fired generating unit.

Seoul Metropolitan Government (SMG) has established the "Seoul Renewable Energy Master Plan 2030"/1-07/ to promote the development and distribution of renewable energy.

As the district offices and the public institution in Seoul of Republic of Korea will be expected to participate in this programme, this PoA was planned and proposed. The district offices and the public institutions related to renewable energy may participate as a CPA implementer.

The proposed programme of activity would support the CPA implementer such as the district

office and the public institution to set up the Photovoltaic power plants. Also the programme would generate local employment and help the country development in an environmentally friendly and sustainable way.

The coordinating / managing entity of the this PoA is SMG. The CDM programme activities (CPAs) under the PoA will be implemented throughout the Seoul City of the host country - Republic of Korea. There are no mandatory policies or regulations for the adoption of "The programme to introduce renewable energy system into Seoul". The proposed PoA is a voluntary action by coordinating/ managing entity - SMG. Under "The programme to introduce renewable energy system into Seoul", the Photovoltaic power plant would be constructed by SSC-CPA implementer(s) and the generated electricity would displace electricity from the KEPCO grid that would have been supplied by at least one fossil fuel fired generating unit.

The technology is described in section A.6 of the CDM SSC PoA-DD in a accurate manner. Each of CPA sites may installed the photovoltaic power plant equal to or less than 15MW and may generate the electricity. SMG has been composed of 25 the district offices and several public institutions.

The description of SSC PoA in the PoA-DD is clearly considered and provides with a clear understanding of precise nature of the PoA and the technical aspects of its implementations.

The starting date of the proposed PoA is 26/03/2011 based on the publication of the PoA-DD (2nd GSC) for global stakeholder consultation as per "Clean Development Mechanism project standard" (version 2.1) /2-11/. The length of PoA is taken as 28 years.

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

- Review of data and information was checked at the desk review stage by following documents;
 - A review of the PoA-DD/1-01/ and the specific CPA-DD/1-02/
 - On-site visit to the place where the specific CPA is implemented and interview with the relevant stakeholder and personnel with knowledge of the project.
 - CDM Operation Manual of "The programme to introduce renewable energy system into Seoul" (version 03, 19/11/2012) /1-05/
 - Plan to promote Programme CDM project /1-06/
 - Seoul Renewable Energy Master Plan 2030 /1-07/
 - Technical Specification for PV power plant /1-33/
 - Guideline on the supporting, equipment installation & management of new and renewable energy /1-14
 - Measures Act /1-15/
 - Guideline on the supporting renewable energy equipment /1-45/

- KSA has on-site visit assessment on 13/09/2012 to confirm the context of the PoAD-DD/1-01/ & 08/11/2012 to confirm the specific CPA/1-02/ and relevant stakeholder and personnel related to operation and maintenance were interviewed.
- A review of information related to similar projects or technologies which have been used to validate the accuracy and completeness of the project description.(Benchmark Project) /1-31/

After desk review, follow-up interview and on-site visit, the major features of the component project activity (CPA) described in the first specific CPA-DD are confirmed as follows;

- Title of the CPA : The project to introduce photovoltaic system in public library of the Jamsil rainwater pump station
- ID of the CPA : 2011-Songpa-001-24kW
- Project type and sectoral scope :
 - Project type : *Renewable electricity generation for captive use and mini-grid*
 - Sectoral Scope : 01 (Energy Industries (renewable/non renewable sources))
- Small-scale project : 24.0kW(maximum output) of solar photovoltaic (PV) power plant
- Annual estimated power generation : 30.79 MWh
- Annual estimated emission reductions : 20.90 tCO_{2eq}/year during the crediting period.
- Project Location : Address : 306, Jamsil-dong, Songpa-gu, Seoul
GPS information : 37.507213°N 127.078539°E
- Crediting Period : 10 years fixed

Thus, KSA confirmed that the PoA project description, as included in the PoA-DD, is sufficiently accurate and complete in order to comply with the requirements of the CDM and the specific CPA-DD submitted by the CME, and also confirmed that the framework developed for the implementation of the PoA and defining a CPA under the PoA was appropriate.

3.7.4 Application of multiple methodologies

Not Applicable. KSA confirmed that each CPA of PoA applies a single methodology.

3.7.5 Boundary for the PoA in terms of geographical area

KSA has assessed the boundary of the PoA within which all CPA are included in the PoA, considering information gathered from on-site visit, interviews, local knowledge of auditor.

The boundary of PoA is Seoul Metropolitan City within Republic of Korea. To assess the boundary of PoA, the PoA-DD and the following evidences in Republic of Korea were reviewed.

- Local Autonomy Act /1-21/
- Law on special case concerning the administration of Seoul Metropolitan City /1-22/
- Energy Use rationalization Act /1-13/
- Seoul Metropolitan City (<http://www.seoul.go.kr>) /1-30/
- Act on the promotion of the development, use and diffusion of new and renewable energy /1-18/

As seen above, it can be confirmed that in establishing the boundary of the PoA, CME have taken into consideration all applicable national and sectoral policies and regulations within that chosen boundary. Furthermore, it can be confirmed that the boundary of the specific CPA is correctly identified and in line with the applied methodology, AMS-IF.

Thus, KSA confirms that the boundary of PoA in terms of geographical area is correctly selected and complete in order to comply with the requirements of the CDM.

3.7.6 Start date of a CPA

The start date of PoA had been defined as 26/03/2011 which is based on the date of publication of the PoA-DD for global stakeholder consultation (2nd GSC) as per §159 (b) of "Clean Development Mechanism Project Standard"(version 2.1). The 2nd webhosting DDs on UNFCCC were published on 26/03/2011. The starting date of 1st CPA is on 19/04/2011 which was contract date for purchasing agreement for photovoltaic power module /1-34/ including construction. The starting date of the specific CPA was later than the date of webhosting DDs on UNFCCC which was identified as the start date of PoA.

Thus, KSA confirmed that the start date of specific CPA is after the date of the PoA and requirement for start date of a CPA are met.

3.8.7 Prior Consideration of the CDM

According to §29 of CDM project standard /2-11/, the demonstration and assessment of prior consideration of the CDM does not apply to PoA.

3.8.8 Demonstration of additionality of the PoA as whole

The additionality of the proposed PoA has been described in section B.1 of Part I of the PoA-DD. The approach used in the PoA-DD has been assessed initially through the document review and followed by on-site discussions. Finally the data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral.

As per "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities (ver 02.1) /2-8/, it can be that the

additionality was demonstrated by clearly establishing that in the absence of CDM, none the implemented CPAs would occur. The additionality of the PoA level has been demonstrated as follows;

- Since the PoA consists of one or more small scale project as CPAs, the eligibility criteria for the demonstration of additionality was based on the "Guidelines on the demonstration of additionality of small-scale project activities".(version 09, EB 68 Annex 27)/2-03/
- CPAs under PoA are as follows;
 - off-grid renewable electricity generation technologies
 - Solar technologies (photovoltaic power)
 - The installed capacity of PV power equals or less than 15MW
- Hence, CPAs under PoA are belonged to the positive list that the demonstration of barrier is not required.

Thus, KSA confirms that the additionality of PoA can be demonstrated in accordance with "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programmes of activities" (version 2.1) /2-8/,

3.8.9 Eligibility criteria for inclusion of a CPA in the PoA

The coordinating/managing entities (CME) has defined clear and unambiguous criteria for the inclusion of the CPA under PoA in section B.2 of Part I of the PoA-DD /1-01/. The eligibility criteria have been stated are verifiable with regards to the applicability of the applied methodology AMS- I .F(version 02), geographical boundary, technology used to the CPA, double counting and the host country's regulations. The eligibility criteria can be checked at the CPA level by the managing entity and can be confirmed by the DOE during inclusion. The eligibility criteria by CME in the PoA-DD has been defined thirteen (13) eligibility criteria including criteria (a) to (l) stipulated in §16 of the standard /2-8/, for inclusion of a CPA under the PoA as described in the PoA-DD.

Validation team has checked and determined whether the thirteen (13) eligibility criteria as shown in the table 3-1 are sufficiently objective and comprehensive to permit the assessment of the inclusion of CPAs in the PoA.

The eligibility criteria can be checked at the CPA level by the SMG (CME) and can be confirmed by the DOE during CPA inclusion validation. The verification method does not apply sampling among CPAs but verifies each CPA.

For the eligibility criteria, KSA confirms that ;

- All of eligibility criteria are appropriated to the inclusion of CPA under the proposed PoA.
- All of eligibility criteria are verifiable.
- All of eligibility criteria are sufficiently objective and comprehensive to permit the validation team assessment of the inclusion of CPAs in the PoA

Table 3-1 Eligibility Criteria for inclusion of a CPA into the PoA

No.	Requirements (§16 of Standard /2-8/)	Eligibility Criteria in PoA-DD	Verifiable Evidence or Means of Verification	Specific CPA	Check Result
1	(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA..	The CPA is performed within the geographical boundary of Seoul in Republic of Korea.	<ul style="list-style-type: none"> ▪ GPS information ▪ Explanation in section A.7 of CPA-DD ▪ CPA ID No. ▪ MoV : Document Review ▪ On-site Visit 	<ul style="list-style-type: none"> ▪ Explanation in section A.7 of CPA-DD (CPA is located within the geographical boundary of Seoul in Republic of Korea) ▪ GPS information : 37.507213°N, 127.078539°E ▪ CPA ID No.: 2011-Songpa-001-24kW 	OK
2	(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo).	The CPA is not involved in another project that is registered or under validation as a CDM project activity or as a CPA under another PoA or as other GHG reduction projects	<ul style="list-style-type: none"> ▪ Written Agreement between CME and CPA implementer ▪ Explanation in A.13 of CPA-DD ▪ MoV: Document Review 	<ul style="list-style-type: none"> ▪ Written Agreement between SMG and Songpa-gu /1-32/ ▪ Explanation in A.13 of the specific CPA-DD 	OK
3	(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications.	The power plant of CPA comply with Korean Standards (KS), guideline related to photovoltaic and Korean law and regulation. In the case of PV module, CPA implementer shall provide Certificate of new and renewable energy facility from KEMCO.	<ul style="list-style-type: none"> ▪ Technical Specification for the project activity ▪ Certificate of New and Renewable energy facility from KEMCO ▪ MoV: Document Review 	<ul style="list-style-type: none"> ▪ Technical Specification for PV power plant /1-33/ ▪ Certificate of New and Renewable energy facility (No. PV-CPA-2-0610) /1-34/ 	OK
4	(d) Conditions to check the start date	The CPA start date is after PoA	<ul style="list-style-type: none"> ▪ Purchase or Construction 	<ul style="list-style-type: none"> ▪ Purchase Contract date for PV 	OK

No.	Requirements (§16 of Standard /2-8/)	Eligibility Criteria in PoA-DD	Verifiable Evidence or Means of Verification	Specific CPA	Check Result
	of the CPA through documentary evidence.	posting date, 26/03/2011	Contract date for PV power plant ▪ MoV: Document Review	module including construction between Songpa-gu and KD power /1-35/ (Start date : 19/04/2011)	
5	(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs.	The CPA meets the applicability criteria of AMS-I.F. as described in PoA-DD part II section B.2	▪ Detailed assessment that CPA meets all the applicability criteria of AMS-I.F. ▪ Explanation in D.2 of CPA-DD ▪ MoV: Document Review On-site visit	▪ Detailed assessment in D.2 of the specific CPA-DD	OK
6	(f) The conditions that ensure that the CPA meets the requirements pertaining to the demonstration of additionality as specified in section 3.8.8 of this report above.	Additionality check in each CPA-DD is performed as per the additionality related guidelines.	▪ Detailed assessment for additionality. ▪ Explanation in D.5 of CPA-DD with evidence for PV installed capacity. ▪ MoV: Document Review On-site visit	▪ Detailed assessment in D.5 of the specific CPA-DD ▪ Evidence for PV installed capacity: Certificate of Inspection Prior to Use by KESCO (No. 121050648) /1-36/	OK
7	(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations.	The CPA implementer performs local stakeholder consultation before the start of CPA.	▪ Minutes or report of local stakeholder consultation including summary of concerns raised, clarification	▪ Minutes of local stakeholder consultation for Jamsil PV power plant /1-38/	OK

No.	Requirements (§16 of Standard /2-8/)	Eligibility Criteria in PoA-DD	Verifiable Evidence or Means of Verification	Specific CPA	Check Result
			<p>provided and other information such as attendance list, meeting agenda, photographs shows that a local stakeholder consultation carried out.</p> <ul style="list-style-type: none"> ▪ Explanation in C of CPA-DD ▪ MoV: Document Review 	<ul style="list-style-type: none"> ▪ Explanation in C of the specific CPA-DD 	
8	(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking environmental impact analysis.	If required by Republic of Korea, CPA implementer shall carry out an analysis of the environmental impacts of the proposed small scale CPA. and provide a summary of the analysis and reference to all related documentation.	<ul style="list-style-type: none"> ▪ EIA/SSC EIA report, SEA ▪ Explanation in B of CPA-DD ▪ MoV: Document Review 	<ul style="list-style-type: none"> ▪ EIA, SSC-EIA or SEA for the specific CPA is not required by law of Republic of Korea. ▪ Explanation B of the specific CPA-DD 	OK
9	(h) Conditions to provide an affirmation that funding from Annex I Parties, if any, does not result in a diversion of official development assistance;	The CPA has the documentary evidence to check project costs and does not result in a diversion of official development assistance from Annex I country.	<ul style="list-style-type: none"> ▪ Written Agreement between CME and CPA implementer that CPA has not received funding from Annex I parties. ▪ Explanation in A.11 of CPA-DD 	<ul style="list-style-type: none"> ▪ Written Agreement between SMG and Songpa-gu /1-32/ ▪ Explanation in A.11 of the specific CPA-DD 	OK

No.	Requirements (§16 of Standard /2-8/)	Eligibility Criteria in PoA-DD	Verifiable Evidence or Means of Verification	Specific CPA	Check Result
			<ul style="list-style-type: none"> MoV: Document Review 		
10	(i) Where applicable, target group (e.g. domestic/commercial/industrial, rural/urban, grid-connected/off-grid) and distribution mechanisms (e.g. direct installation);	Target group of the proposed PoA is off-grid photovoltaic electricity generation technologies.	<ul style="list-style-type: none"> Electric consumption diagram for consumer facility. MoV: Document Review On-site visit 	<ul style="list-style-type: none"> Electric Consumption diagram for Jamsil public library /1-38/ 	OK
N/A	(j) Where applicable, the conditions related to sampling requirements for the PoA in accordance with the “Standard for sampling and surveys for CDM project activities and programme of activities”;	Not Applicable. Sampling method among CPAs is not applied but verifies each CPA.	Not Applicable.	Not Applicable.	OK
11	(k) Where applicable, the conditions that ensure that every CPA (in aggregate if it comprises of independent sub units) meets the small-scale or microscale threshold and remains within those thresholds throughout the crediting period of the CPA;	The total power plant capacity of CPA meets small-scale criteria (≤ 15 MW)	<ul style="list-style-type: none"> Agreement or contract related to construction or facility purchase or If available, Certificate of Inspection Prior to Use MoV: Document Review On-site visit 	<ul style="list-style-type: none"> Certificate of Inspection Prior to Use by KESCO (No. 121050648) /1-36/ 	OK

No.	Requirements (§16 of Standard /2-8/)	Eligibility Criteria in PoA-DD	Verifiable Evidence or Means of Verification	Specific CPA	Check Result
12	(I) Where applicable, the requirements for the debundling check, in case the CPAs belongs to small-scale or microscale project categories.	The CPA is a single project which is not a debundled component of another large-scale CDM or PoA as per the latest guidance given in CDM EB.	<ul style="list-style-type: none"> ▪ Written Agreement between CME and CPA implementer. ▪ Explanation in A.12 of CPA-DD ▪ CPA identification No. ▪ MoV : Document Review On-site Visit 	<ul style="list-style-type: none"> ▪ Written Agreement between SMG and Songpa-gu /1-32/ ▪ Explanation in A.12 of specific CPA-DD ▪ 2011-Songpa-001-24kW 	OK
13	Additional criteria by CME	CME (SMG) makes an agreement with CPA implementer involve the CPA into PoA to ensure that CPA implementer is aware of and agreed to subscribe the CPA into PoA. The agreement between CME and CPA implementer include the debundling check, double counting, no funding from Annex I and monitoring issues. In case that CPA implementer is same with CME, the agreement is not required.	<ul style="list-style-type: none"> ▪ Written Agreement between CME and CPA implementer. ▪ CPA identification No. ▪ MoV : Document Review On-site Visit 	<ul style="list-style-type: none"> ▪ Written Agreement between SMG and Songpa-gu /1-32/ ▪ 2011-Songpa-001-24kW 	OK

3.8.10 Crediting period of a PoA/CPA

The validation team confirms that the length of PoA is 28 years which not exceed 28 years.

3.8.11 Monitoring Plan for a PoA/CPA

(1) General

The verification method does not use sampling among CPAs but verifies each CPA. The monitoring plan shall provide a transparent system to ensure that no double accounting occurs and that the status of verification can be determined any time for each CPA. The system to avoid double counting has been indicated in the PoA-DD /1-01/ and the coordinating and managing entity (CME) CDM operational manual /1-05/. This would be done by SMG through review of information provided by SSC-CPA with information available with UNFCCC. Also, as each CPA will have a unique geographical boundary (as defined by local area) thus it can be checked whether a CPA under the proposed PoA already is a registered CDM project or CPA in another PoA. As per the proposed PoA administration manual /1-05/, a summary data-sheet of all CPAs would be maintained with the coordinating/managing entity - SMG, to determine the CER allocation status of all CPAs.

The description provided in the PoA-DD on the operational and management arrangements can be checked based on document review and on-site visits.

(2) Monitoring Plan of typical CPA

The monitoring plan for typical CPA has been described in Section B.7 of Part II of PoA-DD. The monitoring plan described in the PoA-DD complies with the methodology of AMS- I .F./2-06/

KSA validation team has verified all parameters in the monitoring plan against the relevant methodology requirements and found satisfied. KSA validation team reviewed the monitoring procedure through the document review and interview with the relevant personnel.

Monitoring points have been discussed with the PoA coordinating/managing entity and CPA implementer. These monitoring points include the monitoring methodology, data & record control, QA/QC procedures to calculate the emission reduction.

Thus, the monitoring plan has been appropriately established and the achieved emission reduction can be reported ex-post and verified.

① Monitoring Methodology

The monitoring plan is in compliance with the applied methodology, AMS-I.F. (version 02) /2-06/.

② Data and Parameters determined ex-ante

The data and parameters that are determined ex-ante are as follows;

- $EF_{grid, CM, y}$: CO_{2e} emission factor of the grid in year y (tCO_{2e}/MWh) is calculated to be 0.6789 as per Methodological Tool "Tool to calculate the emission factor for an electricity system (version 3.0)/2-07/
- $EF_{grid, OM, simple, y}$: CO_{2e} emission factor of the grid in year y (tCO_{2e}/MWh) is calculated to be 0.6933 as per Methodological Tool "Tool to calculate the emission factor for an electricity system (version 3.0)/2-07/
- $EF_{grid, BM, y}$: CO_{2e} emission factor of the grid in year y (tCO_{2e}/MWh) is calculated to be 0.6357 as per Methodological Tool "Tool to calculate the emission factor for an electricity system (version 3.0)/2-07/
- $NCV_{i, y}$; Net calorific value (energy content) of fossil fuel type i in year y (GJ/mass or volume unit) is determined as per IPCC guideline 2006 Guidelines for National Greenhouse Gas Inventories, volume 2 - Table 1.2 of chapter 1 of volume 2 (Energy)
- $EF_{CO_2, i, y}$: CO_{2e} emission factor of fossil fuel type i in year y is determined as per IPCC guideline 2006 Guidelines for National Greenhouse Gas Inventories, volume 2 - Table 1.4 of chapter 1 of volume 2 (Energy)

Validation team has checked the applied IPCC guidelines /2-04/ & /2-05/"Renewable Electricity Generation for captive use and mini-grid"/2-06/ and methodology tool "Tool to calculate the emission factor for an electricity system /2-07/.

③ Parameters for monitoring during the crediting period

The monitoring methodology correctly applies the choice of both options for monitoring plan and baseline emissions. The monitoring plan of the proposed project activity has followed the applied methodology, AMS-I.F, in context of the parameters to be monitored.

In this PoA, the data and parameters that are determined ex-post as follows;

- $EG_{BL, y}$; the net electricity supplied to the building using KEPCO grid is calculated the difference between the electricity supplied to the building ($EG_{e, export, y}$) and the auxiliary electricity consumption ($EG_{import, y}$).
- $EG_{e, export, y}$: the electricity supplied to the building (MWh/year) will be monitored by the watt-hour meter (the measuring devices in inverter) and the quantity of transmitted electricity will be electronically archived.
- $EG_{import, y}$: the auxiliary electricity consumption (connector bands, inverters and so on) will be calculated as "the auxiliary electricity consumption = standby power (auxiliary) × number × 8,760 hours" based on manufacturer's specification /1-39/ as a conservative methods.

All data will be archived electronically for a period of two years after the crediting period.

The choice of project GHG indicators is found reasonable and in conformance with the requirements set by the applied methodology, AMS-I.F.

KSA cross-checks these parameters with the relevant methodology /2-06/ and tool /2-07/.

Thus, KSA confirmed that these parameters are fully comply with the approved methodology (AMS-I.F.) /2-06/, applicable tools /2-07/.

3.8.12 Environmental Analysis

It has been described that the environmental impact analysis for the project activity is done at the CPA level. This is in light of the fact that the actual project activity is implemented at the CPA level and environmental impacts by CPA project have an impacts on local area not entire of Republic of Korea. KSA validation team has checked the relevant and regulation such as 'Environmental Impact Assessment Act' /1-19/ using audit team's local knowledge and sectoral expertise. There are SEA (Strategic Environmental Assessment), EIA (Environmental Impact Assessment) and SSC EIA (Small scale Environmental Impact Assessment) as per the project size stipulated by the host Party's law (Environmental Impact Assessment Act /1-19/).

Therefore likely environmental impacts specific to CPA will be discussed at the CPA level.

In the case of the specific CPA, SEA, EIA or SSC EIA is not required by the host Party, Republic of Korea. Thus, KSA confirms that the CPA implementer took necessary mitigation measures and anticipate environmental impacts by the CPA are controlled at a minimum level.

3.8.13 Local Stakeholder Consultation

The local stakeholder consultation will be done at the SSC-CPA level. The justification of doing local stakeholder consultation at the CPA level has been provided. This is in light of the fact that the actual project activity is implemented at the CPA level and impacts by CPA project activity have an effect on local area not entire Republic of Korea. In the case of the specific CPA, the local stakeholder consultation have been invited via meeting with stakeholder on 11/02/2011 which is earlier than starting date of CPA (19/04/2011). Validation team have checked the relevant documents /1-38/ and interviewed with the local stakeholder in order to validate the inclusion of relevant stakeholder. Validation team confirmed that the communication method used to invite the stakeholder are appropriate through audit team's local experience. Comments presented by the local stakeholder on each CPA project will have been taken into account by the CPA implementer and will have been verified with information obtained during interviews.

Thus, validation team confirms that the local stakeholder consultation has been performed adequately as per the relevant CDM requirements.

3.8.14 Determination of Occurrences of debundling under a PoA

The definition of debundling for small-scale project activities is stated in "Guidelines on assessment of de-bundling for SSC project activities (version 3.0)/2-10/.

According to Eligibility criteria No. 03, CME will check whether a CPA is not a debundled component of a large-scale project activity in accordance with "Guidelines on assessment of de-bundling for SSC project activities (version 3.0)/2-10/.

In case of the specific CPA, validation team confirmed during on-site visit that those items for following related to debundling do not be applied to the specific CPA.

- With the same project participants
- In the same category and technology/measure
- Registered within the previous 2 years.
- Whose project boundary is within 1 km of the project boundary of the specific CPA at the chosen point.

4. REFERENCES

Category 1 Documents:

Documents provided by the Client that relate directly to the project.

- /1-01/ PoA-DD for Small-scale CDM PoA project activity - Seoul Metropolitan Government (SMG)
(Webhosted PoA-DD of the proposed project activity is version 01 dated 22/03/2011 and
the current version of the PoA-DD of the proposed project activity is version 6.0 dated
11/12/2012)
- /1-02/ Real case CPA-DD for "The programme to introduce renewable energy system into Seoul"
(version 6.0 dated 11/12/2012)
- /1-03/ Excel Spreadsheet for calculation of the operating margin and build margin emission factors
(version 02, 11/12/2012)
- /1-04/ Approval of CDM - DNA of Republic of Korea (English and Korean)
- /1-05/ CDM Operation Manual of (version 03, 19/11/2012)
- /1-06/ Plan to promote Programme CDM project dated on 07/06/2010.
- /1-07/ Seoul Renewable Energy Master Plan 2030
- /1-08/ Completed Modalities of Communication Statement
- /1-09/ Written confirmation of authorization for MoC Signatories by SMG
- /1-10/ Certificate of employment
- /1-11/ Framework Act on Low Carbon Green Growth
- /1-12/ Electric Utility Act
- /1-13/ Energy Use rationalization Act
- /1-14/ Guideline on the supporting, equipment installation & management of new and renewable
energy (24/12/2008, MKE 2008-232)
- /1-15/ Measures Act
- /1-16/ Rules on the operation of electric utility market - KPX (<http://www.kpx.or.kr>)
- /1-17/ Energy Act
- /1-18/ Act on the promotion of the development, use and diffusion of new and renewable energy
- /1-19/ Environmental Impact Assessment Act
- /1-20/ Framework Act on environmental policy
- /1-21/ Local Autonomy Act
- /1-22/ Law on special case concerning the administration of Seoul Metropolitan City
- /1-23/ Statistic of Electric Power in Korea by KEPCO for 2008, 2009 and 2010)
- /1-24/ The Status Report of generation facility for 2010 by KPX.

- /1-25/ Supporting System in Feed-in Tariffs of Electricity Generation from New & Renewable Energy Sources by MKE (Ministry of Knowledge and Economy)
- /1-26/ Korea Power Exchange (<http://www.kpx.or.kr>)
- /1-27/ Ministry of Knowledge Economy (<http://www.mke.go.kr>)
- /1-28/ Ministry of Environment (<http://www.me.go.kr>)
- /1-29/ KEPCO (<http://www.kepco.co.kr>)
- /1-30/ Seoul Metropolitan City (<http://www.seoul.go.kr>)
- /1-31/ Benchmark Project
- ① Korea Land & Housing Corporation (LH Corporation)'s National Rental House PV power plant bundling CDM project (Registered date : 22/09/2011, Reference No. : 5251)
- ② SH Corporation Solar photovoltaic housing complex programme in Republic of Korea (Registered date : 18/10/2012, Reference No. PoA 6913)
- /1-32/ Written Agreement between SMG and Songpa-gu
- /1-33/ Technical Specification for PV power facility
- /1-34/ Purchase Contract date for PV module including construction between Songpa-gu and KD power
- /1-35/ Certificate of New and Renewable energy facility (No. PV-CPA-2-0610)
- /1-36/ Certificate of Inspection Prior to Use by KESCO (No. 121050648)
- /1-37/ Minutes of local stakeholder consultation for Jamsil PV power plant
- /1-38/ Electric Consumption diagram for Jamsil public library
- /1-39/ Stand by power for the Jamsil PV power plant (initial CPA)
- /1-40/ PV power plant plan for Jamsil (initial CPA)
- /1-41/ PV module specification for Jamsil (initial CPA)
- /1-42/ Internal Audit for CME (SMG)
- /1-43/ Technical Review for the specific CPA
- /1-44/ Education and Training plan of CME(SMG) including relevant record
- /1-45/ Guideline on the Supporting renewable energy equipment (Dec 29, 2008, MKE 2008-332)

Category 2 Documents:

Background documents related to the design and/or methodologies employed in the design or other reference documents.

- /2-1/ *Clean Development Mechanism Validation and Verification Standard (version 03.0, EB 70th Report Annex 3)*
- /2-2/ Guidelines for completing the programme design document form for small-scale CDM programmes of activities (version 2.0, EB 67th Annex30)
- /2-3/ *Guidelines on the demonstration of additionality of small-scale project activities. (EB 68th Report Annex 27)*
- /2-4/ *Revised 1996 IPCC guidelines for national greenhouse gas inventories - Reference Manuel*
- /2-5/ *2006 IPCC guidelines for national greenhouse gas inventories - Reference Manuel*
- /2-6/ Renewable Electricity generation for captive and mini-grid (AMS- I .F) Version 02
- /2-7/ Methodological Tool "Tool to calculate the emission factor for an electricity system". (version 3.0, EB 70 annex 22)
- /2-8/ Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities (EB 70 Annex 5 version 2.1)
- /2-9/ Standard for sampling and surveys for CDM project activities and programme of activities (EB 69 Annex 4, version 3.0)
- /2-10/ Guidelines on assessment of de-bundling for SSC project activities (version 3.0) (EB 54, Annex 13)
- /2-11/ Clean Development Mechanism Project Standard (Version 02.1), EB70 Annex02)
- /2-12/ Glossary of CDM terms (version 07)
- /2-13/ General Guidelines to SSC CDM methodologies (Version 19)
- /2-14/ Guidelines for completing the component project activity design document form for small-scale component project activities (Version 01.0, EB 66 Annex17)
- /2-15/ F-CDM-SSC-PoA-DD - Programme design document form for small-scale CDM programmes of activities (version 2.0)
- /2-16/ F-CDM-SSC-CPA-DD - Component project activity design document form for small-scale component project activities (version 2.0)
- /2-17/ CDM Project Cycle Procedure

Persons interviewed during the validation, or persons who contributed with other information that are not included in the documents listed above.

/1/ Interview on 13/09/2012

Name	Organization	Position
Chul-Soo Kim	Climate Change & Air Quality Management Division Seoul Metropolitan Government	Deputy Director
Seung-Joo Baek	Climate Change & Air Quality Management Division Seoul Metropolitan Government	Action officer (AO)
Gwang-Seok Lee	Environment Projection Division Songpa-gu	Team Leader
Hee-Jun Park	Flood control Division Songpa-gu	Personnel
Jeong-Hwan Lee	Ecoeye Co. Ltd. (Consulting Comapny)	Team Leader
Ha-Yeong Lee	Ecoeye Co. Ltd. (Consulting Comapny)	Chief
Sang-Jeon Ahn	Ecoeye Co. Ltd. (Consulting Comapny)	Director

/1/ Interview on 18/11/2012

Name	Organization	Position
Seung-Joo Baek	Climate Change & Air Quality Management Division Seoul Metropolitan Government	Action officer (AO) (CME staffs)
Hee-Jun Park	Flood control Division Songpa-gu Office	Action officer (AO) (CPA implementer)
Jin-Seong Lee	Flood control Division Songpa-gu Office	Action officer (AO) (CPA implementer)
Chang-Kyu Choi	Jamsil-dong, Songpa-gu, Seoul	Local Resident
Yong-Phil Yang	Jamsil-dong, Songpa-gu, Seoul	Local Resident
Jeong-Hwan Lee	Ecoeye Co. Ltd. (Consulting Comapny)	Team Leader
Ha-Yeong Lee	Ecoeye Co. Ltd. (Consulting Comapny)	Chief

APPENDIX A

VALIDATION PROTOCOL FOR SMALL-SCALE CDM PROJECT ACTIVITIES

Table 1 Requirements Checklist

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
A. General Description of PoA/CPA					
A.1 Title of the PoA/CPA					
A.1.1 Does the project title enable to identify the unique CDM project activity.	/EB 67/ Annex 30	DR	The PoA project title is "The programme to introduce renewable energy system into Seoul". The project title was reflected the field and characteristics of the project activity. Thus, it was clearly identified. CAR 24 The title of CPA is not indicated in section A.1 of CPA-DD.	OK CAR-24	OK
A.1.2 Are there any identification concerning the revision number and the date of the revision ?	/EB 67/ Annex 30	DR	Yes, properly mentioned in A.1 of PoA-DD. The first version is version 1 on 22/03/2011.(based on 2nd GSC) The current version is version 6.0 on 11/12/2012.	OK	OK
A.2 Approval					
A.2.1 Has the coordinate/managing entity obtained letters of approval for the implementation of the PoA from each host Party and Annex I Party involved in the PoA ? - PoA Procedures : EB 55 Annex 38 §9	VVS 38	DR	Yes, only Republic of Korea has involved in the PoA. SMG (Seoul Metropolitan Government) has obtained from Republic of Korea. The host Party : Republic of Korea No Annex I Party has been identified. CAR 03	OK CAR-03	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			Letter of approval has not submitted to the DOE at time of the on-site visit		
A.2.2 Do the LoAs confirm that the corresponding party is a Party to the Kyoto Protocol ?	VVS 38 (a)	DR	Yes, Republic of Korea has ratified the Kyoto Protocol in Nov 2002 LoA /1-21/ from Republic of Korea confirms the followings; - The Government of Republic of Korea has ratified the Kyoto Protocol in November 2002. - This is approval of voluntary participation in the proposed CDM project activity. - This project contributes to Sustainable Development in Korea.	OK Pending	OK
A.2.3 Do the LoAs confirm that the participation is voluntary ?	VVS 39 (b)	DR	Please refer A.2.1 and A.2.2	OK Pending	OK
A.2.4 Does the LoA from the Host Party confirm that the proposed CDM project activity contributes to the sustainable development of the country.	VVS 39 (c) & 50-52	DR	Please refer A.2.1 and A.2.2	OK Pending	OK
A.2.5 Does the LoA refers to the precise proposed CDM project activity title in the PDD being submitted for registration ?	VVS 45 (d)	DR	KSA Validation team checked the detailed information of the LoA/1-04/ from Ministry of Knowledge Economy, the Government of Republic of Korea which is the authorized DNA for CDM projects followings; - Logo - Project title.	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<ul style="list-style-type: none"> - project participant's name - address - signature - etc <p>KSA confirmed that all information in the respective LoA are consistent with the PoA-DD.</p> <p>KSA checked whether the LoA are authenticity by phone call</p>		
A.2.6 Is the LoA unconditional with respect to A.1.2 to A.1.5 ?	VVS 40	DR	LoA from Korea DNA /1-04/ are unconditional with respect to the aspects mentioned A.2.2 to A.2.5 of this checklist.	OK Pending	OK
A.2.7 Has the LoA been issued by the respective Party's DNA ?	VVS 41	DR	<p>This proposed PoA is developed as unilateral CDM PoA. SMG has obtained from the Republic of Korea DNA on 05/12/2012 (No. 2012-32).</p> <p>No Annex I Party is identified.</p>	OK Pending	OK
A.2.8 Is the LoA authentic ?	VVS 42	DR	Validation team confirmed LoA from the host party which issued by Republic of Korea.	OK Pending	OK
A.3 Authorization					
A.3.1 Are the project participants listed in tabular form in the PDD ? Is this information is consistent with the information provided in the section that contains the contact information for project	VVS 46	DR	<p>Yes, SMG (Seoul Metropolitan Government) is listed in tabular form in the PoA-DD.</p> <p>And this information (section A.4 of PoA-DD) is consistent with the Appendix 1 in the PoA-DD.</p>	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
participants ?			CAR 25 Information for CPA implementer is not described.	OK CAR-25	
A.3.2 Are no entities other than those authorized as project participants included in these sections of the PDD-DD ?	VVS 47	DR	No, there are no entities.	OK	OK
A.3.3 Has the approval of participation has been issued from the relevant DNA and if in doubt shall verify with the DNA that the approval of participation is valid for the proposed CDM project participants ?	VVS 48	DR	Yes, Please refer to section A.2.1 of this checklist.	OK Pending	
A.4 Contribution to sustainable development					
A.4.1 Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed CDM project activity to the sustainable development of the host Party ?	VVS 51	DR	Yes, Please refer to section A.2.1 of this checklist.	OK Pending	OK
A.5 Modalities of Communication					
A.5.1 Has been confirmed that ; (a) Directly checking evidence for corporate, personal identity and other relevant documentation; (b) Notarized documentation; or (c) Written confirmation from the project participant	VVS 54	DR	(a) Yes, SMG is one of the local government of Republic of Korea. Validation team directly checked SMG with official information, visited the city hall of Seoul, and interviewed with the authorized representative of the project participant as indicated in the MoC.	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
or the CME that submits to it the MoC statement that all corporate and personal details, including specimen signatures, are valid and accurate.			It has been confirmed that the corporate, personal identity, and relevant documentation are authorized and credible. The corporate names and authorized signatories of the project participant indicated in the MoC are consistent with the ones in the revised PDD. (b) N/A (c) It was confirmed by following documents submitted from PP. - Completed Modalities of Communication Statement /1-08/ - Written confirmation of authorization for MoC Signatories by SMG /1-09/ - Certificate of employment /1-10/	OK Pending	OK
A.5.2 Has been confirmed that the MoC statement is received from a PP with whom the DOE has a contractual relationship, in case of PoAs, from the CME?	VVS 55	DR	Yes, KSA has contractual relationship with SMG. SMG has directly submitted the MoC statement to KSA.	OK Pending	OK
A.5.3 Has been confirmed that the official who submits the MoC statement to the DOE and the official who signed the written confirmation (if a different person) is/are duly authorized to do so on behalf of the respective project participant or	VVS 56	DR	Yes, It has been confirmed by Certificate of employment /1-10/ issued by SMG.	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
coordinating/managing entity?					
A.5.4 If the DOE is unable to validate the requirements by applying section 5.1 (a), (b) or (c) above then, the DOE may perform further validation activities in order to confirm that the corporate and personal details, employment status and specimen signatures included in the MoC statement are valid and accurate and comply with the requirements of this section.	VVS 57	DR	No, Please refer to section A.5.1 to A.5.3 above.	OK	OK
A.5.4 Has the MoC statement been confirmed that: (a) The latest version of the form "Modalities of Communication statement"(F-CDM-MOC) has been used; (b) The information required as per the F-CDM-MOC, including its annex 1, is correctly completed; (c) The project participant's authorized signatories signing the F-CDM-MOC correspond to the project participant's authorized signatories included in F-CDM-MOC, annex 1.	VVS 60	DR	Yes, (a) it was confirmed that the MoC was signed on 20/12/2012 according to the latest Modalities of Communication Form (F-CDM-MOC) (Ver 02.1)/1-8/. (b) It was confirmed that the information is correctly completed. (c) Yes, signatories are identical.	OK Pending	OK
A.6 Project Design Document					

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
A.6.1 Is the PoA-DD prepared in accordance with the relevant form and guidance by the CDM EB ?	VVS 63	DR	<p>Yes, CDM-SSC-PoA-DD and CDM-SSC-CPA-DD have been prepared in accordance with the latest template.</p> <ul style="list-style-type: none"> - CDM-SSC-PoA-DD template version 2.0 - CDM-SSC-CPA-DD template version 2.0 <p>CDM-SSC-PoA-DD and CDM-SSC-CPA-DD have been completed using "Guidelines for completing the programme design document form for small-scale CDM programmes of activities (version 2.0) /2-02/</p> <p>CAR 01 The revision number for PoA-DD and the specific CPA-DD completed on 21/03/2012 were not linked with prior documents.</p> <p>CAR 02 The submitted PoA-DD and the specific CPA-DD which were completed on 22/03/2012 (3rd GSC) are not compliance with the standard, the methodology and the guideline related to the PoA-DD.</p>	<p>OK CAR-01</p> <p>OK CAR-02</p>	OK
A.7 Small Scale CDM project activity - Small-scale project activities.					
A.7.1 Does the project qualify as a small scale CDM	VVS 151	DR, I	Yes,		

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
project activity as defined in decision 4/CMP 1 Annex II ?			As per eligibility criteria in the PoA-DD, the installed capacity of all CPA is up to 15MW. Total installed capacity of initial CPA is 24.kW which is less than 15MW. Thus, the project qualify as a small scale CDM project activity as defined in decision 4/CMP 1 Annex II.	OK Pending	OK
A.7.2 Does the project activity qualifies within the thresholds of the three possible type of small-scale project activity ?	VVS 152 (a)	DR, I	Yes, the CPA in this PoA is a photovoltaic power plants up to 15MW and the generated electricity will displace the KEPCO grid.. Thus the methodology, AMS-I.F, is applicable to this SSC-CPA.	OK Pending	OK
A.7.3 Does the project activity conforms to one of the approved small-scale categories and applies the relevant tool or methodology ?	VVS 152 (b)	DR	See A.6.2 above.	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
B. Programme of activities/Component project activities.					
B.1 Coordinating/Managing Entity and Participants in a PoA					
B.1.1 Has the coordinating/managing entity established the PoA management system in accordance with "Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities ?	VVS 186 & Standard (EB 70 Annex 05) (ver 2.1) §19	DR,I	<p>The operation and management arrangements for the implementation of the PoA are described at section C of the PoA-DD.</p> <p>The operation and management arrangements for the implementation of the PoA have been checked by KSA via the followings;</p> <ul style="list-style-type: none"> - Desk Review for PoA-DD and supporting documents. - Onsite visit - interview with the relevant stakeholders. <p>▪ Role and responsibility of personnel involved in the process of inclusion of CPAs, including a review of their competency; ==> Section C of Part I in PoA-DD Chapter 3 of CDM operation manual by CME/1-05/</p> <p>▪ Records of arrangements for training and capacity development for personnel ==> Section C of Part I in PoA-DD Chapter 6 of CDM operation manual by CME/1-05/</p> <p>▪ A procedure for technical review of CPAs</p>	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
	VVS 186 & Standard (EB 70 Annex 05) (ver 2.1) §19	DR,I	<p>==> Section C of Part I in PoA-DD Chapter 4 of CDM operation manual by CME/1-05/</p> <ul style="list-style-type: none"> ▪ A procedure to avoid double counting <p>==> Section C of Part I in PoA-DD</p> <ul style="list-style-type: none"> - Chapter 4 of CDM operation manual by CME/1-05/ - Written Agreements between CEM and CPA implementer. <ul style="list-style-type: none"> ▪ Records and documentation control process for each CPA under the PoA <p>==> Section C of Part I in PoA-DD Chapter 9 of CDM operation manual by CME/1-05/</p> <ul style="list-style-type: none"> ▪ Measures for continuous improvements of the PoA management system. <p>==> Section C of Part I in PoA-DD Chapter 11 of CDM operation manual by CME/1-05/</p> <p>CAR 10 The submitted procedures for monitoring plan are not covered the followings;</p> <ul style="list-style-type: none"> - responsibility /authority, - means of verification data - data transferring and data trails. - no double accounting occurs - the status of verification can be determined anytime 	OK CAR 10	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
	VVS 186 & Standard (EB 70 Annex 05) (ver 2.1) §19		<p>for each CPA. - etc.</p> <p>CAR 11 Provisions respecting the revisions of the CPAs in case of hold or withdrawn the methodology not included in the PoA-DD.</p> <p>CAR 13 CME did not describe clearly a record keeping system for each CPA under the PoA.</p> <p>CAR 15 Guideline for CPA inclusion in the registered PoA which is submitted by CME could not cover the followings; (1) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies. (2) Records of arrangements for training and capacity development for personnel (3) Procedures for technical review of inclusions of CPAs.</p>	<p>OK CAR 11</p> <p>OK CAR 13</p> <p>OK CAR 15</p>	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			(4) Records and documentation control process for each CPA under the PoA (5) Measures for continuous improvements of the PoA management system.		
B.2 CPA Design Document					
B.2.1 Does the proposed specific CPA that a coordinating/ managing entity wishes to include in the PoA complies with the eligibility criteria specified in the CDM-PoA-DD ?	VVS 187	DR	Yes, the proposed specific CPA complies with the eligibility criteria specified in the PoA-DD. The validation report for the initial CPA has been prepared.	OK	OK
B.2.2 Is the means of validation specific to the PoA ?	VVS 187	DR	Yes, the means of validation is specific to PoA.	OK	OK
B.2.3 Does a desk review of the documentation sufficient to determine compliance in certain instances and follow-up interviews and/or site visits necessary for other types of PoA consider ?	VVS 188	DR	Yes, the means of validation of specific CPA include a desk review as well as follow-up interiveiw and a site visit.	OK	OK
B.3 Description of the small-scale PoA/CPAs					
B.3.1 Has coordinating/managing entity developed the PoA-DD set a framework for the implementation of the PoA and unambiguously defining a CPA under the PoA ?	VVS 189 & EB 67 Annex 30	DR	The coordinating/managing entity (CME), SMG has designed this PoA. CAR 04 The purpose of the project activity, including a summary	OK CAR 04	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			of the scope of activities/measures that are to be implemented within the proposed PoA are not described. CAR 05 The operating and implementing framework are not described in details.	OK GAR-05	
B.3.2 Has the PoA-DD unambiguously defined a CDM programme activity (CPA) under the PoA ?	VVS 189 & EB 67 Annex 30	DR	The PoA-DD unambiguously defined a CPA in section A.2. of Part I. PoA-DD states the following CPA; "The programme to introduce renewable energy system into Seoul" - SSC-CPA "(The project to introduce photovoltaic systems in public library of the Jamsil rainwater pump station)", the first CPA will be implemented in Songpa-gu within Seoul of Republic of Korea.	OK	OK
B.3.3 Does the PoA-DD include identification of the coordinating/managing entity (private or public entity), Host Party and PoA participants ?	EB 67 Annex 30	DR	The PoA-DD states that Seoul Metropolitan Government (SMG) is the coordinating/ managing entity for this PoA and the host party is Republic of Korea. And SMG is public entity. It is stated at the section A.3 and A.4 of PoA-DD.	OK	OK
B.3.4 Does the description of a typical CPA in the CDM PoA-DD cover the technology or measures to be used ?	EB 67 Annex 30	DR, I	The technology and measure to be used to reduce emission reduction is to generate the electricity utilizing the PV power at the new at new construction site. The single capacity by		OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>a single project is not exceeding 15MW. It was checked by means of PoA-DD, AMS-I.F and on-site validation. The description of a typical CPA in the PoA covers the technology and measure to be used.</p> <p>CAR 08 CME did not explain how the PoA will reduce GHG emissions or increase GHG removals.</p>	OK CAR-08	
B.3.5 What is the policy/measure or stated goal that the PoA seeks to promote ?	<i>EB 67 Annex 30</i>	DR, I	<p>The proposed PoA have been planned and implemented to diffuse renewable energy. SMG also is trying to reduce 40% of the GHG emission by 2030. The goal of this PoA is to diffuse the renewable energy and to reduce the GHG in Seoul City. The goal of this PoA have been confirmed by the PoA-DD and on-site interviews. The PoA-DD describes the stated goal that the PoA seeks to defuse the renewable energy and to reduce the GHG emission and it deemed appropriate.</p> <p>CAR 06 Policy/measure or stated goal of PoA taking into account the local and geographical aspects are not</p>	OK CAR-06	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>stated in the section A.2 of PoA-DD.</p> <p>CAR 07 The policy and regulation related to the proposed PoA are not identified.</p>	OK GAR-07	
B.3.6 Is the proposed PoA a voluntary action by the coordinating/managing entity ?	EB 67 Annex 30	DR, I	<p>Yes, Please refer to section A.2.2 of this checklist</p>	OK	OK
B.3.7 Has the PoA-DD contain a clear, accurate and complete project description ?	VVS 64	DR, I	<p>The project activity has been described at the section A.6 of Part I in the PoA-DD. The clearness, accuracy and completeness of the project activity has been checked by KSA via the followings;</p> <ul style="list-style-type: none"> - Desk Review for PoA-DD and supporting documents. - Onsite visit - interview with the relevant stakeholders. <p>CAR 16 The technical description of the project activity has not been described at the section A.6 of the PoA-DD. And the clearness, accuracy and completeness of the project activity could not been checked.</p> <p>CAR 28 The installed capacity in the specific CPA-DD is not</p>	<p>OK GAR-16</p> <p>OK GAR-28</p>	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			consistently applied through the CPA-DD.		
B.3.8 In case the project involves alternation of the existing installation or process, is a clear description available regarding the differences between the project and the pre-project situation ?	VVS 68	DR,I	Not applicable.	OK	OK
B.4 Application of multiple methodologies					
B.4.1 Does the application of multiple methodologies in accordance with the “Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities” ?	VVS 190	DR	Not Applicable.		
B.5 Boundary for PoA in terms of geographical area					
B.5.1 Does the PoA-DD include 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 a CPAs included in the PoA will be implemented ?	VVS 191	DR, I	Yes, Aal CPA associated with this PoA will be implemented within the geographical boundary of Seoul in Republic of Korea.	OK	OK
B.5.2 Are all applicable national and/or sectoral policies and regulations within that chosen boundary reflected in the determination of the baseline ?	VVS 192	DR, I	All applicable national and regional law and regulation in Seoul in Republic of Korea have been checked and these are reflected into the determination of baseline. The same phrase is found also in section A.2, B.1 and B.2		OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>of PoA-DD</p> <p>The national and sectoral policies and regulations for the proposed projects within the host Party are as follows;</p> <ul style="list-style-type: none"> - Environmental Impact Assessment Act /1-19/ - Framework Act on Environmental Policy /1-20/ - Energy Use Rationalization Act /1-13/ - Act on the promotion of development, use and diffusion of new and renewable energy./1-18/ <p>KSA confirmed that applicable national and sectoral policies and regulation for the proposed projects in the host Party are identified and found satisfactory.</p>	OK GAR-05	
B.6 Starting date of the PoA					
B.6.1 Is the starting date of the PoA (start of PoA crediting period) clearly defined ? Is it reasonable ?	VVS 193	DR, I	<p>Yes,</p> <ul style="list-style-type: none"> ■ The start date of PoA stated in the PoA-DD is 26/03/2011 based on the date of publication of the PoA-DD for global stakeholder consultation as per §159 of "CDM project standard (version 2.1) /2-11/ ■ The date of publication of the PoA-DD for 2nd global stakeholder consultation is 26/03/2011. ■ The start date of the initial CPA is 19/04/2011 which is not prior to the commencement of the validation of PoA. <p>The starting date of the first crediting period will be the date</p>	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>of registration of the project. Thus, it is reasonable.</p> <p>CL 04 Both start date of the CPA (A.8.1) and start date of the crediting period (A.9.1) are the same. CPA implementer is required to clarify this.</p>	OK CL-04	
B.7 Prior Consideration of the CDM					
B.7.1 Does prior consideration of the CDM for the PoA apply the provisions of paragraph 107 of VVS mutatis mutandis ?	VVS 194	DR	Not Applicable.	OK	OK
B.8 Demonstration of additionality of the PoA as a whole					
B.8.1 Has the PoA demonstrated that in the absence of the CDM, none of the implemented CPA would occur	VVS 195 <i>Standard (EB 70 Annex 05) (ver 2.1) §7 to §10</i>	DR, I	<p>The proposed PoA consists of one or more small-scale projects as CPAs, thus eligibility criteria include the relevant requirements of the "Guidelines for demonstrating additionality of small scale project activities"(version 09. EB 68 Annex 27) /2-3/</p> <p>CAR 09 CME did not adequately demonstrate the additionality of</p>	OK CAR-09	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			the PoA.		
B.9 Eligibility Criteria for Inclusion of a CPA in the PoA					
B.9.1 Has the eligibility criteria for inclusion of a CPA under the PoA including appropriate criteria for demonstration of additionality of the CPA been defined in the PoA-DD ?	VVS 196 & Standard (EB 70 Annex 05) (ver 2.1)	DR, I	<p>The eligibility criteria for inclusion of a CPA under the PoA have been defined in the section B.2 of Part I in PoA-DD . as belows;</p> <p>1. The CPA is performed within the geographical boundary of Seoul in Republic of Korea.</p> <ul style="list-style-type: none"> - Verifiable evidence : GPS information Explanation in section A.7 of CPA-DD CPA identification No. - MoV : Document Review and On-site visit - Standard (version 2.1, EB 70 Annex 5) : para 14 (a) - Real case CPA is within the geographical boundary of Seoul of Republic of Korea <p>① GPS information : 37.507213°N, 127.078539°E ② CPA ID : 2011-Songpa-001-24kW ③ A.7 of the specific CPA-DD</p> <p>2. The CPA is not involved in another project that is registered or under validation as a CDM project activity or as a CPA under another PoA or as other GHG reduction projects.</p>	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
		DR, I	<ul style="list-style-type: none"> - Verifiable evidence : ① Written Agreement between CME and CPA implementer. ② Explanation in section A.13 of CPA-DD. - MoV : Document Review and On-site visit - Standard (version 2.1, EB 70 Annex 5) : para 14 (b) - Real case CPA : ① Written Agreement between SMG and Songpa-gu /1-32/ ② Section A.13 of the specific CPA-DD <p>3. The power plant of CPA comply with Korean Standards (KS), guideline related to photovoltaic and Korean law and regulation. In the case of PV module, CPA implementer shall provide Certificate of new and renewable energy facility from KEMCO.</p> <ul style="list-style-type: none"> - Verifiable evidence : ① Technical Specification for the project activity ② Certificate of New and Renewable energy facility - MoV : Document Review - Standard (version 2.1, EB 70 Annex 5) : para 14(c). - Real case CPA : ① Technical Specification for PV power plant /1-33/ 	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
		DR, I	<p>② Certificate of New and Renewable energy facility (No. PV-CPA-2-0610) /1-34/</p> <p>4. The CPA start date is after PoA posting date, 19/04/2011</p> <p>- Verifiable evidence : Purchase or Construction Contract date for PV power plant</p> <p>※ Start date in the CPA-DD shall meet the earliest date at which either the implementation or construction or real action of a CPA begins. (Please refer to "Glossary of CDM Terms"/2-12/)</p> <p>- MoV : Document Review</p> <p>- Standard (version 2.1, EB 70 Annex 5) : para 14 (d)</p> <p>- Real case CPA : Purchase Contract date for PV module including between Songpa-gu and KD power /1-35/ dated on 19/04/2011</p> <p>5. The CPA meets the applicability of AMS-I.F. as described in PoA-DD part II section B.2</p> <p>- Verifiable evidence : Explanation in Section D.2 of CPA-DD (detailed assessment for applicability criteria of AMS-I.F)</p>	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
		DR, I	<ul style="list-style-type: none"> - Standard (version 2.1, EB 70 Annex 5) : para 14 (e) - MoV : Document Review - Real case CPA : Section D.2 of the specific CPA-DD (detailed assessment for applicability criteria of AMS-I.F) <p>6. Additionality check in each CPA-DD is performed as per the additionality related guidelines</p> <ul style="list-style-type: none"> - Verifiable evidence : Explanation Section D.5 of CPA-DD (detailed assessment for additionality) with evidence for PV installed capacity. - MoV : Document Review - Standard (version 2.1, EB 70 Annex 5) : para 14 (d) - Real case CPA : Explanation Section D.5 of CPA-DD (detailed assessment for additionality) <p>Evidence : Certificate of inspection prior to use by KESCO (No.121050648)/1-36/</p> <p>7. The CPA implementer performs local stakeholder consultation before the start of CPA.</p> <ul style="list-style-type: none"> - Verifiable evidence : ① Minutes or report of local stakeholder consultation including summary of concerns raised, clarification provided and other 	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
		DR, I	<p>information such as attendance list and meeting agenda, photographs shows that a local stakeholder consultation carried out.</p> <p>② explanation in section C of CPA-DD</p> <p>- MoV : Document Review</p> <p>- Standard (version 2.1, EB 70 Annex 5) : para 14 (g)</p> <p>- Real case CPA : ① Minutes of local stakeholder consultation for Jamsil PV power plant /1-38/</p> <p>② Explanation in section C of the specific CPA-DD</p> <p>8. If required by Republic of Korea, CPA implementer shall carry out an analysis of the environmental impacts of the proposed small scale CPA. and provide a summary of the analysis and reference to all related documentation.</p> <p>- Verifiable evidence : ① where applicable, then EIA, SSC EIA or SEA and reference</p> <p>② explanation in B of CPA -DD</p> <p>- MoV : Document Review and on-site visit</p> <p>- Standard (version 2.1, EB 70 Annex 5) : para 14 (g)</p> <p>- Real case CPA : ① The specific CPA is not required by Republic of Korea</p>	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>② explanation in B of CPA -DD</p> <p>9. The CPA has the documentary evidence to check project costs and does not result in a diversion of official development assistance from Annex I country.</p> <p>- Verifiable evidence : ① Written Agreement between CME and CPA implementer.</p> <p>② Explanation A.11 of CPA-DD</p> <p>- MoV : Document Review</p> <p>- Standard (version 2.1, EB 70 Annex 5) : para 14 (h)</p> <p>- Real case CPA : ① Written Agreement between SMG and Songpa-gu /1-32/</p> <p>② A.11 of the specific CPA-DD</p> <p>10. Target group of the proposed PoA is off-grid photovoltaic electricity generation technologies.</p> <p>- Verifiable evidence : Electric Consumption diagram fo consumer facility .</p> <p>- MoV : Document Review and on-site visit</p> <p>- Standard (version 2.1, EB 70 Annex 5) : para 14 (i)</p> <p>- Real case CPA : Electric Consumption diagram for Jamsil public library /1-38/</p>	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>11. Sampling method</p> <ul style="list-style-type: none"> - Standard (version 2.1, EB 70 Annex 5) : § 14 (k) - Real case CPA : not applicable. <p>12. The total power plant capacity of CPA meets small-scale criteria (≤ 15 MW)</p> <ul style="list-style-type: none"> - Verifiable evidence : Agreement or contract related to construction or facility purchase or If available, Certificate of Inspection Prior to Use - MoV : Document Review and on-site visit - Standard (version 2.1, EB 70 Annex 5) : para 14 (k) - Real case CPA : Certificate of Inspection Prior to Use by KESCO (No. 121050648) /1-36/ <p>13. The CPA is a single project which is not a debundled component of another large-scale CDM or PoA as per the latest guidance given in CDM EB.</p> <ul style="list-style-type: none"> - Verifiable evidence : ① Written Agreement between CME and CPA implementer. ② CPA identification No. and its location. ③ Section A.12 of CPA-DD 	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<ul style="list-style-type: none"> - MoV : Document Review and On-site visit - Standard (version 2.1, EB 70 Annex 5) : para 14(l) - Real case CPA : ① Written Agreement between SMG and Songpa-gu /1-32/ ② CPA identification No. and its location (Section A.2 of CPA-DD) ③ Section A.12 of CPA-DD <p>14. CME (SMG) makes an agreement with CPA implementer involve the CPA into PoA to ensure that CPA implementer is aware of and agreed to subscribe the CPA into PoA. The agreement between CME and CPA implementer include the debundling check, double counting, no funding from Annex I and monitoring issues. In case that CPA implementer is same with CME, the agreement is not required.</p> <ul style="list-style-type: none"> - Verifiable evidence : ① Written Agreement between CME and CPA implementer. ② CPA identification No. - MoV : Document Review - Standard (version 2.1, EB 70 Annex 5) : N/A 	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>- Real case CPA :① Written Agreement between SMG and Songpa-gu /1-32/ ② CPA ID: 2011-Songpa-001-24kW</p> <p>CAR 12 CME did not identify the means of verification and the objective evidence for each eligibility criteria of PoA-DD as per the §15 of 'Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoA' (ver 2.1).</p> <p>CAR 14 The eligibility criteria for followings are not developed for followings; (1) applicability of methodology applied by CPAs (2) target group and distribution mechanisms. (3) the conditions related to sampling requirements for proposed PoA (4) small-scale or microscale threshold criteria. (5) funding from annex I parties.</p> <p>CAR 17 Conditions that avoid double counting of emission</p>	<p>OK CAR 12</p> <p>OK CAR 14</p> <p>OK CAR 17</p>	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>reduction is not considered in the eligibility criteria for inclusion of a SSC-CPA.</p> <p>CAR 21 CME is required to submit the result of technical review of inclusion of the 1st CPA.</p> <p>CAR 22 CME is required to submit records for internal audit such as internal auditor, audit plan and the report on the internal audit.</p> <p>CL 01 The documented evidences that the same ODA money from Annex I is not being involved should be submitted to the validation team.</p> <p>CL 02 The format of the "Written Agreement" is not submitted to the validation team.</p>	<p>OK CAR-21</p> <p>OK CAR-22</p> <p>OK CL-01</p> <p>OK CL-02</p>	
B.10 Crediting Period of a PoA/CPA					
B.10.1 What is the length of the PoA ? Is it reasonable ?	VVS 197	DR	The PoA duration stated in section D.2 of the PoA-DD is 28 years.		OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>According to EB55 Annex 38 para 6 (h) /2-13/, length of the PoA not exceed 28 years. Thus, it is deemed appropriate.</p> <p>CL 03 Both expected operational lifetime of the specific CPA (A.8.2) and length of the crediting period (A.9.2) are described as 10 years. CPA implementer is required to clarify how both can be the same period.</p>	OK CL-03	
B.11 Monitoring plan					
B.11.1 Has a monitoring plan for the PoA been developed including in accordance with the approved monitoring methodology, and identification of the monitoring provisions and data parameters a CPA has to apply/monitor ?	VVS 198	DR,I	<p>Monitoring plan for the PoA is defined at the section B.7.2 of Part II in PoA-DD. Also, monitoring plan has been developed in accordance with the approved methodology, AMS-I.F(version 2.0) including tool and included identification of the monitoring provisions and data parameters a CPA have to be monitored /1-4/.</p> <p>CAR 18 CME is required to indicate the single line diagram including the emission sources and GHGs in the project boundary and the data and parameters to be monitored.</p> <p>CAR 27</p>	OK CAR-18 OK	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>The monitoring plan in the specific CPA is not in accordance with the applied methodology (AMS-I.F.)</p> <p>CAR 29 The monitoring frequency for the generated electricity in D.7.1 of the specific CPA-DD is not in accordance with the applied methodology (AMS-I.F)</p>	<p>CAR-27</p> <p>OK CAR-29</p>	
B.11.2 Are all monitoring parameters required by the applied methodology contained in the monitoring plan ?	/VVS 132/ (a) (i)	DR, I	All monitoring parameters required by the AMS-I.F (version 2.0)/2-6/ are stated in section B.7.1 of PoA-DD.	OK	OK
B.11.3 Are data and parameter monitored by each SSC-CPA considered to be complete with regard to the requirements of the applied methodology ?	/VVS 132/ (a) (ii)	DR, I	Data and parameter monitored by each SSSC-CPA are provided in section B.7.1 of the PoA-DD.	OK	OK
B.11.3.1 Parameters for monitoring during the crediting period.					
(1) Is "quantity of net electricity displaced as a result of the implementation of the CDM project activity in year y (MWh)" in line with the methodology (AMS-I.F) ?	/AMS-I.F/	DR	<p>① Parameter title : OK</p> <p>② Data unit : OK</p> <p>③ Description : OK</p> <p>④ Source of data : OK</p> <p>⑤ Value of data : Value of data will be specified in a CPA-DD</p> <p>⑥ Description of measurement : OK</p> <p>⑦ QA/QC Procedures : OK</p>		OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
B.11.4 Are the means of monitoring of all parameters contained in the monitoring plan feasible and in accordance with the requirements of the applied methodology ?	/VVS 132/ (a) (ii)	DR, I	Yes. please refer to B.11.3	OK Pending	OK
B.11.4 Have all means of implementing the monitoring plan, e.g. equations necessary for ex-ante emission reduction calculation, been described clearly and in line with the methodology ?	/VVS 132/ (b)	DR, I	Yes, the equations necessary for ex-post emission reduction calculation have been described in section B.6.3 of PoA-DD. CAR 20 CME is required to submit the excel calculation sheet to assess the emission coefficient.	OK GAR-20	OK
B.11.5 Is it likely that the monitoring arrangements described in the PoA-DD can properly be implemented within the proposed PoA?	/VVS 132/ (b) (i)	DR	Yes, monitoring arrangements in section B.7.2 of PoA-DD are including for followings. - operation and management structure considering envisioned situation. - responsibilities and institutional arrangements for operation, data collection and archiving These are covered at Chapter 7 of CDM operation manual /1-05/ CAR 19 B.7.1 of Part II states that the monitoring device will be recalibrated according to the instructions (schedules, procedures) for QA of the technology provider. The	OK GAR-19	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			calibration frequency is required to plan as prescribed in the relevant paragraph of the "General guidelines to SSC CDM Methodologies"/2-13/and the host party's standard.		
B.11.6 Are the QA/QC procedures appropriate sufficient to ensure the emission reductions achieved from the project activity can be reported ex-post and verified ?	/VVS 132/ (b) (ii)	DR	Yes, please refer to the section G.4.3 above.	OK Pending	OK
B.11.7 Are procedures identified for data management ?	/VVS 132/ (b) (ii)	DR	Yes, please refer to the section G.4.3 above.	OK Pending	OK
B.12 Environmental Impacts					
B.12.1 Has environmental analysis of the PoA as per requirements of the CDM modalities and procedures been undertaken and described in the PoA-DD ?	VVS 199 & VVS 200	DR, I	The actual project activity is implemented at the CPA level and environmental impacts by CPA project have an impacts on local area not entire of Seoul in Republic of Korea. Thus, any documentation of the environmental impacts is not required for this PoA level. It will be considered at CPA level.	OK	OK
B.12.2 Are there any host Party requirements for an Environmental Impact Assessment (EIA) ?	VVS 134	DR, I	Please refer to C.1 above. Validation team has checked law/regulation of the Host Party for followings; - EIA (Environmental Impact Assessment) Act Sources : Ministry of Government Legislation (http://www.moleg.go.kr , http://www.law.go.kr)	OK	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
B.12.3 If an environmental impact assessment is required by the host Party, have the project participants undertaken an analysis of environmental impacts ?	VVS /135/	DR, I	N/A	OK	OK
B.12.4 Has an analysis of the environmental impacts of the project activity been sufficiently described and in accordance with the host Party environmental legislation ?	VVS 135/	DR, I	N/A	OK	OK
B.13 Local Stakeholder Comments					
B.13.1 Is the local stakeholder consultation process carried out for the whole PoA or at the CPA level ? If comments by local stakeholders were invited with regard to the whole PoA, the DOE shall determine how these comments were invited; whether the summary of the comments received is complete and how due account was taken of all comments received.	/VVS 201/	DR, I	The section F.1 of Part I in the PoA-DD is stated that the local stakeholder consultation is done at the CPA level. This is in light of the fact that the actual project activity is implemented at the CPA. Summary of the comments received are described at the section C of the real case CPA (1st CPA)	OK Pending	OK
B.13.2 If the local stakeholder consultation is conducted at the CPA level, is it determined whether it is in accordance with the level of consultation specified by the coordinating/managing entity and whether the local stakeholder comments were taken into account and described in the CDM-PoA-DD and the CDM-CPA-DD ?	/VVS 202/	DR, I	Section F.1 of PoA-DD is stated that local stakeholder comments is done at the CPA-level. And local stakeholder comments is defined at the C.1 of the CPA-DD. The first CPA implementer, Songpa-gu, have invited local stakeholder's comments via local resident's presentation on 11/02/2011. The identified local stakeholder for the initial CPA is local residents		OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>surrounding "Jamsil rainwater pump station". Stakeholder comments was checked via interview with stakeholder and Minutes of local stakeholder for Jamsil PV power plant /1-37/.</p> <p>KSA confirmed that the communication method used to invite the stakeholder are appropriate through audit team's local experience.</p> <p>CAR 30</p> <p>Local stakeholders consultation process are not appropriately described in section C of the specific CPA-DD.</p>	OK GAR-30	
B.13.3 Determination of Occurrences of debundling under a PoA					
A.9.1 Is the project not a debundled component of a larger project activity ?	VVS 155	DR, I	<p>According to 'Guidelines on assessment of debundling for SSC project activities /2-03/, a proposed small scale project activity shall be deemed to be a debundled component of a large scale activity if there is a registered small scale CDM project activity or an application to register another small scale CDM project activity ;</p> <ol style="list-style-type: none"> 1. with the same project participants 2. in the same project category and technology/measure 3. registered within the previous 2 years; 4. whose project boundary is within 1km of the project 	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>boundary of the proposed small scale activity at the closest point.</p> <p>Coordinating/ managing entity (SMG) will check whether each CPA is de-bundled or not.</p> <p>And also CPA implementer will provide "Written Agreements" confirming not a debundled component.</p>		

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
C. Baseline and Monitoring Methodology.					
C.1 Applicability of the Selected Methodology to the Project Activity.					
C.1.1 Does the PoA correctly quoted and applied by comparing it with the actual text of the applicable version of the methodology available on the UNFCCC CDM website ?	VVS 74	DR	Yes, AMS-I.F Renewable electricity generation for captive use and mini-grid (version 02) /2-6/ is applied to the proposed project. The electricity emission factor is calculated by the latest version of the "Tool to calculate the emission factor for an electricity system" (version 3.0) /2-7/.	OK Pending	OK
C.1.2 Is the quoted and applied methodology considered the most appropriate one ?	VVS 74	DR, I	Yes. The applied methodology, AMS-I.F is considered the most appropriate one for the nature, category and scale of project activity.	OK Pending	OK
C.1.2.1 Criteria 1 This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass that supply electricity to user(s). The project activity will displace electricity from an electricity distribution system that is or would have been supplied by at least one fossil fuel fired generating unit i.e. in the absence of the project	AMS-IF /para 1/	DR, I	Yes. Criteria 1 of the applicability is discussed in section B.2 of Part II in the PoA-DD. The CPA of this PoA is photovoltaic power and will displace electricity from KEPCO grid Thus, criteria 1 is applicable under the proposed PoA.	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
activity, the users would have been supplied electricity from one or more sources listed below: (a) A national or a regional grid (grid hereafter); (b) Fossil fuel fired captive power plant;1 (c) A carbon intensive mini-grid.					
C.1.2.2 Criteria 2 For the purpose of this methodology, a mini-grid is defined as small-scale power system with a total capacity not exceeding 15 MW (i.e. the sum of installed capacities of all generators connected to the mini-grid is equal to or less than 15 MW) which is not connected to a national or a regional grid.	AMS-I.F /para 2/	DR, I	Yes. Criteria 2 of the applicability is discussed in section B.2 of Part II in the PoA-DD. The total capacity of the CPA of this PoA is not exceeding 15MW which is not connected to the KEPCO grid. Thus, criteria 2 is applicable under the proposed PoA.	OK Pending	OK
C.1.2.3 Criteria 3 Illustration of respective situations under which each of the methodology (AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2.	AMS-I.F /para 3/	DR, I	Yes. Criteria 3 of the applicability is discussed in section B.2 of Part II in the PoA-DD.	OK Pending	OK

Checklist Question	Ref.	MoV	Comments				Draft Concl.	Final Concl.																							
			<table><tr><td>Project type</td><td>AMS-I.A</td><td>AMS-I.D</td><td>AMS-I.F</td></tr><tr><td>supplies Grid</td><td></td><td>√</td><td></td></tr><tr><td>displaces grid</td><td></td><td></td><td>√</td></tr><tr><td>identified consumer</td><td></td><td>√</td><td></td></tr><tr><td>Mini grid</td><td></td><td></td><td>√</td></tr><tr><td>supplies household in off grid</td><td>√</td><td></td><td></td></tr></table>	Project type	AMS-I.A	AMS-I.D	AMS-I.F	supplies Grid		√		displaces grid			√	identified consumer		√		Mini grid			√	supplies household in off grid	√						
Project type	AMS-I.A	AMS-I.D	AMS-I.F																												
supplies Grid		√																													
displaces grid			√																												
identified consumer		√																													
Mini grid			√																												
supplies household in off grid	√																														
			Thus, criteria 3 is applicable under the proposed PoA.																												
C.1.2.4 Criteria 4 Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: <ul style="list-style-type: none">• The project activity is implemented in an existing reservoir with no change in the volume of reservoir;• The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project activity, as per definitions given in the project emissions section, is greater than 4 W/m2;• The project activity results in new reservoirs and	AMS-I.F /para 4/	DR, I	Not applicable. The CPA of this PoA is photovoltaic power.				OK Pending	OK																							

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
the power density of the power plant, as per definitions given in the project emissions section, is greater than 4 W/m ² .					
C.1.2.4 Criteria 5 For biomass power plants, no other biomass other than renewable biomass are to be used in the project plant.	AMS-I.F /para 5/	DR, I	Not applicable. The CPA of this PoA is photovoltaic power.	OK	OK
C.1.2.4 Criteria 6 This methodology is applicable for project activities that: (a) Install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) Involve a capacity addition, (c) Involve a retrofit of (an) existing plant(s); or (d) Involve a replacement of (an) existing plant(s).	AMS-I.F /para 6/	DR, I	Yes. Criteria 6 of the applicability is discussed in section B.2 of Part II in the PoA-DD. The CPA of this PoA install a new power plant at a site where there was no renewable enegery power plant operating prior to the implementation of the the project activity (greenfield plant) Thus, criteria 6 is applicable under the proposed PoA.	OK Pending	OK
C.1.2.4 Criteria 7 In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation	AMS-I.F /para 7/		Not applicable. Please refer to criteria 6 above.	OK	

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
facility, the added capacity of the units added by the project should be lower than 15 MW and should be physically distinct ⁷ from the existing units.		DR, I			OK
C.1.2.4 Criteria 8 In the case of retrofit or replacement, to qualify as a small-scale project, the total output of the retrofitted or replacement unit shall not exceed the limit of 15 MW.	AMS-I.F /para 8/	DR, I	Not applicable. Please refer to criteria 6 above.	OK	OK
C.1.2.4 Criteria 9 If the unit added has both renewable and non-renewable components (e.g. a wind/diesel unit), the eligibility limit of 15 MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel, ⁸ the capacity of the entire unit shall not exceed the limit of 15 MW.	AMS-I.F /para 9/		Not applicable. Please refer to criteria 6 above.	OK	OK
C.1.2.4 Criteria 10 Combined heat and power (co-generation) systems	AMS-I.F /para 10/		Not applicable. Please refer to criteria 6 above.	OK	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
are not eligible under this category.					
C.1.2.4 Criteria 11 If electricity and/or steam/heat produced by the project activity is delivered to a third party i.e. another facility or facilities within the project boundary, a contract between the supplier and consumer(s) of the energy will have to be entered that ensures that there is no double counting of emission reductions.	AMS-I.F /para 11/		Not applicable. Please refer to criteria 6 above.	OK	OK
C.1.3 Are all applicability criteria in the methodology, applied tools or any other methodology component referred to therein fulfilled ?	VVS /76/	DR	All applicability criteria in the methodology requirements mentioned in E.1.2 above	OK Pending	OK
C.1.4 Is the project activity in accordance to every other stipulation or requirement mentioned in all sections of the methodology ?	VVS /76/	DR	All other applicability requirements have been met by the project. All applicability requirements mentioned in E.1.2 above, no other stipulation or requirements from the methodology have been identified. Thus, the project is in accordance to every other stipulation and requirements in all section of the applied methodology.	OK Pending	OK
C.2 CPA boundary					
C.2.1 Has a typical CPA's spatial boundary (geographical/ physical) clearly defined ?			Yes, The project boundary is defined at the section B.3 of		

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
<ul style="list-style-type: none"> - documented evidence - site visit 	/VVS 83/	DR, I	<p>Part II in PoA-DD. The information given in the PoA-DD is in accordance with the methodology. A typical CPA's spatial boundary (geographical /physical) was checked via document review and on-site assessment.</p> <p>According to AMS-I.F, a typical CPA boundary is defined as the physical and geographical site as follows;</p> <ul style="list-style-type: none"> - Industrial, commercial facilities consuming energy generated by the system. - physical, geographical site of renewable generating units. - project power plant and all power plants connected physically to the electricity system tha the CDM project power plant is connected to. <p>Thus, a typical CPA's spatial boundary (geographical /physical) is clearly defined at the section B.3 of Part II in the PoA-DD.</p> <p>CAR 18 CME is required to indicate the single line diagram including the emission sources and GHGs in the</p>	<p>OK Pending</p> <p>OK</p>	<p>OK</p> <p>OK</p>

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			project boundary and the data and parameters to be monitored.		
C.2.2 Are all sources and GHGs included in the CPA boundary as required in the applied methodology ?	/VVS 84/	DR, I DR, I	<p>The sources and gases included in the project boundary are summarized as below.</p> <p>(a) Baseline emission</p> <ul style="list-style-type: none"> - CO₂ : included (Major source of emission) - CH₄ : not included (minor source of emission) - N₂O : not included (minor source of emission) <p>(b) Project emission.</p> <ul style="list-style-type: none"> - The CPA of this PoA is photovoltaic power, thus, $PE_g = 0$ <p>All sources and GHGs included in the CPA boundary are checked via document review and on-site assessment.</p> <p>Thus, a sources and GHGs are included in the project boundary as required in the applied methodology.</p>	OK Pending	OK
C.2.3 In case the methodology allows to choose all sources and/or gas is to be included, is the choice sufficiently explained and justified ?	/VVS 84/	DR	Not applicable.	OK	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
C.3 Baseline identification					
C.3.1 Have the most reasonable baseline scenarios been considered and are they complete ?	VVS 89	DR, I	<p>Yes, The applied methodology, AMS-I.F not require the use of tool to establish the baseline scenario. As per the methodology AMS-I.F, the baseline emission is the product of amount electricity displaced with the electricity produced by the renewable generating unit and an emission factor as follows;</p> $BE_y = EG_{BL,y} * EF_{CO_2,y}$ <p>where; BE_y : Baseline emission in year y (tCO₂) $EG_{BL,y}$: Quantity of net electricity displaced as a result of the implementation of the CDM project activity in year y (MWh). $EF_{CO_2,y}$: Emission factor (tCO₂/MWh) Emission factor (tCO₂/MWh) is calculated by "Tool to calculate the emission factor for an electricity system".</p> <p>CAR 26 The identified baseline scenario in the specific</p>	<p>OK Pending</p> <p>OK CAR-26</p>	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			CPA-DD is not in accordance with the applied methodology(AMS-I.F)		
C.3.2 Have the identified baseline scenario been determined according to the methodology ?	/VVS 90/	DR	Please refer to E.3.1 The identified baseline scenario is deemed plausible contained in the applied methodology.	OK Pending	OK
C.3.3 Is the identified baseline scenario reasonable and has the baseline scenario been determined using the conservative assumptions where possible, including relevant references and sources ?	/VVS 91/	DR	Yes, the identified baseline scenario is reasonable and has been determined using conservative assumptions where possible.	OK	OK
C.4 Algorithms and/or formulae used to determine emission reductions.					
C.4.1 Have the equations and parameters in the PoA-DD and CPA-DD been correctly applied and used by comparing them to those in the selected approved methodology ?	/VVS 97/	DR	Yes, the equations and parameters in the PDD have been correctly applied as per the selected approved methodology, AMS-I.F.		OK
C.4.2 Are all data sources and assumptions appropriate and conservative estimate of the emission reductions ?	/VVS 98/	DR	Yes, the baseline emission is the product of amount electricity displaced with the electricity produced by the renewable generating unit and an emission factor as belows; $BE_y = EG_{BL,y} * EF_{CO_2,y}$ where; BE_y : Baseline emission in year y (tCO ₂)		

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			$EG_{BL,y}$: Quantity of net electricity displaced as a result of the implementation of the CDM project activity in year y (MWh). $EF_{CO_2,y}$: Emission factor (tCO ₂ /MWh) Emission factor (tCO ₂ /MWh) is calculated in a transparent and conservative manner as a CM (combined margin) consist of OM (operating margin) and BM (build margin) according to in AMS-I.D. and "Tool to calculate the emission factor for an electricity system".(version 3.0) /2-07/		
C.4.3 Are calculations correct ?	/VVS 98/	DR	Yes, See C.4.2 above	OK Pending	OK
C.4.4 Are the estimates provided in the PDD for theses data and parameters reasonable ?	/VVS 98/	DR	Yes, See C.4.2 above	OK Pending	OK
C.4.5 Are the equation applied correctly according to the applied approved methodology ?	/VVS 98/	DR	Yes, the equation for emission reduction calculation is correctly applied according to the approved methodology, AMS-I.F (version 2.0)/2-6/	OK	OK
C.4.6 In case the methodology allows for different methodological choices, are the equations applied properly justified and have they been used reflecting the other methodological choices.	/VVS 98/	DR	The applied methodology AMS-I.F. (version 2.0)/2-7/ refers to "Tool to calculate the emission factor for an electricity system" (version 3.0)/2-7/. This tool provides option to calculate the operating	OK	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			margin and build margin values. Please refer to C.4.2 above.	Pending	
C.4.7 Have conservative assumptions been used when calculating the project emissions?	/VVS 98/	DR	As per the applied methodology AMS-I.F (version 2.0) /2-6/, The CPA of this PoA is photovoltaic power, thus, $PE_g = 0$	OK	OK
C.4.8 Does the implementation of the project activity lead to GHG emissions within the project boundary which are expected to contribute more than 1% of the overall expected average annual emission reductions, which are not addressed by the methodology?	/VVS 98/	DR, I	The implementation of the project activity does not lead to GHG emission within the project boundary that will contribute more than 1% of the overall expected average annual emission reductions that are not addressed by the applied methodology, AMS-I.F (version 2.0)/2-6/	OK Pending	OK
C.4.9 Are all data and parameters which remain fixed throughout the crediting period correct, applicable to the project and will lead to a conservative estimation of emission reductions?	/VVS 98/	DR	Yes, all data and parameters which remain fixed throughout the crediting period are defined section B.6.3 of Part II in the PoA-DD and correct, applicable to the project and will lead to a conservative estimation of emission reductions.	OK	OK
C.4.10.1 Data and Parameters that are to be reported ex-ante.					
(1) Is "Emission factor of the grid in year y (tCO ₂ /MWh)" in line with the Methodological tool (Tool to calculate	/Methodological Tool/	DR	① Parameter title : OK ② Data unit : OK	OK Pending	OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
the emission factor for an electricity system).			③ Description : OK ④ Source of data : OK (calculated) ⑤ Value of data : 0.6789 ⑥ Justification : OK		
(2) Is "Operating margin emission factor(tCO ₂ /MWh)" in line with the Methodological tool (Tool to calculate the emission factor for an electricity system).	/Methodological Tool/	DR	① Parameter title : OK ② Data unit : OK ③ Description : OK ④ Source of data : OK (calculated) ⑤ Value of data : OK (0.6933) ⑥ Justification : OK This value is calculated according to "Tool to calculate the emission factor for an electricity system (version 2.0)". The power sector data used for the calculation is "Statistics of Electric Power in Korea (2008, 2009 and 2010) by KEPCO (http://www.kepcoco.kr) and Status of generation facility by Korea Power Exchange(http://www.kpx.or.kr)	OK Pending	OK
(3) Is "Build margin emission factor(tCO ₂ /MWh)" in line with the Methodological tool (Tool to calculate the emission factor for an electricity system).	/Methodological Tool/	DR	① Parameter title : OK ② Data unit : OK ③ Description : OK ④ Source of data : OK (calculated) ⑤ Value of data : OK (0.6357)		OK

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			<p>⑥ Justification : OK</p> <p>This value is calculated according to "Tool to calculate the emission factor for an electricity system (version 2.0)". The power sector data used for the calculation is "Statistics of Electric Power in Korea (2008, 2009 and 2010) by KEPCO (http://www.kepcoco.kr) and Status of generation facility by Korea Power Exchange(http://www.kpx.or.kr)</p> <p>CAR 23</p> <p>BM emission factor in PoA-DD is different with that of excel spreadsheet.</p>	OK CAR 23	
(4) Is "NCV(GJ/mass or volume unit)" in line with the Methodological tool (Tool to calculate the emission factor for an electricity system).	/Methodological Tool/	DR	<p>① Parameter title : OK</p> <p>② Data unit : OK</p> <p>③ Description : OK</p> <p>④ Source of data : OK (IPCC guideline)</p> <p>⑤ Value of data : OK</p> <p>⑥ Justification : OK</p>		
(5) Is " $EF_{CO_2, i, y}$ (tCO ₂ /GJ)" in line with the Methodological tool (Tool to calculate the emission factor for an electricity system).	/Methodological Tool/	DR	<p>① Parameter title : OK</p> <p>② Data unit : OK</p> <p>③ Description : OK</p>		

Checklist Question	Ref.	MoV	Comments	Draft Concl.	Final Concl.
			④ Source of data : OK (IPCC guideline) ⑤ Value of data : OK ⑥ Justification : OK		
C.5.6. Are all ex-post calculation values for monitoring parameters (as defined as per section B.7.1 of Part II in the PoA-DD) reasonable?	/VVS 98/	DR, I	A values of data to be applied for the purpose of calculating expected emission reductions are considered to be reasonable, applicable and conservation. All ex-post calculation values for monitoring data and parameters are defined in section B.7.1 of Part II in the PoA-DD and reasonable.	OK Pending	OK

Table 3 Resolution of Corrective Action and Clarification Requests. (PoA/CPA)

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions														
CAR 01	The revision number for PoA-DD and the specific CPA-DD completed on 22/03/2012 were not linked with prior documents.	B.6.1	The initial GSC of PoA-DD/CPA-DD was on 22/02/2011 . But this submission was incorrect on the completion date of PoA-DD and excluded in version control of PoA-DD/CPA-DD. Therefore, The PoA-DD/CPA-DD submitted on 21/03/2011 were 1st version(2nd GSC).	Acceptable.														
			And, CME determined the change of PoA design due to some monitoring issues in solar heating project and geothermal project and resubmitted on 22/03/2012 using AMS-I.F methodology(3rd GSC). But the version of this document was mistyped to version 1 and the actual version is version 2 considering prior submission(2nd GSC).	Revision number for PoA-DD, generic CPA-DD and real case CPA-DD were corrected.														
			The current version(06) of PoA/CPA-DD is updated according to CAR/CL. Therefore, the history of PoA-DD/CPA-DD is as follows:	These are reflected at section A.1 of PoA-DD and A.2 of CPA-DD.														
				Thus CAR 01 is checked and satisfied. CAR 01 is closed.														
			<table><tr><th>Completion date</th><th>Version</th><th>Note</th></tr><tr><td>21/03/2011</td><td>1</td><td>GSC using AMS-I.F and AMS-I.C methodology (GSC : 26/03/11 ~ 24/04/11)</td></tr><tr><td>22/03/2012</td><td>2</td><td>GSC using AMS-I.F (GSC : 07/04/12 ~ 06/05/12)</td></tr><tr><td>07/08/2012</td><td>3</td><td>Updated according to CAR/CL</td></tr><tr><td>25/09/2012</td><td>4</td><td>Updated according to CAR/CL</td></tr></table>	Completion date	Version	Note	21/03/2011	1	GSC using AMS-I.F and AMS-I.C methodology (GSC : 26/03/11 ~ 24/04/11)	22/03/2012	2	GSC using AMS-I.F (GSC : 07/04/12 ~ 06/05/12)	07/08/2012	3	Updated according to CAR/CL	25/09/2012	4	Updated according to CAR/CL
Completion date	Version	Note																
21/03/2011	1	GSC using AMS-I.F and AMS-I.C methodology (GSC : 26/03/11 ~ 24/04/11)																
22/03/2012	2	GSC using AMS-I.F (GSC : 07/04/12 ~ 06/05/12)																
07/08/2012	3	Updated according to CAR/CL																
25/09/2012	4	Updated according to CAR/CL																

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions						
			<table><tr><td>19/11/2012</td><td>5</td><td>Updated according to CAR/CL</td></tr><tr><td>11/12/2012</td><td>6</td><td>Current version</td></tr></table>	19/11/2012	5	Updated according to CAR/CL	11/12/2012	6	Current version	
19/11/2012	5	Updated according to CAR/CL								
11/12/2012	6	Current version								
CAR 02	The submitted PoA-DD and the specific CPA-DD which were completed on 22/03/2012 (3rd GSC) are not compliance with the standard, the methodology and the guideline related to the PoA-DD.	B.6.1	<p>As the PoA-DD/CPA-DD which were submitted for 3rd GSC do not comply with the standard, methodology and guideline related to the PoA-DD/CPA-DD, the document were modified as follows according to the latest version:</p> <ul style="list-style-type: none">- The eligibility criteria is modified based on '<i>Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities</i> (EB70, Annex 5, Version 02.1)'. The related description has been added to Section B.2 and Part II Section B.5 of the PoA-DD and Section D.5 of the CPA-DD.- The application of methodology is modified based on 'AMS-I.F, <i>Renewable electricity generation for captive use and mini-grid</i> (version 02)'. The related description has been added to Part II Section B.2 of the PoA-DD and Section D.2 of the CPA-DD.- The debundling check is modified based on <i>Guidelines on assessment of debundling for SSC project activities</i>(EB 54, Annex 13, Version 03.1)'. The related description has been added to Part II Section B.5 and Section A.12 of the CPA-DD.	<p>Acceptable.</p> <p>CME has corrected the PoA-DD/ CPA-DD as belows;</p> <ul style="list-style-type: none">- Eligibility criteria- application of methodology- and so on <p>These are reflected through the PoA-DD and CPA-DD.</p> <p>Thus CAR 02 is checked and satisfied. CAR 02 is closed.</p>						
CAR 03	Letter of approval has not submitted to the	A.2.1	The LoA for CDM project is issued by Korea DNA on	Acceptable.						

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
	DOE at time of the on-site visit		05/12/2012. It is submitted to the DOE.	CME has submitted the LoA /1-4/ issued on 05/12/2012. Thus CAR 03 is checked and satisfied. CAR 03 is closed.
CAR 04	The purpose of the project activity, including a summary of the scope of activities/measures that are to be implemented within the proposed PoA are not described..	B.3.1	The purpose of PoA is revised to include below in section A.2 of PoA-DD: - SMG has developed the PoA to overcome investment barriers due to high construction costs of photovoltaic power plants, accelerate the diffusion of photovoltaic power plants throughout Seoul and reduce GHG emissions displacing the electricity supplied from KEPCO grid in Seoul, etc.	Acceptable. CME has described the purpose of PoA. The results are reflected in section A.2 of PoA-DD. Thus CAR 04 is checked and satisfied. CAR 04 is closed.
CAR 05	The operating and implementing framework are not described in details.		SMG is coordinating and managing entity(CME) and CPA implementer may be SMG as well as district offices and public institutions in Seoul that meet the eligibility criteria stipulated in this PoA. The entities above are the organizational structure for this PoA. SMG as CME will develop, operate photovoltaic power plant projects and will manage CDM registration, CPA inclusion, monitoring, and other CDM-related issues. The description above is modified in Section A.2 of PoA-DD.	Acceptable. CME has described the operation and implementing framework. The results are reflected in section A.2 of PoA-DD Thus CAR 05 is checked and satisfied. CAR 05 is closed.
CAR 06	Policy/measure or stated goal of PoA taking into account the local and geographical aspects are not stated in the section A.2 of PoA-DD.	B.3.5	SMG has planned policy to reduce consumption of energy based on fossil fuel which is known as 'Seoul green energy master plan 2030'. To promote the achievement of master plan, the PoA has established the goals reducing 40% of	Acceptable. CME has stated the policy/measure or stated goal of PoA taking into account the local and

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			GHG emissions in Seoul by 2030 and diffusing of photovoltaic power plants throughout Seoul. The above description is modified in section A.2 of PoA-DD.	geographical aspects. The results are reflected in section A.2 of PoA-DD. Thus CAR 06 is checked and satisfied. CAR 06 is closed.
CAR 07	The policy and regulation related to the proposed PoA are not identified.	B.3.5	The regulation related to the proposed project is as follows : "Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy (12/04/2010)". No provision of this act mandates photovoltaic power plants projects. The description above is modified in section A2. and B.1 of PoA-DD.	Acceptable. CME has identified the policy and regulation related to the PoA. PP has took into account the identified policy and regulation to the proposed PoA. The results are reflected in section A.2 and B.1 of PoA-DD Thus CAR 07 is checked and satisfied. CAR 07 is closed.
CAR 08	CME did not explain how the PoA will reduce GHG emissions or increase GHG removals.	B.3.4	The electricity generated by the photovoltaic power plant will be for captive use and reduce GHG emissions displacing the electricity supplied from KEPCO grid. The description above is modified in section A.6 of PoA-DD.	Acceptable. CME has explained how the PoA will reduce GHG emission or increase GHG removals. The results are reflected in section A.6 of PoA-DD Thus CAR 08 is checked and satisfied. CAR 08 is closed.
CAR 09	CME did not adequately demonstrate the additionality of the PoA.	B.8.1	According to PoA Standard, as the PoA consist of one or more small-scale projects as CPAs, the additionality is	Acceptable. CME has demonstrated the

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			demonstrated at the CPA level using eligibility criteria derived by "Guidelines on the demonstration of additionality of small-scale project activities (EB 68, Annex 27, Version 09.0) The description above is modified in B.1 of PoA-DD	additionality of PoA/CPA as per "Guidelines on the demonstration of additionality of small scale project activities/2-03/. The results are reflected in section B.1 of PoA-DD Thus CAR 09 is checked and satisfied. CAR 09 is closed. Acceptable.
CAR 10	<p>The submitted procedures for monitoring plan are not covered the followings;</p> <ul style="list-style-type: none"> - responsibility /authority, - means of verification data - data transferring and data trails. - no double accounting occurs - the status of verification can be determined anytime for each CPA. - etc. 	B.1.1	<p>PP modified the monitoring plan to include the information below:</p> <p><u>Responsibility/authority</u></p> <ul style="list-style-type: none"> - CME are in charge of general management and operation of the PoA. CPA implementer assists CME to manage the CPA by operating the photovoltaic power plant, collecting the data and information related to the CPA, and then regularly reporting to the CME. - The detailed responsibility/authority of CME and CPA implementer is modified in section C of PoA-DD. <p>Means of verification data & the status of verification can be determined anytime for each CPA.</p> <ul style="list-style-type: none"> - The CME opts for a verification method that does not use sampling but verifies each CPA. Verification will occur either separately for each CPA or in groups. In any case, data shall be verified per each CPA and the verification status of each CPA will be recorded in the CME's management 	<p>CME has revised the monitoring plan to consider additionally the followings</p> <ul style="list-style-type: none"> - responsibility /authority, - means of verification data - data transferring and data trails. - no double accounting occurs - the status of verification can be determined anytime for each CPA. - etc. <p>The results are reflected in section C of PoA-DD Thus CAR 10 is checked and satisfied. CAR 10 is closed.</p>

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			<p>system using database. The system will provide the information of each CPA to be made available to DOE for verification anytime.</p> <p>- The related description to verification mean for data and the determination for verification status is modified in part II section B.7.2 of PoA-DD.</p> <p><u>Data transferring and data trails</u></p> <p>- For monitoring data management, the description related to collection and record, transmission, storage, etc. is modified in part II section B.7.2 of PoA-DD.</p> <p><u>No double accounting occurs</u></p> <p>- To avoid double counting, CPA implementer certifies through agreement that proposed CPA is not currently registered under CDM or any voluntary scheme nor is currently in progress of validation or registration. In addition, CME ensures that no double counting occurs using CPA information such as CPA identification No. and its location, etc.</p> <p>- The procedure to avoid double counting is modified in section C of PoA-DD.</p>	
CAR 11	Provisions respecting the revisions of the CPAs in case of hold or withdrawn the methodology not included in the PoA-DD.	B.1.1	<p>According to 'Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities, Version 02.1 '(EB</p>	<p>Acceptable.</p> <p>CME has included the provisions respecting the revision of the CPAs in case of hold or</p>

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			70, Annex 5), the provisions regarding the revisions of CPAs in case of hold, withdrawn, revision or replacement of methodology is added in the section B.2 of PoA-DD.	withdrawn the methodology. The results are reflected in section B.2 of PoA-DD Thus CAR 11 is checked and satisfied. CAR 11 is closed. Acceptable.
CAR 12	CME did not identify the means of validation and the objective evidence for each eligibility criteria of PoA-DD as per the para 15 of 'Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoA' (version 2.1).	B.9.1	<p>As for the each eligibility criteria for CPA inclusion, the means of validation and the objective evidence are as follows:</p> <p>Eligibility criteria 1:</p> <ul style="list-style-type: none"> - Means of validation : Document Review, On-site Visit - Objective evidence : GPS information, CPA identification No. <p>Eligibility criteria 2:</p> <ul style="list-style-type: none"> - Means of validation : Document Review - Objective evidence : Written Agreement between CME and CPA implementer, CPA identification No. - <p>Eligibility criteria 3:</p> <ul style="list-style-type: none"> - Means of validation : Document Review - Objective evidence : Technical Specification for the project activity, Certificate of New and Renewable energy facility from KEMCO - <p>Eligibility criteria 4:</p> <ul style="list-style-type: none"> - Means of validation : Document Review 	<p>CME has identified the means of validation and the objective evidence of each eligibility criteria for inclusion of a CPA in the PoA. The results are reflected in section B.5 of PoA-DD Thus CAR 12 is checked and satisfied. CAR 12 is closed.</p>

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			<ul style="list-style-type: none"> - Objective evidence : Purchase or Construction Contract date for PV power plant <p>Eligibility criteria 5:</p> <ul style="list-style-type: none"> - Means of validation : Document Review, On-site Visit - Objective evidence : Detailed assessment that CPA meets all the applicability criteria of AMS-I.F, Explanation in D.2 of CPA-DD <p>Eligibility criteria 6:</p> <ul style="list-style-type: none"> - Means of validation : Document Review, on-site visit - Objective evidence : Detailed assessment for additionality, Explanation in D.5 of CPA-DD <p>Eligibility criteria 7:</p> <ul style="list-style-type: none"> - Means of validation : Document Review - Objective evidence : Minutes or report of local stakeholder consultation including summary of concerns raised, clarification provided and other information such as attendance list, meeting agenda, photographs shows that a local stakeholder consultation carried out. - <p>Eligibility criteria 8:</p> <ul style="list-style-type: none"> - Means of validation : Document Review 	

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			<ul style="list-style-type: none"> - Objective evidence : EIA/SSC EIA report, SEA, Explanation in B of CPA-DD <p>Eligibility criteria 9:</p> <ul style="list-style-type: none"> - Means of validation : Document Review - Objective evidence : Written Agreement between CME and CPA implementer that CPA has not received funding from Annex I parties, Explanation in A.11 of CPA-DD <p>Eligibility criteria 10:</p> <ul style="list-style-type: none"> - Means of validation : Document Review, On-site visit - Objective evidence : Electric consumption diagram for consumer facility. - <p>Eligibility criteria 11:</p> <ul style="list-style-type: none"> - Means of validation : Document Review, On-site visit - Objective evidence : Agreement or contract related to construction or facility purchase, or If available, Certificate of Inspection Prior to Use - <p>Eligibility criteria 12:</p> <ul style="list-style-type: none"> - Means of validation : Document Review, On-site visit - Objective evidence : Written Agreement between CME and CPA implementer, CPA identification No. 	

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			<p>Eligibility criteria 13:</p> <ul style="list-style-type: none"> - Means of validation : Document Review, On-site visit - Objective evidence : Written Agreement between CME and CPA implementer, CPA identification No. 	
CAR 13	CME did not describe clearly a record keeping system for each CPA under the PoA	B.1.1	<p>The description above is modified in part II section B.5 of PoA-DD.</p> <p>CME will grant CPA implementer with ID considering CPA implementer name, order participating as CPA, capacity, etc. This ID numbering system will be used to record baseline and monitoring data on a continuous basis using a excel database. In addition, the database will be updated using the data supplied by the CPA implementer.</p> <p>The above description is modified in section C of PoA-DD and the excel database is submitted to DOE.</p>	<p>Acceptable</p> <p>CME has revised the record keeping system for each CPA under PoA.</p> <p>The results are reflected in section C of PoA-DD</p> <p>Thus CAR 13 is checked and satisfied. CAR 13 is closed.</p>
CAR 14	<p>The eligibility criteria for followings are not developed for followings</p> <p>(1) applicability of methodology applied by CPAs</p> <p>(2) target group and distribution mechanisms.</p> <p>(3) the conditions related to sampling requirements for proposed PoA</p>	B.9.1	<p>Section B. 2 of PoA-DD(ver.6) is modified to add the eligibility criteria below:</p> <p>(1) applicability of methodology applied by CPAs : This condition is added to NO.5 of eligibility criteria.</p> <p>(2) target group and distribution mechanisms : This condition is added to NO.9 of eligibility criteria.</p>	<p>Acceptable.</p> <p>CME has revised the eligibility criteria for the omitted criteria as follows;</p> <p>(1) applicability of methodology applied by CPAs</p> <p>(2) target group and distribution mechanisms.</p>



No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
	(4) small-scale or microscale threshold criteria. (5) funding from annex I parties.		(3) the conditions related to sampling requirements for proposed PoA : As this PoA will verify each CPA, the sampling method is not applicable. Therefore, this condition is not developed to the eligibility criteria. (4) small-scale or microscale threshold criteria : This condition is added to NO.11 of eligibility criteria. (5) funding from annex I parties. : This condition is added to NO.9 of eligibility criteria.	(3) the conditions related to sampling requirements for proposed PoA (4) small-scale or microscale threshold criteria. (5) funding from annex I parties. The results are reflected in section B.2 of PoA-DD Thus CAR 14 is checked and satisfied. CAR 14 is closed.
CAR 15	Guideline for CPA inclusion in the registered PoA which is submitted by CME could not cover the followings; (1) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies. (2) Records of arrangements for training and capacity development for personnel (3) Procedures for technical review of inclusions of CPAs.	B.1.1	According to PoA standard, Section C of PoA-DD(ver.6) and CDM Operation Manual are modified to add the management system for CPA inclusion below: (1) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies - Section C and Chapter 3. Roles, Responsibility and Competence of "CDM operation manual" is modified to include roles, responsibilities and competences of personnel(e.g. CME staffs, technical reviewer, and CPA implementer) (2) Records of arrangements for training and capacity	Acceptable. CME has revised the management system for CPA inclusion in the registered PoA for the followings; (1) A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies. (2) Records of arrangements for training and capacity development for personnel

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
	(4) Records and documentation control process for each CPA under the PoA		development for personnel - Section C and Chapter 6. Training of "CDM operation manual" is modified to include necessary competence for PoA operation and management, record-keeping of education, training, skills and experience.	(3) Procedures for technical review of inclusions of CPAs.
	(5) Measures for continuous improvements of the PoA management system.		(3) Procedures for technical review of inclusions of CPAs - Section C and Chapter 4. CPA inclusion and management of "CDM operation manual" is modified to include the procedure of technical review for CPA inclusion including technical review member, subject documents, follow-up action by CPA inclusion team.	(4) Records and documentation control process for each CPA under the PoA
			(4) Records and documentation control process for each CPA under the PoA - In order to unambiguously identify each CPA in this PoA, CME will grant CPA implementers with ID number according to the ID numbering system and uniquely identify its location in addition to its technical details, address and GPS coordinates. - The description above is modified in Section C and Chapter 9. Document and Data Control of "CDM operation manual" to include Record keeping and documentation control process.	(5) Measures for continuous improvements of the PoA management system. The results are reflected in section C of PoA-DD Thus CAR 15 is checked and satisfied. CAR 15 is closed.

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			(5) Measures for continuous improvements of the PoA management system - Section C and Chapter 11. Continuous Improvement of the PoA Management System of "CDM operation manual" is modified to include continuous improvements of the PoA management system through audit results, management review, updating eligibility criteria etc.	
CAR 16	The technical description of the project activity has not been described at the section A.6 of the PoA-DD. And the clearness, accuracy and completeness of the project activity could not been checked.	B.3.7.	The project activity consists of photovoltaic power plants up to 15MW. The electricity generated from the project will be for captive use and displace the electricity supplied from KEPCO grid. And the project is to introduce photovoltaic power plants using solar module, connector band, inverter, etc. The detailed description above is added in section A.6 of PoA-DD.	Acceptable. CME has revised the technical description of the project activity considering the clearness, accuracy and completeness of the project activity. The results are reflected in section A.6 of PoA-DD Thus CAR 16 is checked and satisfied. CAR 16 is closed.
CAR 17	Conditions that avoid double counting of emission reduction is not considered in the eligibility criteria for inclusion of a SSC-CPA.	B.9.1	To avoid of double counting of emission reductions, the eligibility criteria including MoV and evidences is added to No.2 of the eligibility criteria in the section B.2 of the PoA-DD.	Acceptable. CME has considered the conditions that avoid double counting of emission in the eligibility criteria for inclusion of a CPA under PoA. The results are reflected in section



No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
				B.2 of PoA-DD Thus CAR 17 is checked and satisfied. CAR 17 is closed.
CAR 18	CME is required to indicate the single line diagram including the emission sources and GHGs in the project boundary and the data and parameters to be monitored.	B.11.1	The single line diagram is modified in the section B.3 of PoA-DD to include emission sources, KEPCO grid, EG_{BL,y} parameter and the monitored data, etc.	Acceptable. CME has added the single line diagram including the emission sources and GHGs in the project boundary and the data and parameter to be monitored. The results are reflected in section B.3 of PoA-DD Thus CAR 18 is checked and satisfied. CAR 18 is closed.
CAR 19	B.7.1 of Part II states that the monitoring device will be recalibrated according to the instructions (schedules, procedures) for QA of the technology provider. The calibration frequency is required to plan as prescribed in the relevant paragraph of the "General Guidelines to SSC CDM Methodologies" /2-13/ and the host party's standard.	B.11.5	According to paragraph 56 stipulated in 'Clean development mechanism project standard, (Version 02.1), the calibration frequency is modified in section B.7.1 of PoA-DD Part II as 'according to Measures act or manufacturer's specifications'.	Acceptable. CME has revised the calibration frequency as per CDM project standard. (Guidelines to SSC CDM methodologies has been revised.) The results are reflected in section B.7.1 of PoA-DD Thus CAR 19 is checked and satisfied. CAR 19 is closed.
CAR 20	CME is required to submit the excel	B.11.4	CME submits excel sheet including full calculation process of the emission factor. This emission factor is calculated based	CME has submitted the excel calculation sheet for the emission



No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
	calculation sheet to assess the emission coefficient.		on the operating margin and build margin.	factor. The electric emission factor was checked. Please refer to CAR 23. Thus CAR 20 is checked and satisfied. CAR 20 is closed.
CAR 21	CME is required to submit the result of technical review of inclusion of the 1st CPA.	B.9.1	According to chapter 4. CPA inclusion and management of CDM Operation Manual, CME implements technical review for 1st CPA inclusion and submits technical review book including technical review member, subject documents, etc.	Acceptable. CME has submitted the technical review for the inclusion of the 1st CPA. CME has appropriately managed the technical review process. Thus CAR 21 is checked and satisfied. CAR 21 is closed.
CAR 22	CME is required to submit records for internal audit such as internal auditor, audit plan and the report on the internal audit.	B.9.1	According to chapter 10. Internal quality audit of CDM Operation Manual, CME implements internal audit and submits the records including plan, check list, check report and result report of internal audit.	CME has submitted the records for internal audit such as audit plan and the report. Thus CAR 22 is checked and satisfied. CAR 22 is closed.
CAR 23	BM emission factor in PoA-DD is different with that of excel spreadsheet.	C.4.10.1 (3)	BM emission factor of PoA-DD submitted on 22/03/2012 (3rd GSC) is recalculated considering the exclusion of the generation for plants registered as CDM projects such as Dangjin in 2010 list, Busan C/C solar & Hadong solar in 2008 list, etc) and the inclusion of Wooldolmok plants in 2009 list, etc. In BM factor 2010 of excel spreadsheet, as the net electricity generated is changed above, BM emission factor is	Acceptable. Value in excel spreadsheet is correct. Thus, value in PoA-DD has been corrected. Thus CAR 23 is checked and satisfied. CAR 23 is closed.

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
CAR 24	The title of CPA is not indicated in section A.1 of CPA-DD.	A.1.1	modified to be consistent with that of excel sheet as 0.6357 tCO2/MWh, throughout PoA-DD(Ver.6). The 1st CPA title and CPA ID(2011-Songpa-001-24kW) are modified in the section A.2 of CPA-DD.	Acceptable. CME has corrected the title of the specific CPA including CPA identification No. The results are reflected in section A.2 of the specific CPA. Thus CAR 24 is checked and satisfied. CAR 24 is closed.
	Information for CPA implementer is not described.	A.3.1	Information for CPA implementer is modified in section A.4 of CPA-DD. - The CPA implementer of this CPA is Songpa-gu office located in 29-5, Sincheon-dong, Songpa-gu, Seoul, Korea. The Songpa-gu office is one of 25 autonomous district office in Seoul.	Acceptable. CME has described the information for the specific CPA implementer in details. The results are reflected in A.4 of the specific CPA. Thus CAR 25 is checked and satisfied. CAR 25 is closed.
CAR 26	The identified baseline scenario in the specific CPA-DD is not in accordance with the applied methodology(AMS-I.F)	C.3.1	As the methodology does not describe the tool for establishing baseline scenario, according to AMS-I.F methodology, the baseline emissions are modified in section D.4 of CPA-DD to include below: - The baseline emissions are the quantity of net electricity displaced as a result of the implementation of the CDM project activity in the year y, times the emission factor of a	Acceptable. CME has corrected the baseline scenario in the specific CPA in accordance with the AMS-I.F. The results are reflected in B.4 of the specific CPA. Thus CAR 26 is checked and

No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
CAR 27	The monitoring plan in the specific CPA-DD is not in accordance with the applied methodology (AMS-I.F.)	B.11.1	<p>grid. The monitoring plan is modified in section D.7 of CPA-DD according to the methodology (AMS-I.F.) The monitoring plan contains follows.</p> <p>- To measure EG_{BL_y}, the total quantity of electricity generated by this project and the auxiliary electricity consumption is monitored. The total quantity of electricity generated is measured by measuring device of inverter and the auxiliary electricity consumption is calculated with standby power of a connector band and a inverter.</p>	<p>satisfied. CAR 26 is closed.</p> <p>Acceptable. CME has corrected the monitoring plan in the specific CPA in accordance with the AMS-I.F. The results are reflected in D.7 of the specific CPA. Thus CAR 27 is checked and satisfied. CAR 27 is closed.</p>
CAR 28	The installed capacity in the specific CPA-DD is not consistently applied through the CPA-DD.	B.3.7	The installed capacity of photovoltaic power plant is modified as 24.01kW throughout the CPA-DD.	<p>Acceptable. CME has corrected the installed capacity through the specific CPA-DD in accordance with the AMS-I.F. The results are reflected through the specific CPA. Thus CAR 28 is checked and satisfied. CAR 28 is closed.</p>
CAR 29	The monitoring frequency for the generated electricity in D.7.1 of the specific CPA-DD is not in accordance with the applied methodology (AMS-I.F)	B.11.1	The monitoring frequency of EG_{BL_y} is modified as continuous monitoring, hourly measurement in accordance with the applied methodology (AMS-I.F). Related description is revised in section D.7.1 of the CPA-DD	<p>Acceptable. CME has corrected the monitoring frequency for the generated electricity in D.7 of the specific CPA-DD in accordance with the AMS-I.F. The results are reflected in D.7 of</p>



No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
CAR 30	Local stakeholders consultation process are not appropriately described in section C of the specific CPA-DD.	B.13.2	For 1st CPA, local stakeholder consultation was carried out on February 11, 2011. Officer, experts and local residents related to the proposed CPA were invited via announcement of consulting company to attend the consultation. Songpa-gu office explained about the applicability of CDM for the proposed project and the project objective including outline, facility, influences of PV power plant.	the specific CPA. Thus CAR 29 is checked and satisfied. CAR 29 is closed. Acceptable. CME has appropriately described the local stakeholder consultation process in section C of the specific CPA-DD. And also relevant evidence /1-37/ were submitted. The results are reflected in C of the specific CPA. Thus CAR 30 is checked and satisfied. CAR 30 is closed.
CL 01	The documented evidences that the same ODA money from Annex I is not being involved should be submitted to the validation team.	B.9.1	The detailed information is modified in section C of CPA-DD and minutes of local stakeholder consultation is submitted to DOE. To ensure that public funding from Annex I country does not result in the diversion of ODA, CME submits investment plan including project costs and written agreement between SMG and Songpa-gu to confirm that no funding from Annex I as the documentary evidence.	Acceptable. CME has the investment plan and Written agreement between SMG and Songpa-gu /01-32/ as the documented evidence that the fund from Annex I is not being involved. Validation team has checked and found satisfactory. Thus CL 01 is checked and



No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
CL 02	The format of the "Written Agreement" is not submitted to the validation team.	B.9.1	CDM operation manual contains the format of the written agreement as annex 2. The manual including the format is submitted to DOE.	satisfied. CL 01 is closed. Acceptable The format of the Written agreement is included at CDM operation manual/01-05/. Validation team has checked the written agreement between CME CPA implementer and found satisfied. Thus CL 02 is checked and satisfied. CL 02 is closed. Acceptable.
CL 03	Both expected operational lifetime of the CPA (A.8.2) and length of the crediting period (A.9.2) are described as 10 years. CPA implementer is required to clarify how both can be the same period.	C.6.1	The expected operational lifetime is 25 years and it is modified based on module's specification. And PP choose 10 years as the length of the crediting period. The respective description above is modified in the section A.8.2 and A.9.2 of CPA-DD.	CME has corrected both expected lifetime of the CPA and length of the crediting period for the specific CPA. The results are reflected in section A.8.2 and A.9.2 of the specific CPA-DD. Thus CL 03 is checked and satisfied. CL 03 is closed.
CL 04	Both start date of the CPA (A.8.1) and start date of the crediting period (A.9.1) are the same. CPA implementer is required to clarify this.	B.10.1	The start date of the CPA is on 19/04/2011 and it is modified based on "Purchase Contract date for PV module including construction" . And the start date of the crediting period is determined either	Acceptable. CME has corrected both start date of the specific CPA and start date of the crediting period for the





No.	Description of the CAR/CL	Ref.	Comments/Response from PP	Conclusions
			the date of complete submission to UNFCCC or 20/06/2011(The date of Certificate of Inspection Prior to Use by KESCO). In this case, PP choose the later date above. The respective description above is modified in the section A.8.1 and A.9.1 of CPA-DD.	specific CPA. The results are reflected in section A.8.1 and A.9.1 of the specific CPA-DD. Thus CL 04 is checked and satisfied. CL 04 is closed.



APPENDIX B

CERTIFICATE OF COMPETENCE



GHG Validator/Verifier Certificate

Kyoo-Il Sohn

Certificate No. : CDM-001

Technical Area : 13.1

Korean Standards Association hereby certifies that the above person is qualified by KSA's Qualification requirements to conduct validation and verification for CDM and GHG project.

VALID FROM

2011.1.21

VALID UNTIL

2014.1.20

PRESIDENT OF KSA

A handwritten signature in black ink, appearing to read "Kaphong Choo", is written over the printed name of the President of KSA.

KOREAN STANDARDS ASSOCIATION

13F, Ace High-end Tower 3, 371-50, Gasan-dong, Gwumcheon-gu, Seoul, Korea

KSA

CDM Validator/Verifier Certificate

Seong-Yong Park

Certificate No. : CDM-014

Technical Area : -

Korean Standards Association hereby certifies that the above person is qualified by KSA's Qualification requirements as a technical expert for CDM validation and verification activities.

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2011.01.21

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2014.01.20

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KOREAN STANDARDS ASSOCIATION

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KSA

Technical Expert Certificate

Chung-kook Lee

Certificate No. : CDM-013

Technical Area : 1.2, 2.1, 2.2, 3.1

Korean Standards Association hereby certifies that the above person is qualified by KSA's Qualification requirements as a technical expert for CDM validation and verification activities.

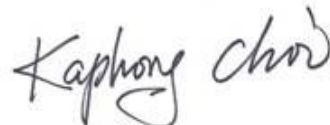
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KSA

CDM Validator/Verifier Certificate

Seung-Keun Choi

Certificate No. : CDM-015

Technical Area : -

Korean Standards Association hereby certifies that the above person is qualified by KSA's Qualification requirements to conduct validation and verification for CDM and GHG project.

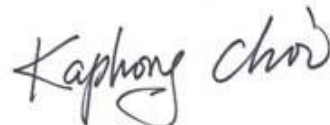
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KOREAN STANDARDS ASSOCIATION

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Technical Expert Certificate

Woo-Jin Park

Certificate No. : CDM-019

Technical Area : 1.2, 2.1, 2.2, 3.1

Korean Standards Association hereby certifies that the above person is qualified by KSA's Qualification requirements as a technical expert for CDM validation and verification activities.

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VALID UNTIL

2013.09.19

PRESIDENT OF KSA

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