



Keco

VALIDATION REPORT

VALIDATION OF
The programme to introduce renewable energy
system into Jeju Island

REPORT NO. 11-002


REVISION NO. 2



KOREA ENVIRONMENT CORPORATION



VALIDATION REPORT

Date of first issue: 27-03-2012		Project No: KC11-002	
APPROVED BY: Lee Seon-woo GHG Certification Center manager		Signature  Organizational unit: Korea Environment Corporation (Keco)	
Client: Ecoeye Co.,Ltd		Client ref: Ha Sang-sun	

Summary:

▶ **A project title:** The programme to introduce renewable energy system into Jeju Island

▶ **Host Country:** Republic of Korea

▶ **Annex Country:** Not identified (Unilateral CDM)

▶ **A brief description of the validation project:** This small scale CDM PoA has been developed by Jeju Special Self-Governing Province and Ecoeye Co.,Ltd. The objective of the project is to reduce Greenhouse Gases by introducing renewable energy systems to Jeju Island, which displace electricity from the Korea Electric Power Corporation(KEPCO).

▶ **Scale:** Small

▶ **Methodology:** AMS-I.D(ver.17), 'Grid connected renewable electricity generation' and AMS-I.F(ver.02), 'Renewable electricity generation for captive use and mini-grid'

▶ **Emission Reduction Estimate:** Total estimated reduction will be calculated on each CPA level. The lengths of the programme of activities is twenty-eight (28) years.

▶ **Scope of validation:** This is the validation report prepared on the basis of the UNFCCC criteria. Validation has been concurrently prepared by desk reviews based on the project documents provided by the project participants, cross-checks with an on-site visit and interviews with relevant personnel.

▶ **The applicability of the methodology and criteria used for validation:** Methodology AMS-I.D(ver.17) and AMS-I.F(ver.02) are applicable to the proposed project as it satisfies several conditions mentioned in the methodologies.

▶ **Any restrictions or uncertainties related to the validation:** None

▶ **Main conclusions and corrective action requests:** Based on the desk review and feedback from the project participants, eight (8) Corrective Action Requests and twenty-two (22) Clarification Requests were raised by Keco and those requests have been corrected by the project participants.


▶ **Summary of the validation status and opinion:**

☐ Corrective Action Requested

☐ Clarification requested

☒ Full approval and submission for registration

☐ Rejected

Work carried out by: Park Beom-woong (Team leader) Kim Chung-hyeon (Team member) Kim Tae-rae (Team member) Lee Seon Gyoo (Team member) Baik Seon-jai(Trainee)		Service area: Validation
Work carried out by: Lee Seon-woo Independent technical reviewer		
Date of this revision: 03-07-2012		Signature 
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Abbreviations

AMS	Approved Methodology Small scale
BM	Build Margin
CAR	Corrective Action Request
CEF	Carbon Emission Factor
CER	Certified Emission Reduction
CL	Clarification Request
CM	Combined Margin
CME	Coordinating/managing entity
CO ₂	Carbon Dioxide
CO ₂ e	Carbon Dioxide equivalent
CPA	CDM Programme of activities
CPA-DD	CDM Programme of activities Design Document
DNA	Designated National Authority
DOE	Designated Operational Entity
EF	Emission Factor
EIA	Environmental Impact Assessment
FAR	Forward Action Request
FSR	Feasibility Study Report
GHG	Greenhouse Gas(es)
GWP	Global Warming Potential
IRR	Internal Rate of Return
JGP	Jeju Special Self-Governing Province
Keco	Korea Environment Corporation
KEPCO	Korea Electric Power Corporation
KEMCO	Korea Energy Management corporation
KPX	Korea Power Exchange
LoA	Letter of Approval
MP	Monitoring Plan
NGO	Non Governmental Organization
ODA	Official Development Assistance
OM	Operating Margin
PoA-DD	Programme of activities Design Document
PoA	Programme of activities
PP	Project Participant
VVM	Validation and Verification Manual
UNFCCC	United Nations Framework Convention on Climate Change



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1. INTRODUCTION

Keco has been commissioned as a DOE to validate a small scale CDM PoA, 'The programme to introduce renewable energy systems into Jeju Island' (hereinafter referred to as 'the PoA'), by Ecoeye Co.,Ltd. The CME of the PoA is Jeju Special Self-Governing Province(hereinafter referred to as JGP). This report summarizes the findings of the validation of the project to prove that the project meets all the relevant requirements based on the UNFCCC criteria.

1.1. Objective

The purpose of the validation is to ensure a thorough and independent assessment of the proposed small scale PoA submitted for registration as a proposed CDM project activity against the applicable CDM. The validation has been performed to confirm general description, baseline selection, additionality, calculation of emission reductions, monitoring plan, crediting period, environmental impacts and stakeholder's comments on a basis of the Kyoto Protocol, CDM rules, modalities, related decisions by the COP/MOP, CDM Executive Board, and host country criteria. This report includes a result of its assessment.

1.2. Scope

The scope of the validation is an independent and objective review on the small scale CDM PoA design document(hereinafter referred to as 'PoA-DD') and other relevant documents. The PoA-DD has been reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board, including the approved baseline and monitoring methodology AMS-I.D(ver.17) and AMS-I.F(ver.02). Keco has employed a risk-based approach in the validation, focusing on the identification of significant risks for PoA implementation and the generation of CERs. The validation is not meant to provide any consulting towards the clients. However, stated requests for clarifications and/or corrective actions may provide input for improvement of the project design.

1.3. Names and Roles of the Validation Team Members

This is a brief description of validation team members.

2. METHODOLOGY

Standard auditing techniques(following CDM Validation and Verification Manual, version01.2) have been applied to assess the correctness of the information provided by the project participants. The validation consisted of the following three phases.

- (a) Document review
 - (i) Review of data and information
 - (ii) Cross-checks between information provided in the PoA-DD and information from sources other than that used
- (b) Follow-up actions (i.e. on-site visit, telephone, email interviews)
 - (i) Interview with relevant stakeholders in the host country



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Role	Name	Technical Area competence	Competence Demonstration	Type of involvement			
				Desk review	Interview	On-site visit/	Reporting
Team leader (Validator)	Park Beom-woong	✓ (Under Observation)		✓	✓	✓	✓
Team Member (Validator)	Kim Chung-hyeon	✓	✓	✓	✓	✓	✓
Team Member (Validator)	Kim Tae-rae	✓	✓	✓	✓	✓	✓
Team Member (Validator)	Lee Seon-gyoo	✓	✓			✓	✓
Team Member (Trainee)	Baik Seon-jai			✓	✓		

(ii) Cross-checks of information provided by interviewed personnel

(c) Resolution of outstanding issues and the issuance of the final validation report and opinion

The validation serves the following purposes.

- (a) It organizes, details and clarifies the requirements the project is expected to meet
- (b) It documents both how a particular requirement has been validated and the result of the validation.

The validation protocol consists of a couple of tables. The different columns in these tables are described in Figure 1.

The findings established during the validation can either be seen as a non-fulfillment of validation protocol criteria or where a risk to the fulfillment of project objectives is identified. Corrective Action Requests(CARs) are issued, where:

- (a) The project participants have made mistakes that will influence the ability of the project activity to achieve real, measurable additional emission reduction;
- (b) The CDM requirements have not been met;
- (c) There is a risk that emission reductions cannot be monitored or calculated.

Clarification requests(CLRs) have been raised where information is insufficient or unclear enough to determine whether the applicable CDM requirements have been met.



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Validation Protocol Table 1: Mandatory Requirements			
Requirement	Reference	Conclusion	Cross reference/Comment
The requirements the project must meet.	Gives reference to the legislation or agreement where the requirement is found.	This is either acceptable based on evidence provided (OK), or a Corrective Action request (CAR) of risk or non-compliance with stated requirements. The corrective action requests are numbered and presented to the client in the Validation report.	Used to refer to the relevant checklist questions in Table 2 to show how the specific requirement is validated. This is to ensure a transparent Validation process.

Validation Protocol Table 2: Requirement checklist				
Checklist Question	Reference	Means of verification (MoV)	Comment	Draft and/or Final Conclusion
The various requirements in Table 1 are linked to check-list questions the project should meet. The checklist is organised in seven different sections. Each section is then further sub-divided. The lowest level constitutes a checklist question.	Gives reference to documents where the answer to the check-list question or item is found.	Explains how conformance with the check-list 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 check-list 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 non-compliance with the check-list question (See below). Clarification (CI) is used when the validation team has identified a need for further clarification.



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Validation Protocol Table 3: Resolution of Corrective Action and Clarification Requests				
Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of project participants responses	Review by DOE	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.	Corrective Action or a Clarification #1 It should address the corrective action or a clarification from project participants	DOE review comment #1 This section should summarise the way of review (based on relevant document, statistical data, sectoral experience) by DOE about responses of project participants. In case of non-closure additional corrective action or clarification and DOE review comment should be added such as #2 or #3.	This section should summarise the validation team's conclusion.

Figure1. Validation protocol tables (See also Appendix A to this report)

2.1. Documents Review

The PoA-DD has been submitted by the project participants (PPs) and additional documents were reviewed. Followings are the documentation reviewed during the validation.

Documents provided by the PPs directly related to the project:

- <1> PoA-DD [ver 01], The programme to introduce renewable energy system into Jeju Island dated 13/04/2011
- <2> Specific CPA-DD [ver 01] dated 13/04/2011
- <3> Generic CPA-DD dated 13/04/2011
- <4> PoA-DD [ver 01] dated 13/04/2011 and received at 06/07/2011
- <5> Specific CPA-DD [ver 01] dated 13/04/2011 and received at 06/07/2011
- <6> Generic CPA-DD dated 13/04/2011 and received at 06/07/2011
- <7> PoA-DD [ver 02] dated 16/12/2011
- <8> PoA-DD [ver 02] dated 23/12/2011
- <9> Specific CPA-DD [ver 01.1] dated 16/01/2012
- <10> Generic CPA-DD dated 16/01/2012
- <11> Jeju Special Self-Governing Province renewable energy dissemination action plan by Jeju Special Self-Governing Province dated 2009
- <12> Jeju Island renewable energy potential by Korea institute of energy Research, <http://kredc.kier.re.kr> dated 10/05/2009
- <13> Act on the promotion of the development, use and diffusion of new and renewable energy



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- by Republic of Korea dated 9/03/2011(Act No.10445)
- <14> Enforcement decree of the environment impact assessment act Annex 1 by Republic of Korea dated 25/1/2012(Act No.11019)
 - <15> Statistics of Electric Power in KOREA for 2010, KEPCO in brief dated 03/2011.
 - <16> Statistics of Electric Power in KOREA for 2011, KEPCO in brief dated 30/06/2011.
 - <17> Agreement between Jeju Special Self-Governing Province and Ecoeye Co.,Ltd for CDM Registration dated 10/12/2010
 - <18> Jeju Special Self-Governing Province internal decision documents for the PoA by Future strategy division of Jeju Special Self-Governing Province dated 19/10/2010
 - <19> Monitoring procedure for the PoA by Smart grid division of Jeju Special Self-Governing Province dated 12/2011
 - <20> Operating Manual for the PoA by Smart grid division of Jeju Special Self-Governing Province dated 05/2012
 - <21> Request for approval of the application of multiple methodologies which are AMS-I.D.(ver16.0) and AMS-I.F.(ver1.0) dated 05/08/2011
 - <22> Standard contract for CPA under Jeju PoA
 - <23> Utilization coefficient of renewable power system by Korea Power Exchange dated 2009
 - <24> Construction completion check for Cheongsu community centre photovoltaic system dated 01/07/2011
 - <25> Specific CPA-DD [ver 02.2] dated 12/03/2012
 - <26> EF calculation sheet dated 12/06/2012
 - <27> PoA-DD [ver 03] dated 24/06/2012
 - <28> Specific CPA-DD [ver 03] dated 24/06/2012
 - <29> Generic CPA-DD dated 24/06/2012
 - <30> Letter of Approval(LoA) issued by the DNA of Republic of Korea 30/05/2012

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

- (1) EB33 Annex43, CDM-SSC-PoA-DD - Small-Scale CDM Programme of Activities Design Document form, version 01
- (2) EB33 Annex44, CDM-SSC-CPA-DD - Small-Scale CDM Programme Activity Design Document form, version 01
- (3) EB65 Annex21, Tool for the demonstration and assessment of additionality, version 06.0.0
- (4) EB63 Annex19, Tool to calculate the emission factor for an electricity system, version 02.2.1
- (5) EB62 Annex5, Guidelines on the assessment of investment analysis, version 05
- (6) EB55 Annex1, Clean Development Mechanism Validation and Verification Manual, version 01.2
- (7) EB61 Annex22, Procedures for review of erroneous inclusion of a CPA, version 03.0
- (8) EB55 Annex38, Registration of a programme of activities as a single CDM project activity and issuance of CERs for a PoA, version 04.1
- (9) EB47 Annex31, Procedures for approval of the application of multiple methodologies to a programme of activities , version 01.0
- (10) EB61 Annex17, AMS-I.D. Grid connected renewable electricity generation, version 17
- (11) EB61 Annex18, AMS-I.F. Renewable electricity generation for captive use and mini-grid,



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version 02

- (12) EB65, Annex 3, 'Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities', version.01.0
- (13) EB54 Annex13, Guidelines on assessment of de-bundling for SSC project activities, version 03
- (14) EB63 Annex23, Guidelines for demonstrating additionality of microscale project activities, version 03
- (15) CDM EB 62th meeting Report dated 15/07/2011
- (16) EB66 Annex35, ACM0002, Consolidated baseline methodology for grid-connected electricity generation from renewable sources, version 12.3.0
- (17) EB22 Annex3, CLARIFICATIONS ON THE CONSIDERATION OF NATIONAL AND/OR SECTORAL POLICIES AND CIRCUMSTANCES IN BASELINE SCENARIOS, version 02
- (18) EB 60 Annex 26, 'Clarification regarding the 'Procedures for registration of a programme of activities as a single CDM project activity and issuance of CERs for a PoA', version 01
- (19) EB 63 Annex 24, Attachment A of Appendix B, version 08

2.2. Follow-up Actions

Keco conducted an on-site visit on 26/09/2011–28/09/2011 and had interviews with project stakeholders to confirm selected information and to resolve issues identified in the document review. The main topics of the interviews are summarized in Table 1 below.

Interviewed organization	Interview topics
<ul style="list-style-type: none"> ➤ Jeju Special Self-Governing Province • Mr. Kim Young-kil, Future strategy division officer 	<ul style="list-style-type: none"> ✓ General aspects of the project ✓ Involved personnel and responsibilities ✓ Contribution to sustainable development ✓ License, operation & maintenance authority and responsibility ✓ Monitoring Plan
<ul style="list-style-type: none"> ➤ Ecoeye Co.,Ltd • Ms. Shin Suk-hee, Consultant • Mr. Jeong Jong-min, Consultant 	<ul style="list-style-type: none"> ✓ Legal aspects of the project ✓ Project boundary ✓ Technical details of the project realization ✓ Involved personnel and responsibilities ✓ Monitoring and measurement equipment ✓ Contribution to sustainable development ✓ Additionality ✓ Baseline methodology ✓ License, operation & maintenance authority and responsibility ✓ QA/QC procedure ✓ Project management system ✓ Duration of the project/Crediting period ✓ Environmental impacts ✓ Comments by local stakeholder, process



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Interviewed organization	Interview topics
	✓Approval by the host country

Table 1. Interview topics

2.3. Resolution of Clarification and Corrective Action Requests

The objective of this phase is to resolve the requests for corrective actions, clarifications, forward actions and any other outstanding issues, which need to be clarified for Keco's positive conclusions on the project design. Eight (8) Corrective Action Requests(CARs) and twenty-two (22) Clarification Requests(CLS) were identified in the initial validation. In order to guarantee the transparency of the validation process, the raised concerns and given responses are documented in the validation protocol in Appendix A. However, all of the CARs and CLs have been corrected completely through the validation process. Since modifications to the PoA-DD are necessary to resolve Keco's concerns, the PPs resubmits the revised PoA-DD on 24/06/2012(<27> in the 2.1 Documents review). After reviewing the resubmitted PoA-DD, Keco has issued this final validation report and opinion.

2.4. Internal Quality control

The final validation report is published after a review by an qualified independent technical reviewer as per the Keco's qualification management system.

3. FINDINGS

The validation function by Keco and the results are described as below in accordance with the VVM reporting requirements.

3.1. Approval

The project participants are Jeju Special Self-Governing Province(JGP) and Ecoeye Co.,Ltd. The host Party, Republic of Korea, meets the requirements of participation of the CDM. Annex1 Party is not identified and this is unilateral CDM. The DNA of Republic of Korea issued the Letter of Approval(LoA) on 30/05/2012 (<30>). From the letter, Keco confirms that:

- (a) Republic of Korea is a Party to the Kyoto Protocol;
- (b) Participation is voluntary;
- (c) The proposed CDM project activity contributes to the sustainable development of the host Party;
- (d) It refers to the precise proposed CDM project title in the PDD.

Since it is provided by the PPs, Keco has cross-checked using an interview with a person in charge from the Republic of Korea DNA to confirm its authenticity.

3.2. Participation

Keco confirms that all project participants are listed in a tabular form in section A.3 of the PoA-DD and that information is consistent with the contact details provided in annex 1 of the PoA-DD. The participants, Republic of Korea, have been approved by each corresponding Party



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and it has been confirmed by the LoA.

3.3. Programme of activities design document

The PoA-DD is in compliance with relevant form and guidance as currently provided by UNFCCC (http://cdm.unfccc.int/Reference/PDDs_Forms/PoA/PoA_form02_v01.pdf). The latest version of the CDM-SSC-PoA-DD template has been used. This section has been handled in the checklist in Appendix A of this report.

3.4. Project description

The proposed PoA involves introducing of renewable energy systems in Jeju Island by utilizing a photovoltaic system, wind power and small hydro power plant as belows.

	Methodology	Greenfield plants	Capacity addition	Replacement
Photovoltaic	AMS-I.F.	Applicable	Applicable	N/A
	AMS-I.D.	Applicable	Applicable	N/A
Wind power	AMS-I.D.	Applicable	Applicable	Applicable
Small hydro power	AMS-I.D.	Applicable	N/A	N/A

Table 2. Applicable types of CPAs based on methodologies, technologies and project type combinations

The PoA will introduce (a)Greenfield plants/Capacity addition of Photovoltaic system using AMS-I.F and I.D, (b)Greenfield plants/Capacity addition/Replacement of Wind power plants using AMS-I.D and (c)Greenfield plants of Small hydro power plants using AMS-I.D.

The PoA will reduce GHG emission by replacing generated electricity based on the fossil fuel power plant. JGP established a vision as 'Carbon free Island Jeju' and is promoting to introduce renewable energy systems to Jeju Island. JGP also sets up the goal to enhance the proportion of renewable energy (1% as of 2007) to 10% by 2013, 20% by 2020 and 30% by 2030. Keco confirms the JGP vision through 'JGP renewable energy dissemination action plan' published at 2009 (11). The CME of the PoA is JGP and the location of the PoA is Jeju Island, Republic of Korea. Keco checks the LoA and confirms that the PoA is a voluntary action by CME.

There is a mandatory regulation related with renewable energy system installation in the republic of Korea, which is 'Act on the promotion of the development, use and diffusion of new and renewable energy', dated 9/03/2011(Act No.10445) (13). Article 12 of the Act regulates introducing a renewable energy system in a building for newly built/extended/remodelled by (a)state and a local government, (b)a public corporation, (c)a government contributed institution, (d)a government-invested corporation and etc to supply renewable energy above a certain percentage of the estimated amount of energy use(Enforcement date: 13/04/2011). The Act is regarded as E-policy, since the Act was enforced from 13/04/2011 to give comparative advantages to less emissions-intensive technologies in accordance with the 'Additional clarifications regarding the treatment of national/sectoral policies and circumstances' (EB22, Annex3). A penalty or surcharge is imposed to building owners failing in complying the duty of renewable energy installation. Therefore,



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the impact of the Act is not taken into account when developing a baseline scenario, Keco confirms that there are no mandatory requirements and regulations for introducing renewable energy systems in the Republic of Korea.

Through an on-site visit(26/09/2011–28/09/2011) Keco confirms the followings.

- ✓The PoA will be implemented on Jeju Island, Republic of Korea.
- ✓The objective of the PoA is to reduce GHG emissions from the existing power plants by introducing renewable energy facilities for supplying electricity to KEPCO or self-use;
- ✓The power generated replaces electricity which should be purchased from the KEPCO in the absence of the PoA; and
- ✓The PoA involves three renewable energy generation systems which are photovoltaic system, wind power and small hydro power plant.

Keco confirmed through on-site visit that storage batteries will not be included in the photovoltaic system. Wind and hydro power systems will be installed considering circumstances of project sites. The length of the PoA is 28 years. The accuracy and completeness of the PoA description is secured by the on-site visit including stakeholder interview and cross-check with other sources(see 2.1 Documents review). In conclusion, Keco confirms that the project description, as included to the PoA-DD, is sufficiently accurate and complete in order to comply with the requirements of the CDM.

3.5. Baseline and monitoring methodology

3.5.1 Applicability of the selected methodology to the project activity

The project applies methodologies, AMS-I.D, 'Grid connected renewable electricity generation(ver.17)' and AMS-I.F, 'Renewable electricity generation for captive use and mini-grid(ver.02)'. Keco confirms that PP changes version of the applied methodologies from AMS-I.D(ver.16) and AMS-I.F(ver.1) to AMS-I.D(ver.17) and AMS-I.F(ver.02). Through the on-site visit, an interview with the PPs and the documents provided, Keco confirms that the information in the PoA-DD complies with the criteria of the methodologies AMS-I.D(ver.17) and AMS-I.F(ver.02). Table 3 and 4 below is used to assess the applicability of the methodologies. PP will chose applicable methodologies for each type of CPA and technologies.

Condition		Applicability check		
		Criteria discussed in the PoA-DD	Compliance provable	Compliance verified
1	This methodology comprises renewable energy generation units, such as photovoltaic, hydro, tidal/wave, wind, geothermal and renewable biomass: (a) Supplying electricity to a national or a regional grid; or (b) Supplying electricity to an identified consumer facility via national/regional grid through a contractual arrangement such as wheeling.	Yes	Yes	Yes
		§ The CPA involves renewable energy generation units including photovoltaic, wind and hydro to supply electricity to the national grid.		



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Condition		Applicability check														
		Criteria discussed in the PoA-DD	Compliance provable	Compliance verified												
2	Illustration of respective situations under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2 in the AMS-I.D. <table><tr><th>No.</th><th>Project type</th></tr><tr><td>1</td><td>Project supplies electricity to a national/regional grid</td></tr><tr><td>2</td><td>Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)</td></tr><tr><td>3</td><td>Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)</td></tr><tr><td>4</td><td>Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel</td></tr><tr><td>5</td><td>Project supplies electricity to household users (included in the project boundary) located in off grid areas</td></tr></table>	No.	Project type	1	Project supplies electricity to a national/regional grid	2	Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)	3	Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)	4	Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel	5	Project supplies electricity to household users (included in the project boundary) located in off grid areas	No	Yes	Yes
No.	Project type															
1	Project supplies electricity to a national/regional grid															
2	Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)															
3	Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)															
4	Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel															
5	Project supplies electricity to household users (included in the project boundary) located in off grid areas															
		No 1 and 3 project types are applicable for the PoA § The CPA will supply electricity to the national grid § The CPA supplies electricity to an identified consumer facility via national grid														
3	This methodology is applicable to project activities that (a) install a new power plant at a site where there was no renewable energy power plant operating prior to the implementation of the project activity (Greenfield plant); (b) involve a capacity addition; (c) involve a retrofit of (an) existing plant(s); or (d) involve a replacement of (an) existing plant(s).	Yes	Yes	Yes												
		§ The CPA involves project activities; (a)Greenfield plant for photovoltaic, wind and hydro technologies (b)Capacity addition for photovoltaic and wind technologies (d)Replacement for wind technology														
4	Hydro power plants with reservoirs that satisfy at least one of the following conditions are eligible to apply this methodology: • The project activity is implemented in an existing reservoir with no change in the volume of reservoir; • The project activity is implemented in an existing reservoir, where the volume of reservoir is increased and the power density of the project	Yes	Yes	Yes												
		§ The PoA will include CPA using hydro power plants with run-of-river or reservoir under one of below situation; • an existing reservoir with no change in the volume of reservoir; • an existing reservoir, where the volume of reservoir is increased and														

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Condition	Applicability check		
	Criteria discussed in the PoA-DD	Compliance provable	Compliance verified
activity, as per definitions given in the Project Emissions section, is greater than 4W/m ² ; <ul style="list-style-type: none"> The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4W/m². 	the power density of the project activity, as per definitions given in the Project Emissions section, is greater than 4W/m ² ; <ul style="list-style-type: none"> new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4W/m². 		
5 If the new unit 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 new unit co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15MW.	Yes	Yes	Yes
	§ The specific CPA's eligibility limit is 15 MW and applies only to the renewable component.		
6 Combined heat and power (co-generation) systems are not eligible under this category.	No	No	No
	§ The PoA does not involve combined heat and power systems		
7 In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15MW and should be physically distinct from the existing units.	Yes	Yes	Yes
	§ The PoA involves additional installation of photovoltaic and wind power system to the existing renewable energy plant, which is lower than 15MW and physically distinct from the existing units.		
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 15MW.	Yes	Yes	Yes
	§ The PoA involves replacement of wind power system and the total output is less than 15MW.		

Table 3. Applicability of the methodology AMS-I.D(ver.17).



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Condition		Applicability check												
		Criteria discussed in the PoA-DD	Compliance provable	Compliance verified										
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 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; (c) A carbon intensive mini-grid.	Yes	Yes	Yes										
		§ The CPA involves photovoltaic renewable energy generation units to supply electricity to user(s), which displaces the electricity supplied by the national grid.												
2	For the purpose of this methodology, a mini-grid is defined as small-scale power system with a total capacity not exceeding 15MW (i.e., the sum of installed capacities of all generators connected to the mini-grid is equal to or less than 15MW)which is not connected to a national or a regional grid.	N/A	N/A	N/A										
		§ The CPA does not involve a mini-grid												
3	Illustration of respective situations under which each of the methodology (i.e. AMS-I.D, AMS-I.F and AMS-I.A) applies is included in Table 2 in the AMS-I.F.	Yes	Yes	Yes										
		§ No 2 project types are applicable for the PoA.												
		§ The CPA displaces grid electricity consumption.												
<table><tr><th>No.</th><th>Project type</th></tr><tr><td>1</td><td>Project supplies electricity to a national/regional grid</td></tr><tr><td>2</td><td>Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)</td></tr><tr><td>3</td><td>Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)</td></tr><tr><td>4</td><td>Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel</td></tr></table>		No.	Project type	1	Project supplies electricity to a national/regional grid	2	Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)	3	Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)	4	Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel			
No.	Project type													
1	Project supplies electricity to a national/regional grid													
2	Project displaces grid electricity consumption (e.g. grid import) and/or captive fossil fuel electricity generation at the user end (excess electricity may be supplied to a grid)													
3	Project supplies electricity to an identified consumer facility via national/regional grid (through a contractual arrangement such as wheeling)													
4	Project supplies electricity to a mini grid system where in the baseline all generators use exclusively fuel oil and/or diesel fuel													



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Condition		Applicability check		
		Criteria discussed in the PoA-DD	Compliance provable	Compliance verified
5	Project supplies electricity to household users (included in the project boundary) located in off grid areas			
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 4W/m²; • The project activity results in new reservoirs and the power density of the power plant, as per definitions given in the Project Emissions section, is greater than 4W/m². 	N/A	N/A	N/A § The PoA will not include CPA using hydro power plants to supply electricity to user(s).
5	For biomass power plants, no other biomass other than renewable biomass is to be used in the project plant.	N/A	N/A	N/A § The PoA does not involve biomass power plants.
6	This methodology is applicable to project activities that <ul style="list-style-type: none"> (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). 	Yes	Yes	Yes § The CPA involves (a)Greenfield plant and (b)capacity addition of photovoltaic system to supply electricity to user(s).
7	In the case of project activities that involve the capacity addition of renewable energy generation units at an existing renewable power generation facility, the added capacity of the units added by the project should be lower than 15MW and should be physically distinct from the existing units.	Yes	Yes	Yes § The CPA involves capacity addition of photovoltaic renewable energy generation units at an existing renewable power generation facility, the added capacity of the units by



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Condition	Applicability check		
	Criteria discussed in the PoA-DD	Compliance provable	Compliance verified
	the project shall be lower than 15MW and shall be physically distinct from the existing units.		
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 15MW.	Yes	Yes
	§ The CPA does not involve retrofit or replacement.		
9	If the unit added has both renewable and non-renewable components (e.g., a wind/diesel unit), the eligibility limit of 15MW for a small-scale CDM project activity applies only to the renewable component. If the unit added co-fires fossil fuel, the capacity of the entire unit shall not exceed the limit of 15MW.	Yes	Yes
	§ The specific CPA's eligibility limit is 15 MW and applies only to the renewable component.		
10	Combined heat and power (co-generation) systems are not eligible under this category.	N/A	N/A
	§ The PoA does not involve co-generation.		
11	In case electricity produced by the project activity is delivered to another facility or facilities within the project boundary, a contract between the supplier and consumer(s) of the electricity will have to be entered into specifying that only the facility generating the electricity can claim emission reductions from the electricity displaced.	Yes	Yes
	§ The emission reductions from the electricity displaced can be claimed only by PP. It is regulated by 'Standard contract for CPA under Jeju PoA' <22>.		

Table 4. Applicability of the methodology AMS-I.F(ver.02).

Keco confirms that the selected baseline and monitoring methodologies are applicable to the project activity. Emission reductions that are expected to contribute more than 1% of the overall expected average annual emission reductions, which are not addressed by the applied methodology have not been identified. PP applied combination of the methodologies which are AMS-I.D and AMS-I.F in accordance with the 'Procedures for approval of the application of multiple methodologies to a programme of activities(ver.01.0)' and Keco confirms it's approval through CDM EB 62th meeting Report dated 15/07/2011.

3.5.2 CPA boundary

The CPA boundary has assessed based on documented evidences, the on-site visit and



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interviews. Keco confirms that the identified boundary, the selected sources, and gases as documented in the PoA-DD are justified for the CPA, hence all sources and GHGs required by the methodology have been included within the project boundary. The spatial extent of the PoA boundary is the physical and geographical location of each CPA at which a renewable energy system is installed by the entity participating in the CPA, and KEPCO electricity grid. All CPAs boundaries relevant with 'The programme to introduce renewable energy system into Jeju Island' will be implemented within the geographical boundary of the Jeju island in the Republic of Korea. There are two kinds of GHGs involved in the project activity; CH₄ emitted from small hydro power plant, CO₂ from power plants serving the electricity grid.

The selected sources and gases within the project boundaries are justified as follows.

	Sources	GHGs
Baseline	CO ₂ emissions from electricity generation in fossil fuel fired power plants	CO ₂
Project Activity	For hydro power plant, emission of CH ₄ from the reservoir.	CH ₄

Table 5. Summary of emission sources and gases included in the project boundary

Keco confirms that the identified boundary, the selected gases and sources as documented in the PoA-DD are justified for the PoA and fully in line with the requirements set by the applied methodology AMS-I.D(ver.17) and AMS-I.F(ver.02).

3.5.3 Baseline identification

In accordance with the methodology AMS-I.D(ver.17) and AMS-I.F(ver.02), the baseline scenario is listed below.

	AMS-I.D(ver.17)	AMS-I.F(ver.02)
Baseline scenario	<p>a) The electricity delivered to the grid by the CPA would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources into the grid</p> <p>b) If the CPA is the replacement/capacity addition of an existing wind power plant or capacity addition of photovoltaic, the baseline scenario is the continuation of the existing plant.</p>	<p>a) The baseline scenario is that the electricity delivered to the end users by the CPA would have otherwise been generated by the operation of grid-connected power plants</p> <p>b) If the CPA is the capacity addition of an existing photovoltaic, the baseline scenario is the continuation of the existing plant.</p>

Table 6. Baseline scenario of AMS-I.D(ver.17) and AMS-I.F(ver.02)

The continued use of existing fossil fuel based plant or existing renewable plant have been identified as the likely baseline scenario. From above analysis, Keco confirms that the baseline determination is transparent and deemed reasonable.

✓All the assumptions and data used by the project participants are listed in the PoA-DD;



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- ✓ Assumptions and data used in the identification of the baseline scenario are justified appropriately, supported by evidence and can be deemed reasonable;
- ✓ 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.

3.5.4 Algorithm and/or formulae used to determine emission reductions

Keco conducted assessment of baseline emissions, project emissions, leakage, and emission reductions. The parameters and equations presented in the PoA-DD, as well as other applicable documents, have been compared with the information and requirements stipulated in the methodology and respective tools. The assumptions and data used to determine the emission reductions are described in the PoA-DD and all the sources have been checked and confirmed by Keco. Based on the reviewed information, it can be confirmed that the sources used are correctly quoted and interpreted in the PoA-DD. The values in the PoA-DD are considered to be reasonable based on the documentation and references reviewed, as well as, the result of the interviews. The baseline methodology has been correctly applied according to the requirements.

1) Baseline Emissions

As per the methodology AMS-I.D(ver.17) and AMS-I.F(ver.02), baseline emissions(BE_y) of the project are calculated using below formula:

$$BE_y = EG_{BL,y} * EF_{CO_2,grid,y} \quad (1)$$

where: BE_y = Baseline emissions in year y(tCO_2e)

$EG_{BL,y}$ = Quantity of net electricity supplied to the grid or end users as a result of the implementation of the CDM project activity in year y (MWh)

$EF_{CO_2,grid,y}$ = CO_2 emission factor of the grid in year y (tCO_2/MWh)

In accordance with the methodology AMS-I.F(ver.02), $EF_{CO_2,y}$ (Emission factor of a grid) is calculated as per the procedures provided in AMS-I.D and same with $EF_{CO_2,grid,y}$.

Calculation of $EG_{BL,y}$

The calculation of $EG_{BL,y}$ is depending on the combinations of project type and technology as below table and following explanations.

	Methodology	Greenfield plants	Capacity addition	Replacement
Photovoltaic	AMS-I.F.	(a)	(c)	N/A
	AMS-I.D.	(b)	(c)	N/A
Wind power	AMS-I.D.	(b)	(c)	(d)
Small hydro power	AMS-I.D.	(b)	N/A	N/A

Table 7. $EG_{BL,y}$ calculation options for each project type and technology

- Option (a) : 'AMS-I.F(Captive use type) – Greenfield plants'



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✓ $EG_{BL,y} = EG_{BL_Captive,y}$ (2)

where: $EG_{BL_Captive,y}$ = Quantity of net electricity displaced as a result of the implementation of the CDM project activity in year y (MWh)

Ex-ante calculation for $EG_{BL_Captive,y}$ is as below:

✓ $EG_{BL_Captive,y} = C_{facility_captive} * H * UC_{renewable\ energy}$ (3)

Where: $C_{facility_captive}$ = Capacity of renewable energy equipment introduced by project activity (MW)

H = Yearly operating hours, 8760 (=365*24) (hour)

$UC_{renewable\ energy}$ = Utilization coefficient of renewable energy power plant (%)

➤ Option (b) : 'AMS-I.D(Grid connected type) – Greenfield plants'

✓ $EG_{BL,y} = EG_{BL_grid,y}$ (4)

where: $EG_{BL_grid,y}$ = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)

Ex-ante calculation for $EG_{BL_grid,y}$ is as below:

✓ $EG_{BL_grid,y} = C_{facility_grid} * H * UC_{renewable\ energy}$ (5)

Where: $C_{facility_grid}$ = Capacity of renewable energy equipment introduced by project activity (MW)

➤ Option (c) : 'AMS-I.D(Grid connected type) & AMS-I.F(Captive use type) – Capacity addition'

✓ $EG_{BL,y} = EG_{BL_ADD,y}$ (6)

where: $EG_{BL_ADD,y}$ = Quantity of net electricity generation supplied to the grid or end users in year y by the project plant/unit that has been added under the project activity (MWh)

Ex-ante calculation for $EG_{BL_ADD,y}$ is as below:

✓ $EG_{BL_ADD,y} = C_{facility_ADD} * H * UC_{renewable\ energy}$ (7)

Where: $C_{facility_ADD}$ = Capacity of renewable energy equipment that added under the project (MW)

➤ Option (d) : 'AMS-I.D(Grid connected type) – Replacement'

✓ $EG_{BL,y} = EG_{BL_retrofit,y}$ (8)

where: $EG_{BL_retrofit,y} = EG_{PJ,facility,y} - (EG_{historical} + O_{historical})$; until $DATE_{BaselineRetrofit}$; and $EG_{BL_retrofit,y} = 0$; on/after $DATE_{BaselineRetrofit}$

where: $EG_{BL_retrofit,y}$ = Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y (MWh)

$EG_{PJ,facility,y}$ = Quantity of net electricity supplied to the grid by the project plant/unit in

$EG_{historical}$ = Annual average historical net electricity generation delivered to the grid by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity (MWh)

$O_{historical}$ = Standard deviation of the annual average historical net electricity generation delivered to the grid supplied to the grid by the existing renewable energy plant that was operated at the project site prior to the implementation of the project activity (MWh)

$DATE_{BaselineRetrofit}$ = Point in time when the existing equipment would need to be replaced in the absence of the project activity (date)

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Ex-ante calculation for $EG_{BL_retrofit,y}$ is as below:

$$\checkmark EG_{BL_retrofit,y} = C_{facility_replacement} * H * UC_{renewable\ energy} \quad (9)$$

Where: $C_{facility_replacement}$ = Capacity of renewable energy equipment introduced by project for the purpose of replacement of existing facilities (MW)

Among the formula, the ex-ante parameters required by the methodology are validated as below.

Parameter	Description	Value used	Source
$UC_{renewable\ energy}$	Utilization coefficient of wind power plant	<u>0.251</u> <i>⇒ It is validated to be in compliance with the recently published data.</i>	〈23〉 Utilization coefficient of renewable power system by Korea Power Exchange
	Utilization coefficient of small hydro power plant	<u>0.442</u> <i>⇒ It is validated to be in compliance with the recently published data.</i>	
	Utilization coefficient of photovoltaic system	<u>0.153</u> <i>⇒ It is validated to be in compliance with the recently published data.</i>	

Table 8. Parameters for calculation of $EG_{BL,y}$

Calculation of $EF_{CO2,grid,y}$

$EF_{CO2,grid,y}$ will be calculated as per the latest version of 'Tool to calculate the emission factor for an electricity system' at the time of CPA inclusion.

2) Project Emissions

As per the methodology AMS-I.D(ver.17), AMS-I.F(ver.02) and ACM0002(ver.12.3.0), project emissions (PE_y) of the project are calculated using below formula:

$$PE_y = PE_{HP,y} \quad (10)$$

where: PE_y = Project emissions during the year y (tCO_2e)

$PE_{HP,y}$ = Emissions from water reservoirs of hydro power plants (tCO_2e)

➤ Project emissions from water reservoirs of hydro power plants ($PE_{HP,y}$)

i) If the power density of the single or multiple reservoirs (PD) is greater than 4 W/m² and less than or equal to 10 W/m²:

$$PE_{HP,y} = \frac{EF_{Res} \cdot TEG_y}{1000} \quad (11)$$

where: $PE_{HP,y}$ = Project emissions from reservoirs of hydro power plants in year y (tCO_2e)

EF_{Res} = Default emission factor for emissions from reservoirs of hydro power plants ($kgCO_2e/MWh$)

TEG_y = Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y (MWh)

ii) If the power density of the project activity (PD) is greater than 10 W/m²:

$$PE_{HP,y} = 0 \quad (12)$$



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The power density of the project activity(PD) is calculated as follows:

$$PD = \frac{Cap_{PJ} - Cap_{BL}}{A_{PJ} - A_{BL}} \quad (13)$$

where: PD = Power density of the project activity (W/m²)

Cap_{PJ} = Installed capacity of the hydro power plant after the implementation of the project activity (W)

Cap_{BL} = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero

A_{PJ} = Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m²)

A_{BL} = Area of the single or multiple reservoirs measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m²). For new reservoirs, this value is zero

3) Leakage

Energy generating equipment shall not transferred from another activity for the PoA, leakage is not to be considered.

4) Emission reductions

Emission reductions due to the project activity during the year y are follows according to the methodology.

$$ER_y = (BE_y - PE_y) - LE_y \quad (14)$$

where: ER_y = Emission reductions in year y (tCO₂e)

$BE_{total,y}$ = Total Baseline emissions in year y (tCO₂e)

$PE_{total,y}$ = Total Project emissions in year y (tCO₂e)

LE_y = Leakage emissions in year y (tCO₂e)

Keco judged that the calculation of the baseline emissions, project emissions, leakage and the emission reductions are appropriate.

3.6. Additionality

Following documents are reviewed to assess the approach used in the PoA-DD:

- ✓PoA-DD[ver 03] of The programme to introduce renewable energy system into Jeju Island <27>
- ✓Specific CPA-DD [ver 3] <28>

The data, rationales, assumptions, justifications, and documentation provided have been verified using local knowledge as well as sectoral and financial expertise.

3.6.1 Prior consideration of the clean development mechanism

The start date of the PoA is 02/05/2011, which is based on the contract date of the first CPA, 'Cheongsu community centre photovoltaic system'(#14 of CPA No.001), and it was the earliest date on which the real action of a PoA began. Since the project developer had not undertaken any



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construction or any real action on the implementation of the project activity prior to this date, as per Glossary of CDM terms (ver.05), this date has been appropriately treated as the start date of the PoA. The contract is signed between KD power and JGP, and Keco confirms it through reviewing 'Construction completion check for Cheongsu community centre photovoltaic system' <24>. The start date of the PoA is not prior to the commencement of validation of the programme of activities which the POA-DD is published for global stakeholder consultation is 15/04/2011. Any CPA starting before the GSP date of PoA-DD, 15/04/2011, can not be included in this PoA in accordance with the eligibility criteria for inclusion of a CPA in the PoA. Keco therefore confirms that the proposed PoA has seriously considered CDM prior to the implementation of the CPA.

3.6.2 Additionality of PoA

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

The additionality of the PoA level has been demonstrated as follows;

- The proposed PoA is a voluntary coordinated actions
 - ☞ Since there are no mandatory policy/regulation in Korea that requires JGP to introduce renewable energy systems to regional place and Keco confirms it through Letter of Approval(LoA) issued by the DNA of Republic of Korea <30>.
- If the PoA is implementing a voluntary coordinated action, it would not be implemented in the absence of the PoA;
 - ☞ The project is unable to attract financial investment without CDM and as such, CDM has been taken as a matter of central core.
- If the PoA is implementing a mandatory policy/regulation, this would/is not enforced
 - ☞ There are no mandatory policies/regulations in Korea, requiring JGP introducing renewable energy systems to regional places
- If mandatory policies/regulations are enforced, the PoA will lead to a greater level of enforcement of the existing mandatory policy/regulation
 - ☞ There is no mandatory policy/regulation in Korea that requires JGP to introduce renewable energy systems to regional place.

3.6.3 Assessment and demonstration of additionality for a typical CPA

The PoA-DD has presented three methods to assess additionality of CPA which are a) 'Guidelines for demonstrating additionality of microscale project activity' (ver.03, EB63 annex23) b) positive list of 'Attachment A of Appendix B' (ver.08, EB63 annex24) c) 'investment analysis' of 'Attachment A of Appendix B' (ver.08, EB63 annex24)

➤ Method A; 'Guidelines for demonstrating additionality of microscale project activity'

The CPA up to five megawatts that employ renewable energy technology are additional if any one of the conditions below is satisfied:



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

➤ Method B; positive list of 'Attachment A of Appendix B' (ver.08, EB63 annex24)

The CPA up to 15MW that employ grid connected photovoltaic system are additional without further documentation.

➤ Method C; investment analysis of 'Attachment A of Appendix B' (ver.08, EB63 annex24)

The other CPA can be demonstrated using 'investment analysis' given in 'Attachment A of Appendix B'. PP will demonstrate that the CPA would not have occurred due to investment barrier. The template of additionality for a typical CPA has been presented to demonstrate that the proposed CPA faces investment barrier without CDM consideration.

The approach for demonstration additionality of CPA presented above has been analyzed by Keco and it is considered to be reasonable because it provides transparent criteria for assessment of additionality for a typical CPA and is in accordance with the guideline approved by EB. Taking into account the description of the validation of additionality, Keco can confirm, with reasonable certainty, that the assessment and demonstration of additionality are credible and can be correctly applied to a typical SSC CPA.

3.7. Monitoring plan

Keco has applied a two-step process to assess compliance with the requirement of the VVM as below:

(a) Compliance of the monitoring plan with the approved methodology

The monitoring plan presented in the PoA-DD complies with the requirements of the applicable methodology AMS-I.D(ver.17), AMS-I.F(ver.02) and ACM0002,(ver.12.3.0). Keco has verified that all parameters in the monitoring plan against the requirements of the methodology, and no relevant deviations have been found.

The parameters need to be monitored as per the methodologies has been validated as follows:



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No.	Parameter	Unit	Description
1	$EF_{CO_2,grid,y}$	tCO ₂ /MWh	CO ₂ emission factor of the grid in year y
2	$EG_{BL_Captive,y}$	MWh	Quantity of net electricity displaced as a result of the implementation of the CDM project activity in year y
3	$EG_{BL_grid,y}$	MWh	Quantity of net electricity supplied to the grid as a result of the implementation of the CDM project activity in year y
4	$EG_{BL_ADD,y}$	MWh	Quantity of net electricity generation supplied to the grid or end users in year y by the project plant/unit that has been added under the project activity
5	$EG_{PJ,facility,y}$	MWh	Quantity of net electricity supplied to the grid by the project plant/unit in year y
6	Cap_{PJ}	W	(For hydro power plants) Installed capacity of the hydro power plant after the implementation of the project activity
7	A_{PJ}	m ²	(For hydro power plants) Area of the single or multiple reservoirs measured in the surface of the water, after the implementation of the project activity, when the reservoir is full
8	TEG_y	MWh	(For hydro power plants) Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y

Table 9. Parameter to be monitored in the methodology AMS-I.D(ver.17), AMS-I.F(ver.02)

$EF_{CO_2,grid,y}$ parameter is to be monitored and calculated using recently available data at the time of CPA inclusion.

- Tool to calculate the emission factor for an electricity system(ver.02.2.1)

The monitoring plan provided in the PoA-DD complies with the requirements of AMS-I.D(ver.17), AMS-I.F(ver.02) and the above tools.

Monitoring parameters to determine baseline emissions are $EG_{BL_Captive,y}$, $EG_{BL_grid,y}$, $EG_{BL_ADD,y}$ and $EG_{PJ,facility,y}$.

- ✓ $EG_{BL_Captive,y}$, $EG_{BL_grid,y}$, $EG_{BL_ADD,y}$ and $EG_{PJ,facility,y}$ will be continuously monitored, hourly measured and monthly recorded by electricity meter and calibrated at least once in three years. Auxiliary electricity consumption will be calculated based on the equipment specifications for captive use type and checked by invoices from KPX for grid-connected type.

'Monitoring procedure for the PoA' <19> clearly explains calibration standard, a specification of monitoring equipment to verify its capability and excellence.

(b) Implementation of the Plan

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



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maintenance. Archiving of the records is indicated. By reviewing the provided 'Monitoring procedure for the PoA' <19> and interview with the PPs, Keco confirms that the monitoring arrangements described in the monitoring plan are feasible within the PoA-DD, and the means of implementation of the monitoring plan is sufficient to ensure the emission reductions achieved by the PoA can be reported ex post and verified.

3.8. Sustainable development

The DNA of the Host country, Republic of Korea issued the Letter of Approval(LoA) on 30/05/2012 <30>, has confirmed the contribution of the project to the sustainable development.

3.9. Local stakeholder consultation

The stakeholder survey will be carried out at the CPA level and Keco has confirmed that it is correctly indicated in the PoA-DD.

3.10. Environmental Impacts

The EIA will be carried out at the CPA level and Keco has confirmed that it is correctly indicated in the PoA-DD.

3.11. Specific Validation Activity for PoA

(a) Operational and Management Plan

A clear and transparent description of the operational and management arrangements have been established by the JGP and stated in the PoA-DD. These have been verified from the 'Operating Manual for the PoA' <20>. There is a record keeping and managing system for each CPA under the PoA. The CPAs shall follow 'Operating Manual for the PoA' <20> and the operating manual includes (a)a clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies, (b)records of arrangements for training and capacity development for personnel, (c)procedures for technical review of inclusion of CPAs, (d)a procedure to avoid double counting, (e)records and documentation control process for each CPA under the PoA and (f)measures for continuous improvements of the PoA management system. JGP will check the records for each CPA before submission to the DOE for inclusion. The arrangements is sufficient to ensure that the CME of the PoA, JGP, will have control of all records and information related to the implementation of individual CPAs and will be in a position to ensure each CPA is being operated in accordance with the specific requirements of the PoA.

(b) Eligibility Criteria for inclusion of a SSC-CPA under PoA

The CME applies clear and unambiguous criteria for the inclusion of the CPA. The eligibility criteria are verifiable with regards to the applicability of the applied methodologies, geographical boundary, technology used to the CPA, double counting and the host country's regulations. Keco checks the specified eligibility criteria in the PoA-DD and confirms that the criteria are sufficient to ensure that all CPAs would comply with the minimum eligibility criteria in the 'Standard for



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demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities` (EB65, Annex3, ver.01.0).

Minimum eligibility criteria in the Standard (EB65, Annex3, ver.01.0)	Eligibility criteria Category in the PoA-DD
(a) The geographical boundary of the CPA including any time-induced boundary consistent with the geographical boundary set in the PoA;	Boundary and location of CPA
(b) Conditions that avoid double counting of emission reductions like unique identifications of product and end-user locations (e.g. programme logo);	Avoid double-counting of CPA
(c) The specifications of technology/measure including the level and type of service, performance specifications including compliance with testing/certifications;	Technological requirements
(d) Conditions to check the start date of the CPA through documentary evidence;	CPA start date
(e) Conditions that ensure compliance with applicability and other requirements of single or multiple methodologies applied by CPAs;	Applicability of the methodologies
(f) The conditions that ensure that CPAs meet the requirements pertaining to the demonstration of additionality as specified in Section A above;	additionality
(g) The PoA-specific requirements stipulated by the CME including any conditions related to undertaking local stakeholder consultations and environmental impact analysis;	Stakeholder consultant Environmental Impact Analysis
(h) Conditions to provide an affirmation that funding from Annex I parties, if any, does not result in a diversion of official development assistance;	Funding from Annex I parties
(i) Where applicable, target group (e.g. domestic/commercial/ industrial, rural/urban, grid-connected /off-grid) and distribution mechanisms (e.g. direct installation);	N/A
(j) Where applicable, the conditions related to sampling requirements for a PoA in accordance with the approved guidelines/standard from the Board pertaining to sampling and surveys;	Sampling method
(k) Where applicable, the conditions that ensure that every CPA in aggregate meets the small-scale or microscale threshold criteria ⁶ and remains within those thresholds throughout the crediting period of the CPA;	Project scale threshold
(l) Where applicable, the requirements for the debundling check, in case CPAs belong to small-scale (SSC) or microscale project categories.	Debundling check

Table 10. Eligibility criteria in the Standard and the PoA-DD



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The eligibility criteria ensures the smooth functioning of PoA and can be checked at the CPA level by the CME and confirmed by the DOE during inclusion.

4. COMMENTS BY PARTIES, STAKEHOLDERS AND NGOS

According to the modalities for the Validation of CDM projects, DOE shall make publicly available the PoA-DD, CPA-DD, specific CPA-DD and receive, within 30 days, comments from Parties, stakeholders and UNFCCC accredited non-governmental organizations and make them publicly available. Keco published the PoA-DD, CPA-DD and specific CPA-DD on the UNFCCC CDM web site(<http://cdm.unfccc.int>) on 15/04/2011 and invited comments by 14/05/2011 by Parties, stakeholders and non-governmental organizations. No Comments are received.

5. VALIDATION OPINION

Keco has performed a validation of the proposed PoA, The programme to introduce renewable energy system into Jeju Island. The validation has performed on the basis of UNFCCC criteria and host country criteria.

Keco carried out the validation via i) desk review of PoA-DD, the baseline and monitoring plan; ii) follow-up interviews with project stakeholders and technical experts; and iii) the resolution of outstanding issues and the issuance of the final validation report and opinion.

No public funding is involved and the validation did not reveal any information indicating that the project can be seen as a diversion of ODA funding.

The PoA applies the baseline and monitoring methodology AMS-I.D(ver.17), 'Grid connected renewable electricity generation' and AMS-I.F(ver.02), 'Renewable electricity generation for captive use and mini-grid'. The PoA also applies 'Guidelines for demonstrating additionality of microscale project activity' (ver.03) and 'Attachment A of Appendix B' (ver.08) to determine that the project activity would not have occurred anyway due to the barrier identified.

Emission reductions from the PoA are hence additional to any that would have occurred in the absence of the PoA. Emission reductions will be calculated at each CPA level by utilizing a photovoltaic system, wind power and small hydro power plant. The PoA results in reductions of CO₂ emissions that are real, measurable and give long-term benefits to the mitigation of climate change.

In our opinion, this PoA, as described in the revised and resubmitted PoA-DD dated 24/06/2012(ver.03) meets all relevant UNFCCC requirements for CDM and relevant host country criteria. Keco will therefore recommend the registration of the PoA, "The programme to introduce renewable energy system into Jeju Island", as CDM PoA.



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The validation is based on the information made available to the DOE and the engagement conditions detailed in this report. The only purpose of this report is its use during the registration process as part of the CDM project cycle. Hence, Keco cannot be held liable by any party for decisions made or not made based on the validation opinion, which will go beyond that purpose.

03/07/2012

Signature: 

Keco GHG Certification Center Manager
Lee Seon-woo

6. VALIDATION TEAM

□ Team Members

Park Beom-woong, Keco, Republic of Korea- Validation Team leader(Under Observation)
Kim Chung-hyeon, Keco, Republic of Korea - Team member
Kim Tae-rae, Keco, Republic of Korea - Team member
Lee Seon-gyoo, Keco, Republic of Korea - Team member
Baik Seon-jai, Keco, Republic of Korea - Team member, Trainee

□ Qualification of validator

a. Park Beom-woong, Team Leader



CERTIFICATE

No. 110073

Name : **Park Beom-woong** (Date of Birth : 3 Nov. 1980)

Qualification

Team leader ☒ Validator ☒ Verifier ☒

Qualified for the following technical areas

Sectoral Scope	Technical Area	Valid from
1 Energy industries	Energy generation from renewable energy sources	29 Jun. 2011
	Waste heat/gas recovery	15 Feb. 2011
13 Waste handling and disposal	Waste handling and disposal	15 Feb. 2011
	Animal waste management	15 Feb. 2011
15 Agriculture	Animal waste management	15 Feb. 2011

As a auditor, based on the competence requirements of Korea Environment Corporation.

Date : 12 Mar. 2012

Park Seung-hwan 
Chairman of Korea Environmental Coporation 



b. Kim Chung-hyeon, Team member



CERTIFICATE

No. 110069

Name : **Kim Chung-hyeon** (Date of Birth : 4 Dec. 1968)

Qualification

Team leader ☐ Validator ☒ Verifier ☒

Qualified for the following technical areas

Sectoral Scope	Technical Area	Valid from
1 Energy industries	Energy generation from renewable energy sources	29 Jun. 2011
3 Energy demand	Energy demand	29 Jun. 2011

As a auditor, based on the competence requirements of Korea Environment Corporation.

Date : 12 Mar. 2012

Park Seung-hwan 
Chairman of Korea Environmental Coporation 





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c. Kim Tae-rae, Team member

Korea Environment Corporation

CERTIFICATE

No. 110008

Name : **Kim Tae-rae** (Date of Birth : 28 Jan. 1964)

Qualification

Team leader ☐ Validator ☒ Verifier ☒

Qualified for the following technical areas

Sectoral Scope	Technical Area	Valid from
1 Energy industries	Energy generation from renewable energy sources	15 Feb. 2011
	Waste heat/gas recovery	15 Feb. 2011
6 Construction	Construction	15 Feb. 2011
13 Waste handling and disposal	Waste handling and disposal	15 Feb. 2011

As a auditor, based on the competence requirements of Korea Environment Corporation.

Date : 12 Mar. 2012

Park Seung-hwan
Chairman of Korea Environmental Corporation

d. Lee Seon-gyoo

Korea Environment Corporation

CERTIFICATE

No. 110001

Name : **Lee Seon-gyoo** (Date of Birth : 4 Feb. 1966)

Qualification

Team leader ☒ Validator ☒ Verifier ☒

Qualified for the following technical areas

Sectoral Scope	Technical Area	Valid from
1 Energy industries	Energy generation from renewable energy sources	15 Feb. 2011
	Waste heat/gas recovery	15 Feb. 2011
	Energy efficiency and fuel switch	15 Feb. 2011
4 Manufacturing industries	Other manufacturing industries	15 Feb. 2011
13 Waste handling and disposal	Waste handling and disposal	15 Feb. 2011
	Animal waste management	15 Feb. 2011
15 Agriculture	Animal waste management	15 Feb. 2011

As a auditor, based on the competence requirements of Korea Environment Corporation.

Date : 12 Mar. 2012

Park Seung-hwan
Chairman of Korea Environmental Corporation

Appendix A

Validation Protocol for small-scale programme of activities

Table 1. Mandatory Requirements for Clean Development Mechanism(CDM) Project Activities

REQUIREMENT	REFERENCE	CONCLUSION	CROSS REFERENCE/COMMENT
1. The project shall assist Parties included in Annex I in achieving compliance with part of their emission reduction commitment under Art. 3	Kyoto Protocol Art. 12.2	OK	The type of this project is Unilateral and no Annex1 has been identified.
2. The project shall assist non-Annex I Parties in achieving sustainable development and shall have obtained confirmation by the host country thereof	Kyoto Protocol Art. 12.2, Simplified Modalities and Procedures for Small Scale CDM Project Activities § 23a	OK	In accordance with a Letter of Approval (LoA), the DNA of the Host country confirms the sustainable development.
3. The project shall assist non-Annex I Parties in contributing to the ultimate objective of the UNFCCC	Kyoto Protocol Art. 12.2.	OK	The project result in fewer GHG emissions than the baseline case.
4. The project shall have written approval of voluntary participation from the designated national authorities of each party involved	Kyoto Protocol Art. 12.2, Simplified Modalities and Procedures for Small Scale CDM Project Activities § 23a	OK	Written approval letter (LoA) from Republic of Korea has been received.
5. The emission reductions should be real, measurable and give long-term benefits related to the mitigation of climate change	Kyoto Protocol Art. 12.5b	OK	Table 2, Section 5
6. Reduction in GHG emissions must be additional to any that would occur in absence of the project activity, i.e. a CDM project activity is additional if anthropogenic emissions of greenhouse gases by sources are reduced below those that would have occurred in the absence of the registered CDM project activity	Kyoto Protocol Art. 12.5.c, Simplified Modalities and Procedures for Small Scale CDM Project Activities § 26	OK	Table 2, Section 6
7. Potential public funding for the project from Parties in Annex I shall not be a diversion of official development assistance	Marrakech Accords (Decision 17/CP.7)	OK	No public funding has been involved.
8. Parties participating in the CDM shall designate a national authority for the CDM	CDM Modalities and Procedures § 29	OK	DNA of the Republic of Korea is the Prime Minister' s Office organized at Jun. 2004

REQUIREMENT	REFERENCE	CONCLUSION	CROSS REFERENCE/COMMENT
9. The host Party and the participating Annex1 Party shall be a Party to the Kyoto Protocol	CDM Modalities and Procedures § 30, 31b	OK	The Republic of Korea is a party to the Kyoto Protocol. Ratification date is Nov 8, 2002
10. The participating Annex1 Party's assigned amount shall have been calculated and recorded	CDM Modalities and Procedures § 31b	OK	The type of this project is Unilateral and no Annex1 has been identified.
11. The participating Annex1 Party shall have in place a national system for estimating GHG emissions and a national registry in accordance with Kyoto Protocol Article 5 and 7	CDM Modalities and Procedures § 31b	OK	The Republic of Korea is a party to the Kyoto Protocol. Ratification date is Nov 8, 2002
12. The proposed project activity shall meet the eligibility criteria for small scale CDM project activities set out in § 6 (c) of the Marrakesh Accords and shall not be a de-bundled component of a larger project activity	Simplified Modalities and Procedures for Small Scale CDM Project Activities § 12a,c	OK	Table 2, Section 11
13. The project design document shall conform with the Small Scale CDM Programme of Activities Design Document format	Procedures for registration of a programme of activities as a single CDM project activity and issuance of CERs for a PoA	OK	Project Design Document form for Small-scale CDM Programme of Activities Design Document format [CDM-SSC-PoA-DD-Ver.01] is used for project activity
14. The proposed project activity shall confirm to one of the project categories defined for small scale CDM project activities and uses the simplified baseline and monitoring methodology for that project category	Simplified Modalities and Procedures for Small Scale CDM Project Activities § 22e	OK	Table 2, Section 11 The project activity is confirmed to category I.D. (Grid connected renewable electricity generation, ver. 16) and I.F. (Renewable electricity generation for captive use and mini-grid, ver. 01) in sectoral scope 01 energy industries.
15. Comments by local stakeholders are invited, and a summary of these provided	Simplified Modalities and Procedures for Small Scale CDM Project Activities § 22b	OK	Table 2, Section 9
16. If required by the host country, an analysis of the environmental impacts of the project activity is carried out	Simplified Modalities and Procedures for Small	OK	Table 2, Section 10

REQUIREMENT	REFERENCE	CONCLUSION	CROSS REFERENCE/COMMENT
and documented	Scale CDM Project Activities § 22c		
17. Parties, stakeholders and UNFCCC accredited NGOs have been invited to comment on the validation requirements and comments have been made publicly available	Simplified Modalities and Procedures for Small Scale CDM Project Activities § 23b,c,d	OK	The SSC-PoA-DD has been published for public comments on the UNFCCC CDM website during a period of 30 days, from 15 April 2011 to 14 May 2011.
18. The baseline and monitoring methodology shall be previously approved by the CDM Executive Board.	CDM Modalities and Procedures § 37e	OK	Table 2, Section 5
19. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	CDM Modalities and Procedures § 45c,d	OK	Table 2, Section 5

Table 2. Requirement Check list

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
1. Approval					
All Parties involved have approved the project activity.	/1/ 44				
1.1. Has the DNA of each Party indicated as being involved in the proposed SSC-PoA activity in Section A.3 of the SSC-PoA-DD provided a written letter of approval?	/1/ 45	DR/I	No, A written approval letter (LoA) from the DNA of Republic of Korea isn't obtained yet.	EARt	OK
1.2. Does the written letter of approval from each DNA involved;	/1/ 45				
1.2.1. Does it confirm that the party is a Party of the Kyoto Protocol?	/1/ 45(a)	DR	Refer to section 1. 1 Keco has confirmed below through UNFCCC website. Host party: Republic of Korea Republic of Korea is a party to the Kyoto Protocol. Ratification date is 08 November 2002.	Pending	OK
1.2.2. Does it confirm that participation is voluntary?	/1/ 45(b)	DR	Refer to section 1. 1	Pending	OK
1.2.3. In the case of the host Party, does the proposed SSC-PoA activity contribute to the sustainable development of the country?	/1/ 45(c)	DR	Refer to section 1. 1	Pending	OK
1.2.4. Does it refer to the precise proposed SSC-PoA activity title in the SSC-PoA-DD being submitted for registration?	/1/ 45(d)	DR	Refer to section 1. 1	Pending	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
1.3. Is the letter of approval unconditional with respect to 1.2.1 to 1.2.4 above?	/1/ 46	DR/I	Refer to section 1. 1	Pending	OK
1.4. Has the letter of approval been issued by the respective Party' s designated national authority (DNA)?	/1/ 47	DR/I	Refer to section 1. 1	Pending	OK
1.5. Is the letter of approval authentic?	/1/ 48	DR/I	Refer to section 1. 1	Pending	OK
1.6. Do letters of approval contain additional specification of the project activity, such as the SSC-PoA-DD version number?	/1/ 50	DR	Not applicable	N/A	N/A
1.7. Does a letter of approval refer to a specific version of the validation report and the DOE therefore is unable to submit this precise version of the validation report?	/1/ 50	DR	Not applicable	N/A	N/A
2. Participation			In the section A.3 of the SSC-PoA-DD		
Coordinating/managing entity and participants have been listed in a consistent manner in the project documentation, and their participation in the project activity has been approved by a Party to the Kyoto Protocol.	/1/ 51				
2.1. Are the Coordinating/managing entity and participants listed in tabular form in Section A.3 of the SSC-PoA-DD?	/1/ 52	DR	Yes. But Keco needs to cross-check the contract between Jeju Special Self-Governing Province and Ecoeye Co.,Ltd.	GH	OK
2.2. Is the information consistent with the contact details provided in annex 1 of the SSC-PoA-DD?	/1/ 52	DR	Yes. The information is consistent with the contact	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
			details provided in annex 1 of the SSC-PoA-DD.		
2.3. Has the participation of each project participant been approved by at least one Party involved either in a letter of approval or in a separate letter specifically to approve participation?	/1/52	DR/I	Refer to section 1. 1	Pending	OK
2.4. Are any entities other than those approved as project participants included in these Sections of the SSC-PoA-DD?	/1/52	DR/I	There are no entities other than approved as project participants.	OK	OK
2.5. Has the approval of participation been issued from the relevant DNA?	/1/53	DR/I	Refer to section 1. 1	Pending	OK
<i>Requirements related to participation in the PoA</i>	<i>/4/</i>				
2.6. Are the operators of individual CPAs same with project participants?	/4/8		No, PP described that private entity can participate in the section A.2 Keco needs to check the evidence documents above.	GI2	OK
2.7. Is the CDM programme participation only recorded at the PoA level?	/4/8		Yes, CDM programme participation is recorded at the PoA level.	OK	OK
2.8. Does the coordinating/managing entity obtain letters of approval from each host Party and Annex I Party which wishes to be involved in the PoA?	/4/9		Refer to section 1. 1	Pending	OK
2.9. Are letters of approval issued in accordance with the guidance provided by the Board(EB 16 report, Annex 6)?	/4/9		Refer to section 1. 1	Pending	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
2.10. Does the coordinating/managing entity obtain letters of authorization of its coordination of the PoA from each host Party?	/4/10		Refer to section 1. 1	Pending	OK
2.11. Do the coordinating/managing entity apply MoC using the latest version of the 'Procedures for modalities of communication between project participants and the Executive Board' with the exception that the coordinating/managing entity shall be either sole or joint focal point for each area of communication?	/4/11		No, PP needs to submit MoC in accordance with the latest procedure.	El3	OK
2.12. How many of joint focal points and host parties for the programme?	/4/11		Refer to section 2. 11	Pending	OK
2.13. If, subsequent to the registration of the programme, the coordinating/managing entity has changed then the DOE who is undertaking the next inclusion of a CPA shall submit:	/4/12		N/A This is a validation report used for registration of the PoA.	N/A	N/A
2.13.1. New letter(s) of authorization by the each respective host Party stating the change in coordinating/managing entity;	/4/12		N/A	N/A	N/A
2.13.2. A confirmation from new coordinating/managing entity that the PoA will be developed and implemented with the same set framework as originally described in the CDM-PoA-DD; and	/4/12		N/A	N/A	N/A
2.13.3. A validation opinion by a DOE regarding the compliance of the new coordinating/managing entity with the requirements of paragraph 15 (c)/4/ below.	/4/12		N/A	N/A	N/A
3. SSC-PoA-DD					

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
The SSC-PoA-DD used as a basis for validation shall be prepared in accordance with the latest template and guidance from the CDM Executive Board available on the UNFCCC CDM website.	/1/ 55 /5/				
3.1. Is the SSC-PoA-DD used as a basis for validation prepared in accordance with the latest template and guidance?	/1/ 55	DR	Yes. PoA-DD used small-scale programme of activities design Project Design Document Form (SSC-PoA-DD), Ver. 01.	OK	OK
3.2. Is the PDD in accordance with the applicable CDM requirements for completing PDD?	/1/ 56 57	DR	Yes.	OK	OK
3.2.1. Are the following indicated in Section A.1 of the SSC-PoA-DD; <ul style="list-style-type: none"> • The title of the project activity, • The current version number of the document, and • The date when the document was completed? 	/2/	DR	Yes There is the title of the project activity, the current version number of the document, and the date when document has completed in section A.1 of the PoA-DD. But PP needs to update version number and revised date	GI4	OK
3.2.2. Has not potential public funding for the project from Parties in Annex I be a diversion of official development assistance?	/2/	DR/I	No public funding is involved and the validation did not reveal any information that indicates that the project can be seen as a diversion of ODA funding towards. Also, PP described that this program includes subsidy from government refer to the 'Act on the Promotion of the Development, Use and Diffusion of New and Renewable	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
			Energy`.		
3.2.3. Has the Section E.8 of the SSC-PoA-DD provided followings? <ul style="list-style-type: none"> • Date of completion of the application of the methodology to the project activity • Contact information of the persons(s)/entity(ies) responsible for the application of the baseline and monitoring methodology to the project activity 	/2/	DR	Yes. The PoA-DD describes the date of completion of the methodology and a contact person responsible for application of the baseline and monitoring methodology the project activity.	OK	OK
Validation of a programme of activities	/4/ 13				
3.3. Does the coordinating/managing entity submit to a DOE the following documentation? <ul style="list-style-type: none"> • A completed CDM-PoA-DD; • A PoA generic CDM-CPA-DD, which specifies the generic information relevant to all CPAs that may be included in the PoA; • A completed CDM-CPA-DD which is to be based on the application of the PoA to one real case. 			Yes, The PP submit a completed CDM-PoA-DD, PoA generic CDM-CPA-DD, CDM-CPA-DD. Also, PP describe that the program will include photovoltaic, wind and small hydro power to Jeju Island. But a completed CDM-CPA-DD only includes photovoltaic power generation. PP needs clarifications on above.	GI5	OK
3.4. Does the DOE make the above documents publicly available on the UNFCCC CDM website in accordance with the latest version of the Procedures for processing and reporting on validation of CDM project activities?			Please refer to table 1.	OK	OK
Preparation of a CDM-PoA-DD A coordinating/managing entity shall develop a PoA Design Document (CDM-PoA-DD) setting a framework for the	/4/ 6				

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
implementation of the PoA and unambiguously defining a CPA under the PoA.					
3.5. Does the CDM-PoA-DD include the following information:					
3.5.1. Identification of the coordinating/managing entity, host Party(ies) and PoA participants;	/4/ 6(a)		Coordinating or managing entity of the PoA is Jeju Special Self-Governing Province and Republic of Korea is host party. Ecoeye Co.,Ltd is PoA participant. But PP needs to clearly indicated that the Party involved wishes to be considered or not.	GI6	OK
3.5.2. Definition of the boundary for the PoA in terms of a geographical area (e.g., municipality, region within a country, country or several countries) within which all CPAs included in the PoA will be implemented, taking into consideration all applicable national and/or sectoral policies and regulations within that chosen boundary are reflected in the determination of the baseline;	/4/ 6(b)		The geographical area of PoA is within JGP in Korea and all applicable national and/or sectoral policies of host country are considered.	OK	OK
3.5.3. Description of the policy/measure or stated goal that the PoA seeks to promote;	/4/ 6(c)		Yes, it has been clearly presented that the objective of PoA is to supply renewable energy systems to Jeju Island instead of fossil fuel based electricity in Jeju.	OK	OK
3.5.4. Confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity;	/4/ 6(d)		Refer to section 1. 1	Pending	OK
3.5.5. Demonstration that in the absence of the CDM either:	/4/		Refer to section 6.	Pending	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
<ul style="list-style-type: none"> the proposed voluntary measure would not be implemented, or the mandatory policy/regulation would be systematically not enforced and that non-compliance with those requirements is widespread in the country/region, or that the PoA will lead to a greater level of enforcement of the existing mandatory policy /regulation. This shall constitute the demonstration of additionality of the PoA as a whole; 	6(e)		<p>The PP demonstrated that the proposed voluntary measure would not be implemented in the absence of the CDM.</p> <p>There are no mandatory enforcements in Korea that enforces introduction of renewable energy system to existing public buildings or other place.</p>		
3.5.6. Description of a typical CPA that will be included in the PoA covering the technology or measures to be used, justification of the choice of an approved baseline and monitoring methodology (or combination of approved methodologies), application of an approved baseline and monitoring methodology;	/4/ 6(f)		The program applies AMS-I.D.(ver16.0) and AMS-I.F.(ver1.0). Keco request for approval on the application of multiple methodologies which are AMS-I.D. and AMS-I.F at 5 August 2011. But the combination of the methodologies is not approved yet.	GI7	OK
3.5.7. Definition of eligibility criteria for inclusion of a project activity as a CPA under the PoA, which shall include, as appropriate, criteria for demonstration of additionality of the CPA, and the type and/or extent of information (e.g. criteria, indicators, variables, parameters or measurements) that shall be provided by each CPA in order to ensure its eligibility;	/4/ 6(g)		<p>Yes,</p> <p>Definition of eligibility criteria are expressed in PoA-DD section A.4.2.2. But more clarifications are needed as belows;</p> <ul style="list-style-type: none"> - Specific type of eligible technology. For example; <ul style="list-style-type: none"> · Hydro power: run of river or dam type · Wind power: gear or gearless type · Photovoltaic power: Cell type, fixed or non-fixed - Contractual relationship between CPA implementer and CME - Criteria related with small scale type I 	GI8	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
			project – Characteristic of power plant(newly built, retrofitting or modifying of an existing facility for renewable energy generation)		
3.5.8. Starting date and length of the PoA not exceeding 28 years (60 years for A/R);	/4/ 6(h)		PP explained the start date, 17 October 2010, and length of the PoA as 28 years. PP choose a length of the PoA which does not exceeding 28 years. But PP needs to submit evidence documents for the start date.	GH	OK
3.5.9. Description of the operational and management arrangements established by the coordinating/managing entity for the implementation of the PoA, including <ul style="list-style-type: none"> • a record keeping system for each CPA under the PoA, • a system/procedure to avoid double accounting e.g. to avoid the case of including a new CPA that has been already registered either as CDM project activity or as a CPA of another PoA, • the provisions to ensure that those operating the CPA are aware and have agreed that their activity is being subscribed to the PoA; 	/4/ 6(i)		PP needs to submit evidence documents related with a record keeping system, a system/procedure to avoid double accounting and etc.	GH	OK
3.5.10. Description of a monitoring plan for a CPA, developed in accordance with the approved monitoring methodology, and identification of the monitoring provisions and data parameters a CPA has to apply/monitor;	/4/ 6(j)		The CME opts for a verification method that does not use sampling but verifies each CPA by DOE and submits a transparent system to define and describe that ensures that no double accounting occurs and that the status of verification can be determined anytime for	GH	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
			each CPA. But DOE needs evidence documents for the monitoring plan.		
3.5.11. If the coordinating /managing entity does not wish to have all CPAs verified, a description of the proposed statistically sound sampling method/procedure to be used by DOEs for verification of the amount of reductions of anthropogenic emissions by sources or removals by sinks of greenhouse gases achieved by CPAs under the PoA;	/4/ 6(k)		N/A	N/A	N/A
3.5.12. Environmental analysis of the PoA as per requirements of the CDM modalities and procedures. If this analysis is not undertaken for the PoA but is to be done at the CPA level this shall be described and reflected in the CDM-PoA-DD and the CDM-CPA-DD;	/4/ 6(l)		Yes, PP chooses to carry out EIA at PoA level and explained that it is not required for this program. But it is applicable only when the PP installs hydro, wind and photovoltaic power plant smaller than 10MW capacity not 100MW. In case of hydropower projects, if PP planed to build new dam or reservoir, PP needs to carry our EIA bigger than 3MW capacity. Please refer to the Environmental Impact Assessment Act of the Republic of Korea.	GH2	OK
3.5.13. If comments by local stakeholders were invited with regard to the total PoA, information on how comments by local stakeholders were invited, a summary of the comments received and how due account was taken of any comments received, as applicable. If such comments are to be sought at the CPA level this shall be described and	/4/ 6(m)		Keco has cross-checked the web-site survey which carried out by CME. http://www.jeju.go.kr/contents/index.php?mid=0708&act=poll_result&pollidx=54 35 people participated on the web survey	GH3	OK

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reflected in the CDM-PoA-DD and the CDM-CPA-DD;			totally but PP did not clearly show how due account has taken of any comments received. And PP needs to submit evidence documents for advertisements in newspapers.		
3.5.14. In case public funding is used a confirmation that official development assistance is not being diverted to the implementation of the PoA.	/4/ 6(n)		Refer to section 3.2.2	OK	OK
4. Project description					
The SSC-PoA-DD shall contain a clear description of the project activity that provides the reader with a clear understanding of the precise nature of the project activity and the technical aspects of its implementation.	/1/ 58				
4.1. Is the description of the proposed SSC-PoA activity sufficiently covering all relevant elements accurate?	/1/ 59	DR/I	Yes.	OK	OK
4.2. Does the description provide a clear understanding of the nature of the proposed SSC-PoA activity?	/1/ 59	DR/I	Yes, The description provides a clear understanding of the nature of the proposed CDM project activity.	OK	OK
4.3. If the proposed SSC-PoA activity involves the alteration of an existing installation or process, are the differences resulting from the project activity compared to the pre-project situation clearly stated in the project description?	/1/ 63	DR	No, The proposed SSC-PoA activity does not involve the alteration of an existing installation or process	OK	OK
4.4. Are followings included in the description in Section A.2 of the SSC-PoA-DD?	/5/	DR	Refer to section 3.5	Pending	OK

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<ul style="list-style-type: none"> • General operating and implementing framework of PoA • Policy/measure or stated goal of the PoA • Confirmation that the proposed PoA is a voluntary action by the coordinating/managing entity. 					
4.5. Are the project' s spatial (geographical) boundaries clearly defined so that no submitted project could potentially be confused with another in Section A.4.1 of the SSC-PoA-DD?	/2/	DR/I	Refer to section 3.5.9	Pending	OK
4.6. Has the type and category of the project activity using the categorization of Appendix B to the simplified modalities and procedures for small-scale CDM been specified in section A.4.2 of the SSC-PoA-DD?	/2/	DR	<p>Yes, The proposed project activity falls under the following type and category.</p> <p>Type I. Energy industries (renewable-/non-renewable sources) Category: AMS-I.D. Grid connected renewable electricity generation (ver.16.0) AMS-I.F. Renewable electricity generation for captive use and mini-grid (ver.1.0)</p> <p>But the combination of the methodologies are not approved yet.</p>	Pending	OK
4.7. Have a description of how environmentally safe and sound technology and knowhow is being applied by the project activity inter alia technology transfer to the Host Party(ies) for application in the project activity been included in Section A.4.2 of the SSC-PoA-DD?	/2/	DR/I	In the PoA-DD, detailed technological specification for photovoltaic system, wind, Small hydro power plant and relevant equipments is not described.	GH4	OK
4.8. Does SSC-PoA-DD demonstrate that the project activity	/2/	DR	Refer to section 3.5.7	Pending	OK

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qualifies as a small-scale project activity and that it will remain under the limits of small-scale project activity types during every year of the crediting period?					
5. Baseline and monitoring methodology					
The baseline and monitoring methodology shall be previously approved by the CDM Executive Board. A baseline shall be established on a project-specific basis, in a transparent manner and taking into account relevant national and/or sectoral policies and circumstances.	/1/ 65				
(a) General requirement					
5.1. Do the baseline and monitoring methodologies selected by the project participants comply with the methodologies previously approved by the CDM Executive Board?	/1/ 65 68	DR	Yes.	OK	OK
5.2. Are the number and the version of the approved methodology that is used indicated and correctly quoted in Section E.1 of the SSC-PoA-DD?	/5/	DR	Yes. The project activity is confirmed to category I.D and I.F.	OK	OK
5.3. Is the used version of the baseline and monitoring methodology valid?	/1/ 68	DR	Yes, The methodology applied belows; AMS-I.D(ver.16), is Valid from 11 Jun 10 to 16 Jun 11 (Requests for registration can be submitted until 17 Feb 2012) AMS-I.F(ver.1), is Valid from 28 May 10 to 16 Jun 11(Requests for registration can be submitted until 17 Feb 2012).	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.								
5.4. Is the selected methodology applicable to the project activity?	/1/ 66(a)	DR/I	<p>Yes. The baseline methodology is applicable for the project and the appropriateness is justified in the PoA-DD.</p> <p>However, PP needs to clearly describe applicability condition of methodology using table.</p> <p>AMS- I .D(ver.16)</p> <table><tr><td>Requirements</td><td>Applicability of the Project</td></tr><tr><td>1. to 8.</td><td>Explanation</td></tr></table> <p>AMS- I .F(ver.1)</p> <table><tr><td>Requirements</td><td>Applicability of the Project</td></tr><tr><td>1. to 11.</td><td>Explanation</td></tr></table>	Requirements	Applicability of the Project	1. to 8.	Explanation	Requirements	Applicability of the Project	1. to 11.	Explanation	GAR2	OK
Requirements	Applicability of the Project												
1. to 8.	Explanation												
Requirements	Applicability of the Project												
1. to 11.	Explanation												
(b) Applicability of the selected methodology to the project activity			In the section E.2 of the PoA-DD										
5.5. Is the methodology correctly quoted and applied by comparing it with the actual text of the applicable version of the methodology?	/1/ 70	DR	Refer to section 5.4	Pending	OK								
5.6. Have the project participants shown that the project activity meet each of the applicability conditions of the approved methodology or any tool or other methodology component referred to therein?	/1/ 66(b) 71 76	DR	Refer to section 5.4	Pending	OK								
5.7. Is the project activity expected to result in emissions other than those allowed by the methodology?	/1/ 71	DR/I	No, Other expected emissions other than CO ₂ are	OK	OK								

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			identified. Keco has confirmed that during the on-site visit.		
5.8. Is it possible to make a determination regarding the applicability of the selected methodology to the proposed SSC-PoA activity?	/1/ 72-75	DR/I	Refer to section 5.4	Pending	OK
(c) Project boundary			In the section E.2 and 3 of the PoA-DD		
5.9. Requirements of the selected baseline?	/2/ /1/ 78-80	DR/I	Refer to section 5.4	Pending	OK
5.10. Have all sources and GHGs required by the methodology been included within the project boundary?	/2/ /1/ 78	DR/I	No, PP needs to correctly describe emissions sources included in or excluded from the project boundary in accordance with the ACM0002(ver 12.1.0) PP described that there are no emission source for project activity but emissions of CH ₄ needs to be considered for hydro power plants.	GAR3	OK
5.11. If the methodology allows project participants to choose whether a source or gas is to be included within the project boundary, is the justification provided reasonable?	/2/ /1/ 79 80	DR/I	N/A	N/A	N/A
(d) Baseline identification			In the section E.4 of the PoA-DD		
5.12. Has the PDD identified the baseline for the proposed	/1/	DR	Baseline scenario is identified in AMS-I.D;	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
SSC-PoA activity?	81		<p>The program is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the electricity delivered to the grid by the project activity that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.</p> <p>Baseline scenario is identified in AMS-I. F Baseline emissions are the product of amount electricity displaced with the electricity produced by the renewable generating unit and an emission factor.</p> <p>PoA-DD describe baseline scenario based on the methodologies.</p>		
5.13. Has any procedure contained in the methodology to identify the most reasonable baseline scenario been correctly applied?	/1/ 82	DR	There are no procedure contained in the methodology to identify the most reasonable baseline scenario.	OK	OK
5.14. Has each step in the procedure been described in the PDD against the requirements of the methodology?	/1/ 82	DR/I	Refer to section 5.13.	OK	OK
5.15. If the selected methodology requires use of tools to establish the baseline scenario, has it been correctly applied?	/1/ 82	DR	<p>No.</p> <p>The selected methodologies, AMS-I.D & F, do not require use of tools to establish the baseline scenario.</p>	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
5.16. Does the methodology require several alternative scenarios for reasonable baseline scenario? <ul style="list-style-type: none"> • If yes, are all those scenarios reasonable in the context of the proposed SSC-PoA activity? • Has no reasonable alternative scenario been excluded? 	/1/ 83	DR	N/A	N/A	N/A
5.17. Have the key assumptions and rational been explained and justified? <ul style="list-style-type: none"> • Are all the assumptions and data used by the project participants listed in the SSC-PoA-DD, including their references and sources? • Is all documentation used relevant for establishing the baseline scenario and correctly quoted and interpreted in the SSC-PoA-DD? • Are the assumptions, calculations and rationales used reasonable? 	/1/ 84 87(a)- (c) /2/	DR/I	N/A	N/A	N/A
5.18. Have all relevant policies and circumstances been identified and correctly considered in Section E.4 of the PDD?	/1/ 85 87(d) /2/	DR/I	Yes, The PoA-DD describes that 'Act on the Promotion of the Development, Use and Diffusion of New and Renewable Energy'. But the act is only applicable to new public building, not to existing public building, and supply program is just encouraged, optional and not mandatory to public institute. So the proposed PoA is not applicable for above Act.	OK	OK
5.19. Does the SSC-PoA-DD provide a verifiable description of the identified baseline scenario, including description of the	/1/ 86	DR/I	Refer to section 5.12.	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
technology that would be employed and/or the activities that would take place in the absence of the proposed SSC-PoA activity?	87(e)				
(e) Algorithms and/or formulae used to determine emission reductions			In the section E.6 of the PoA-DD		
5.20. Has the SSC-PoA-DD explained how the procedures, in the approved project category to calculate project emissions, baseline emissions, leakage emissions and emission reductions are applied to the proposed project activity?	/1/ 89 /2/	DR/I	The procedures to calculate project activity emissions from water reservoir and leakage emissions are not clear. (If the energy generating equipment is transferred from another activity, leakage is to be considered in accordance with the AMS-I.D & F)	GAR4	OK
5.21. Does the SSC-PoA-DD clearly state which equations will be used in calculating emission reductions?	/2/	DR			
5.22. Have the equations and parameters in the SSC-PoA-DD been correctly applied by comparing them to those in the selected approved methodology?	/1/ 90	DR/I	PP used 'Tool to calculate the emission factor for an electricity system' (ver 2) but it needs to be changed to ver 02.2.0. Please correctly apply newly adopted tool to the PoA-DD. PP describes that the 32.7% of electricity is from mainland through submarine cable and 67.3% of electricity is from own fire power plant as of 2007. So, PP needs to clearly explain that if there is a need to calculate OM separately.	GAR5	OK
5.23. If the methodology provides for selection between different options for equations or parameters, has adequate	/1/ 90	DR	Refer to section 5.22	Pending	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
justification been provided and have correct equations and parameters been used in accordance with the methodology selected?					
5.24. (For Section E.6.3 of the SSC-PoA-DD) If data and parameters have already been determined and will remain fixed throughout the crediting period without being monitored throughout the crediting period of the proposed SSC-PoA activity. <ul style="list-style-type: none"> • Are all data sources and assumptions appropriate? • Are calculations are correct, applicable to the proposed SSC-PoA activity? • Will calculations result in a conservative estimate of the emission reductions? 	/1/ 91 /2/	DR/I	PoA-DD describe yearly proportion of the generation of electricity based on the source of energy in page25. But the proportion of hydro at 2006 is different from the evidence documents. And PP needs to calculate low cost/must run sources ratio and describe in the table.	GH5	OK
5.25. (For Section E.6.2 of the SSC-PoA-DD) Has the SSC-PoA-DD provided a transparent ex-ante calculation of project emissions, baseline emissions (or, where applicable, direct calculation of emission reductions) and leakage emissions expected during the crediting period, applying all relevant equations?	/1/ 92 /2/	DR/I	PP calculated emission factor for the ex-ante calculation of emission reductions. But PP needs to calculate OM, BM and CM using the most recent data available at the time of submission of the CPA submission to the DOE for inclusion in to the PoA.	GH6	OK
5.26. Has it documented how each equation is applied, in a manner that enables the reader to reproduce the calculation?	/1/ 92 /2/	DR	PP needs to submit emission reduction calculation sheet.	GH6	OK
5.27. If the project activity involves more than one component activity, have emission reduction calculations for each of the component been provided separately in a transparent manner?	/2/	DR/I	Yes, The emission reduction calculations for photovoltaic system and wind and small hydro power plant is calculated separately.	GH7	OK

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			But the parameters related with photovoltaic system are not expressed in the same manner.		
5.28. (For Section A.4.4 of the SSC-CPA-DD) Has the SSC-CPA-DD summarized the results of the ex-ante estimation of emission reductions for all years of the crediting period, using the tabular form provided?	/2/	DR	N/A	N/A	N/A
5.29. Have all data used to determine the baseline emissions (variables, parameters, data sources etc.) been illustrated in a transparent manner?	/1/ 93 /2/	DR	Refer to section 5.20-27	Pending	OK
6. Additionality of a project activity			In the section E.5 of the SSC-PoA-DD		
The SSC-PoA-DD shall describe how a proposed CDM project activity is additional.	/1/ 94		The validation report shall clearly describe all steps taken, and sources of information used, by the DOE to cross-check the information contained in the SSC-PoA-DD on this matter. The validation report shall contain information regarding how the DOE has determined that the documentation assessed is authentic, where appropriate. (96)		
6.1. Do project participants describe how a proposed SSC-PoA activity is additional in SSC-PoA-DD?	/1/ 94	DR/I	Yes. PP proposed two methods to check the additionality of the program activity as belows;	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
			<ul style="list-style-type: none"> Guidelines for demonstrating additionality of microscale project activities Attachment A to Appendix B of the Simplified Modalities and Procedures for Small-Scale Clean Development Mechanism Project Activities (decision 4/CMP.1, Annex II) <p>PPs will demonstrated the additionality of the each CPA through above methods.</p>		
6.2. Are all data, rationales, assumptions, justifications and documentation provided by project participants to support the demonstration of additionality reliable and credible?	/1/ 95	DR/I	N/A	N/A	N/A
6.3. Does the proposed project activity comply with the latest tools and documents provided by the CDM Executive Board to demonstrate the additionality of the proposed SSC-PoA activities, as well as specific complementary or alternative requirements included in approved CDM methodology?	/1/ 96 137	DR	Yes. For demonstration of additionality of the proposed project, the PPs refer to guidelines.	OK	OK
(a) Prior consideration of the clean development mechanism					
6.4. If this starting date is earlier than the date of publication of the SSC-PoA-DD for global stakeholder consultation, has Section B.1 in the SSC-PoA-DD contain a description of how the benefits of the CDM were seriously considered prior to the starting date?	/1/ 98 /2/	DR/I	N/A	N/A	N/A
6.5. Did project participants reported in Section B.1 of the SSC-PoA-DD about the start date of the project activity in	/1/ 99	DR/I	- In accordance with the 'Glossary of CDM terms', "The starting date of a CDM	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
accordance with the "Glossary of CDM terms"?	/2/		<p>programme activity is the earliest date at which either the implementation or construction or real action of a programme activity begins. The start date of the CPA cannot be prior to the commencement of validation of the programme of activities, i.e. the date on which the CDM-PoA-DD is first published for global stakeholder consultation". in particular, for project activity required construction, retrofit or other modifications, the date of commissioning cannot be considered the project activity start date.</p> <ul style="list-style-type: none"> - The SSC-PoA-DD has been published for public comments on the UNFCCC CDM website during a period of 30 days, from 15 April 2011 to 14 May 2011. So any CPA which started before 15 April 2011 can not included in this PoA. - Refer to section 3.5.8 		
6.6. For a new project activity (a project activity with a start date on or after 02 August 2008), if SSC-PoA-DD has not been published for global stakeholder consultation or a new methodology proposed to the CDM Executive Board before the project activity start date, did project participants had informed the host Party DNA and the UNFCCC secretariat in writing of	/1/ 100 101	DR	<ul style="list-style-type: none"> - In accordance with the 'Clarification regarding the 'Procedures for registration of a programme of activities as a single CDM project activity and issuance of CERs for a PoA' (ver 01, EB60, Annex26), 'Guidelines for the demonstration and 	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
the commencement of the project activity and of their intention to seek CDM status?			assessment of prior consideration of the CDM` do not apply to PoAs. - Any CPA which started before GSP which is 15 April 2011 can not included in this PoA.		
6.7. For an existing project activity(a project activity with a start date before 02 August 2008), for which the start date is prior to the date of publication of the SSC-PoA-DD for global stakeholder consultation, are there sufficient and available evidence to support the serious consideration of the CDM in the decision to implement the project activity?	/1/ 100 102(a)	DR	Refer to section 6.6	OK	OK
6.7.1. Does the evidence from project participants indicate that continuing and real actions were taken to secure CDM status for the project in parallel with its implementation?	/1/ 102(b)	DR	N/A	N/A	N/A
(b) Identification of alternatives			<i>Unless the approved methodology that is selected by the proposed SSC-PoA activity prescribes the baseline scenario and no further analysis is required</i>		
6.8. Does approved methodology that is selected by the proposed SSC-PoA activity prescribe the baseline scenario so that no further analysis is required?	/1/ 105	DR	Yes. The baseline scenario is identified in AMS-I.D & AMS-I.F Baseline scenario is identified in AMS-I.D; The program is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the electricity delivered to the grid by the project activity	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
			<p>that otherwise would have been generated by the operation of grid-connected power plants and by the addition of new generation sources.</p> <p>Baseline scenario is identified in AMS- I . F Baseline emissions are the product of amount electricity displaced with the electricity produced by the renewable generating unit and an emission factor.</p> <p>PoA-DD describe baseline scenario based on the methodologies. Baseline is in compliance all mandatory applicable legal and regulatory requirements. There is currently no law or regulation that requires mandated use of renewable energy in the proposed area. The PoA-DD described the relevant national and/or local law, regulation.</p>		
6.9. If no above question, does the SSC-PoA-DD identify credible alternatives to the project activity in order to determine the most realistic baseline scenario?	/1/ 105	DR/I	N/A	N/A	N/A
6.9.1. Does the list of alternatives include as one of the options that the project activity is undertaken without being registered as a proposed SSC-PoA activity?	/1/ 106(a)	DR/I	N/A	N/A	N/A
6.9.2. Does the list contain all plausible alternatives?	/1/ 106(b)	DR/I	N/A	N/A	N/A

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6.9.3. Do the alternatives comply with all applicable and enforced legislation?	/1/ 106(c)	DR/I	N/A	N/A	N/A
(c) Investment analysis	/1/ 108	<i>If investment analysis has been used to demonstrate the additionality of the proposed SSC-PoA activity</i> <i>⇒The DOE shall comply with the latest version of the 'Guidance on the Assessment of Investment Analysis' as provided by the CDM Executive Board and with other relevant guidance including the latest guidelines on plant load factors' guidelines for the reporting and validation of plant load factors'.(110)</i>			
6.10. If investment analysis has been used to demonstrate the additionality of the proposed CDM project activity, the PDD shall provide evidence that the proposed CDM project activity would not be below? <ul style="list-style-type: none"> • The most economically or financially attractive alternative; or • Economically or financially feasible, without the revenue from the sale of certified emission reductions (CERs) 	/1/ 108	DR/I	Yes, The PP explained that the proposed project would not be economically or financially feasible without the revenue from the sale of certified emission reductions (CERs).	OK	OK
6.11. Do project participants demonstrate this through one of the following approaches? <ul style="list-style-type: none"> • The proposed SSC-PoA activity would produce no financial or economic benefits other than CDM-related income.; • The proposed SSC-PoA activity is less economically or financially attractive than at least one other credible and realistic alternative; • The financial returns of the proposed SSC-PoA activity would be insufficient to justify the required investment. 	/1/ 109	DR/I	Yes, The proposed CDM project activity is less economically or financially attractive than other credible and realistic alternative.	OK	OK
6.12. Has project participants choose appropriate investment	/3/	DR	Yes.	OK	OK

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analysis method? – simple cost analysis, investment comparison analysis or benchmark analysis	16		The PP used investment comparison analysis. NPV has chosen as the financial indicator.		
6.13. Is the plant load factor defined ex-ante in the SSC-PoA-DD according to the latest 'Guidelines for the reporting and validation of plant load factors'?	/1/ 110	DR	PP needs to submit evidence documents for utilization coefficient of wind, hydro, photovoltaic power plant.	GH8	OK
(d) Barrier analysis	115	<i>(If barrier analysis has been used to demonstrate the additionality of the proposed SSC-PoA activity)</i>			
6.14. Has the SSC-PoA-DD demonstrated that the proposed SSC-PoA activity faces barriers that; • Prevent the implementation of this type of the proposed SSC-PoA activity • Do not prevent the implementation of at least one of the alternatives	/1/ 115	DR	N/A	N/A	N/A
6.15. Are not the barriers presented issues that have a clear direct impact on the financial returns of the project activity?	/1/ 116	DR	N/A	N/A	N/A
6.16. Is existence of barriers substantiated by independent sources?	/1/ 117(a)	DR/I	N/A	N/A	N/A
6.17. Do the barriers prevent the implementation of the project activity but not the implementation of at least one of the possible alternatives?	/1/ 117(b)	DR/I	N/A	N/A	N/A
(e) Common practice analysis	/1/ 119	<i>(For proposed large-scale CDM activities, unless the proposed project type is first-of-itskind, common practice analysis shall be carried out as a credibility check of the other available evidence used by the project)</i>			

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			<i>participants to demonstrate additionality.)</i>		
6.18. Is the geographical scope (i.e. the defined region) of the common practice analysis appropriate for the assessment of common practice related to the project activity's technology or industry type?	/1/ 120(a)	DR/I	N/A	N/A	N/A
6.19. Were official sources and local and industry expertise used to determine to what extent similar and operational projects (i.e. using similar technology or practice), other than CDM project activities, have been undertaken in the defined region?	/1/ 120(b)		N/A	N/A	N/A
6.20. If similar and operational projects, other than CDM project activities, are already "widely observed and commonly carried out" in the defined region, are there the essential distinctions between the proposed CDM project activity and the other similar activities?	/1/ 120(c)		N/A	N/A	N/A
7. Monitoring plan					
The SSC-PoA-DD shall include a monitoring plan. This monitoring plan shall be based on the approved monitoring methodology applied to the proposed SSC-PoA activity.	/1/ 122				
7.1. (For section E.7 of the SSC-PoA-DD) Has the SSC-PoA-DD noted that data monitored and required for verification and issuance are to be kept for a minimum of two years after the end of the crediting period or the last issuance of CERs for	/2/	DR	Yes, The PoA-DD noted that the data monitored under the monitoring plan will be kept for two (2) years after the end of crediting	GH9	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.												
this project activity, whichever occurs later?			period. However, type of storage system is not clearly noted.														
7.2. (For section E.7 of the SSC-PoA-DD) If data and parameters will be monitored on implementation and hence become available only after validation of the project activity, are the estimates provided in the SSC-PoA-DD for these data and parameters reasonable?	/2/	DR/I	Yes, There is a list of parameters required by the approved methodology in the PoA-DD.	OK	OK												
For compliance of the monitoring plan with the approved methodology																	
7.3. Is the list of parameters required by the selected approved methodology identified in Section E.7.1 of the SSC-PoA-DD, using tabular form provided by guideline for completing the SSC-PoA-DD?	/1/ 123(a) /2/	DR	Yes, There is a list of parameters required by the approved methodology in the PoA-DD.	OK	OK												
7.4. Does the monitoring plan contain all necessary parameters?	/1/ 123(a)	DR	Refer to section 7.2	Pending	OK												
7.5. Are the parameters clearly described?	/1/ 123(a) /2/	DR/I	PP needs to described data and parameters as below format. – Data and parameters not monitored <table><tr><td>Data / Parameter:</td><td></td></tr><tr><td>Data unit:</td><td></td></tr><tr><td>Description:</td><td></td></tr><tr><td>Source of data:</td><td></td></tr><tr><td>Value to be applied:</td><td></td></tr><tr><td>Any comment:</td><td></td></tr></table> – Data and parameters monitored	Data / Parameter:		Data unit:		Description:		Source of data:		Value to be applied:		Any comment:		OK	OK
Data / Parameter:																	
Data unit:																	
Description:																	
Source of data:																	
Value to be applied:																	
Any comment:																	

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.																
			<table><tr><td>Data / Parameter:</td><td></td></tr><tr><td>Data unit:</td><td></td></tr><tr><td>Description:</td><td></td></tr><tr><td>Source of data:</td><td></td></tr><tr><td>Measurement procedures (if any):</td><td></td></tr><tr><td>Monitoring frequency:</td><td></td></tr><tr><td>QA/QC procedures:</td><td></td></tr><tr><td>Any comment:</td><td></td></tr></table> <ul style="list-style-type: none">- In accordance with the para 17 (c) of 'General Guidelines to SSC CDM methodologies', measuring equipment should be certified to national or IEC standards and calibrated according to the national standards at lease once in three years.- Parameters related with the small hydro plant which are installed capacity of the hydro power plant after the implementation of the project activity(Cap_{PJ}) and area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full(A_{PJ}) not listed.- A monitoring manner(i.e. reporting procedure), calibration standard, personnel information, a specification of monitoring	Data / Parameter:		Data unit:		Description:		Source of data:		Measurement procedures (if any):		Monitoring frequency:		QA/QC procedures:		Any comment:			
Data / Parameter:																					
Data unit:																					
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Any comment:																					

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
			equipment to verify its capability and excellence and an organization chart of the assigned team for monitoring emission reductions should be provided.		
7.6. Does the means of monitoring described in the plan comply with the requirements of the methodology?	/1/ 123(a)	DR	Refer to section 7.5	Pending	OK
For implementation of the plan					
7.7. Are the monitoring arrangements described in the monitoring plan feasible within the project design?	/1/ 123(b)	DR	Yes, By reviewing the provided operation plan and on-site interview with the PPs, Keco confirms that the monitoring arrangements described in the monitoring plan are feasible within the project design. But an operating manual for the program and evidence on training of monitoring staff should be provided.	OK	OK
7.8. Is the means of implementation of the monitoring plan, including the data management and quality assurance and quality control procedures, sufficient to ensure that the emission reductions achieved by/resulting from the proposed SSC-PoA activity can be reported ex post and verified?	/1/ 123(b)	DR/I	Refer to section 7.5	Pending	OK
7.9. Have the operational and management structure that the project operator will implement in order to monitor emission reductions and any leakage effects generated by the project activity been described in the SSC-PoA-DD?	/2/	DR/I	Yes, The PoA-DD demonstrates operational and management structure.	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.																				
7.10. Have the responsibilities for and institutional arrangements for data collection and archiving been clearly indicated in the SSC-PoA-DD?	/2/	DR	Refer to section 7.5	Pending	OK																				
7.11. Has the monitoring plan reflected good monitoring practice appropriate to the type of project activity?	/2/	DR	<div>Refer to section 7.5</div> <div>The PoA-DD is not reflecting good monitoring practice below.</div> <table><tr><td colspan="2">The SSC-PoA-DD gives detailed accounts for all of the following:</td></tr><tr><td>The authority and responsibility of project management</td><td>OK</td></tr><tr><td>The authority and responsibility for registration, monitoring, measurement and reporting</td><td>OK</td></tr><tr><td>Procedures for training of monitoring personnel</td><td>No</td></tr><tr><td>Procedures for emergency preparedness for cases where emergencies can cause unintended emissions</td><td>No</td></tr><tr><td>Procedures for calibration of monitoring equipment</td><td>No</td></tr><tr><td>Procedures for maintenance of monitoring equipment and installations</td><td>No</td></tr><tr><td>Procedures for monitoring, measurements and reporting</td><td>OK</td></tr><tr><td>Procedures for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)</td><td>OK</td></tr><tr><td>Procedures for internal review of reported results/data, including a system for corrective actions as needed, in order to provide for more accurate futur monitoring and reporting.</td><td>No</td></tr></table>	The SSC-PoA-DD gives detailed accounts for all of the following:		The authority and responsibility of project management	OK	The authority and responsibility for registration, monitoring, measurement and reporting	OK	Procedures for training of monitoring personnel	No	Procedures for emergency preparedness for cases where emergencies can cause unintended emissions	No	Procedures for calibration of monitoring equipment	No	Procedures for maintenance of monitoring equipment and installations	No	Procedures for monitoring, measurements and reporting	OK	Procedures for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	OK	Procedures for internal review of reported results/data, including a system for corrective actions as needed, in order to provide for more accurate futur monitoring and reporting.	No	Pending	OK
The SSC-PoA-DD gives detailed accounts for all of the following:																									
The authority and responsibility of project management	OK																								
The authority and responsibility for registration, monitoring, measurement and reporting	OK																								
Procedures for training of monitoring personnel	No																								
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Procedures for maintenance of monitoring equipment and installations	No																								
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Procedures for day-to-day records handling (including what records to keep, storage area of records and how to process performance documentation)	OK																								
Procedures for internal review of reported results/data, including a system for corrective actions as needed, in order to provide for more accurate futur monitoring and reporting.	No																								

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
8. Sustainable development					
SSC-PoA activities shall assist Parties not included in Annex I to the Convention in achieving sustainable development.	/1/ 125				
8.1. Does the letter of approval by the DNA of the host Party confirm the contribution of the proposed SSC-PoA activity to the sustainable development of the host Party?	/1/ 126	DR	A written approval letter (LoA) from the DNA of Republic of Korea is not obtained yet.	GAR-4	OK
9. Local stakeholder consultation					
Local stakeholders shall be invited by the PPs to comment on the proposed SSC-PoA activity prior to the publication of the SSC-PoA-DD on the UNFCCC website.	128				
9.1. Were stakeholders invited by the project participants to comment on the proposed SSC-PoA activity prior to the publication of the SSC-PoA-DD on the UNFCCC website?	/1/ 128	DR/I	No, The stakeholder survey has carried out using internet website of Jeju special self-governing province from 1 May 2011 to 15 May 2011 and 35 people participated on the web survey totally. But the PoA-DD publically opened for Global stakeholders at 15 Apr 2011 which is earlier than stakeholder survey.	GAR7	OK
9.2. Have comments by local stakeholder that can reasonably be considered relevant for the proposed SSC-PoA activity, been invited?	/1/ 129(a)	DR	Refer to section 3.5.13 35 people participated on the web survey totally. But there are no explanation on how they had been invited.	Pending	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
9.3. Has the SSC-PoA-DD described the process by which comments by local stakeholder have been invited and compiled?	/2/	DR	Refer to section 3.5.13	Pending	OK
9.4. Was an invitation for comments by local stakeholders made in an open and transparent manner, in a way that facilitates comments to be received from local stakeholders and allows for a reasonable time for comments to be submitted.(in Section D.2 of the SSC-PoA-DD)?	/2/	DR/I	The PP has invited stakeholders for the comments on the program activity via website (15 days) and collect comments.	OK	OK
9.5. Does project participants describe a project activity in a manner which allows the local stakeholders to understand the project activity, taking into account confidentiality provisions of the CDM modalities and procedures.(in Section D.2 of the SSC-PoA-DD)?	/2/	DR/I	Refer to section 3.5.13 There is no explanation on the PoA in the website of Jeju special self-governing province. PP needs to explain how did they explain the PoA to the stakeholder.	Pending	OK
9.6. Is the summary of the comments received complete in Section D.3 of the SSC-PoA-DD?	/1/ 129(b)	DR/I	Refer to section 3.5.13	Pending	OK
9.7. Have the project participants taken due account of any comments received and described this process in Section D.4 of the SSC-PoA-DD?	/1/ 129(c)	DR/I	No, There are no countermeasure for the received comments from stakeholder in the PoA-DD.	€22	OK
10. Environmental impacts					
Project participants shall submit documentation to the DOE on the analysis of the environmental impacts of the project activity in accordance with paragraph 37(c) of the CDM modalities and procedures	/1/ 131				
10.1. Have project participants submitted documentation on the	/1/	DR/I	No,	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
analysis of the environmental impacts of the project activity?	131		Keco verified that the proposed project activity is not subjected to assessment in accordance with Environmental Impact Assessment Act of the Republic of Korea.		
10.2. If an environmental impact assessment required by the host Party, have the project participants undertaken an analysis of environmental impacts?	/1/ 131 132	DR/I	N/A	N/A	N/A
11. Specific validation_SSC					
A proposed small-scale SSC-PoA activity shall meet the requirements of the simplified modalities and procedures for small-scale CDM activities	/1/ 135				
11.1. Does the project activity qualify within the thresholds of the three possible types of small-scale project activities?	/1/ 136(a)	DR	Yes. The program qualify within the thresholds of the Type I.	OK	OK
11.2. Does the project activity conform to one of the approved small-scale categories and apply the relevant tool or methodology?	/1/ 136(b)	DR	Yes. The project activity is has confirmed to category I.D & F.	OK	OK
11.3. Are the small-scale methodologies applied in conjunction with the general guidance to the methodologies?	/1/ 136(b)	DR	Yes.	OK	OK
11.4. Is the project activity not a de-bundled component of a large-scale project? And is it described in Section A.4.4 of the SSC-PoA-DD? • With the same project participants • Registered within the period of 2 years	/1/ 136(c) /7/	DR/I	According to the guidance for determining the occurrence of de-bundling under a PoA (EB 54, Annex13), the JGP will check the occurrence of de-bundling in each SSC-CPA. and the procedure is clearly described in the	OK	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
<ul style="list-style-type: none"> Whose project boundary is within 1 km of the project boundary of the proposed small-scale activity under the CDM at the closest point. 			PoA-DD.		
11.5. Is an assessment of the environmental impacts of the proposed SSC-PoA activity required by the host Party?	/1/ 136(d)	DR/I	No.	OK	OK
12. Specific validation_SSC-PoA					
The CDM Executive Board has provided guidance and procedures for registering a programme of activities (PoA) as a single CDM project activity. In validating a PoA and any CDM programme activities (CPAs) proposed to be included in the PoA, the DOE shall, in general, apply the means of validation and reporting requirements described in this Manual. However there is a number of requirements unique to PoAs for which additional instructions are provided below, the precise extent of validation required in each of these areas will need to be determined by the DOE based on the type or PoA being validated.	/1/ 165				
12.1. Operational and management arrangements for the PoA		DR			
12.1.1. Are the operational and management arrangements which have been established by the coordinating/managing entity in order to determine whether these arrangements suitable for the PoA being validated?	/1/ 166		PP needs to submit operational and management arrangements or contract between CME and CPA implementer.	CAR8	OK
12.1.2. Shall be the arrangements sufficient to ensure that the coordinating/managing entity will have control of all records and information related to the implementation of individual	/1/ 166		Refer to section 12.1.1	Pending	OK

REQUIREMENT CHECK LIST	Ref. §	MoV	COMMENTS	Draft Concl.	Final Concl.
CPAs?					
12.1.3. Will be the coordinating/managing entity in a position to ensure each CPA is being operated in accordance with the specific requirements of the programme?	/1/ 166		Refer to section 12.1.1	Pending	OK
12.1.4. Where the DOE considers the arrangements to be unsatisfactory or insufficient?	/1/ 166		Refer to section 12.1.1	Pending	OK
12.2. Eligibility criteria for CPAs					
12.2.1. Is the specified eligibility criteria in the PoA-DD ensuring that all CPAs would comply with the CDM requirements applicable to the PoA,	/1/ 167		Refer tp section 3.5.7	Pending	OK
12.2.2. Will these requirements include inter alia the means of demonstrating the additionality of the CPA and the applicability of the applied methodology?	/1/ 167		Refer tp section 6.1	OK	OK
12.2.3. Is the eligibility criteria represent an essential element of ensuring the smooth functioning or programmatic CDM?	/1/ 167		Refer tp section 3.5.7	Pending	OK

/1/ Validation and Verification Manual_version 01.2

/2/ Guidelines for completing the simplified project design document(CDM-SSC-PDD) and the form for proposed new small scale methodologies(CDM-SSC-NM)_version 05

/3/ Guidelines on the assessment of investment analysis_version 05

/4/ PROCEDURES FOR REGISTRATION OF A PROGRAMME OF ACTIVITIES AS A SINGLE CDM PROJECT ACTIVITY AND ISSUANCE OF CERTIFIED EMISSION REDUCTIONS FOR A PROGRAMME OF ACTIVITIES-version 04.1

/5/ CDM-SSC-PoA-DD-Small-Scale CDM Programme of Activities Design Document form_version 01

/6/ CDM-SSC-CPA-DD-Small-Scale CDM Programme Activity Design Document form_version 01

/7/ Guidelines on assessment of de-bundling for SSC project activities _version 03

/8/ Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities _version 01.0

Table 3. Resolution of Corrective Action and Clarification Requests

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion								
CAR1 A written approval letter (LoA) from the DNA of Republic of Korea has yet to be obtained. In accordance with a letter of Approval (LoA), the DNA of the Host country will confirm the sustainable development.	1.1	Corrective Action or a Clarification #1 PP has to submit draft validation report with project description in order to request the Approval from the DNA. But draft validation report isn' t issued yet, so PP doesn' t request the approval. Letter of approval (LoA) can be provided after approval from the DNA	DOE review comment #1 Keco will issue draft validation report for the application of host country LoA. PP needs to submit LoA of host country after approval.	OK								
		Corrective Action or a Clarification #2 PP submitted LoA of host country	DOE review comment #2 The DNA of Republic of Korea issued the Letter of Approval(LoA) on 30/05/2012. Keco cross-check using an interview with a person in charge from the Republic of Korea DNA to confirm its authenticity. So CAR1 is closed.									
CAR2 PP needs to clearly describe applicability condition of methodology using table. AMS- I .D(ver.16) <table><tr><td>Requirements</td><td>Applicability of the Project</td></tr><tr><td>1. to 8.</td><td>Explanation</td></tr></table> AMS- I .F(ver.1)	Requirements	Applicability of the Project	1. to 8.	Explanation	5.4	Corrective Action or a Clarification #1 PP revises and adds table at PoA-DD to clearly describe applicability condition. And PP applies methodologies AMS-I.D (ver.17) and AMS-I.F (ver.2).	DOE review comment #1 - Keco confirms that PP revise its methodology version from AMS-I.D(ver.16) and AMS- I .F(ver.1) to AMS-I.D(ver.17) and AMS- I .F(ver.02). AMS- I .D(ver.17) <table><tr><td>Cri</td><td>Project Scenario</td></tr><tr><td>1</td><td>PP needs to clearly explain which renewable technologies that will be used and where the generated</td></tr></table>	Cri	Project Scenario	1	PP needs to clearly explain which renewable technologies that will be used and where the generated	OK
Requirements	Applicability of the Project											
1. to 8.	Explanation											
Cri	Project Scenario											
1	PP needs to clearly explain which renewable technologies that will be used and where the generated											

Draft report clarifications and corrective action requests by Validation team		Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion	
Requirements	Applicability of the Project					
1. to 11.	Explanation			2		electricity will be supplied
				3		Explanation of the criteria are not in accordance with the methodologies
				4		PP needs to clearly explain that PoA will includes four types. An independent monitoring of scrapping of replaced equipment needs to be implemented when PoA includes replacement of the equipment in accordance with para 27 of methodology.
				5		PP needs to clearly explain that which type of hydro power generation system will be adopted.
				6		PP needs to clearly explain that PoA will cover renewable and non-renewable components.
						PP needs to explain the characteristic of PoA.
				AMS- I .F(ver.02)		
				Cri		Project Scenario
				1		PP needs to clearly explain which renewable technologies that will be used and where the generated electricity will be supplied. PP needs to explain the project scenario.
		2	Explanation of the criteria are not in accordance with the methodologies			
		3	Explanation of the criteria are not in accordance with the methodologies			

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion						
			<table><tr><td>7</td><td>PP needs to clearly explain that how the added capacity will be physically distinct with the existing units.</td></tr><tr><td>9</td><td>PP needs to clearly explain that PoA will cover renewable and non-renewable components.</td></tr><tr><td>11</td><td>PP needs to ensures that emission reduction from displacing electricity will be only claimed by PP.</td></tr></table> <p>– If a CPA includes retrofit, capacity addition of hydro, wind, photovoltaic, PP needs to correctly consider para 15 of AMS-I.D(ver.17) for the baseline emission calculation.</p>	7	PP needs to clearly explain that how the added capacity will be physically distinct with the existing units.	9	PP needs to clearly explain that PoA will cover renewable and non-renewable components.	11	PP needs to ensures that emission reduction from displacing electricity will be only claimed by PP.	
7	PP needs to clearly explain that how the added capacity will be physically distinct with the existing units.									
9	PP needs to clearly explain that PoA will cover renewable and non-renewable components.									
11	PP needs to ensures that emission reduction from displacing electricity will be only claimed by PP.									
		Corrective Action or a Clarification #2 PP revises and adds table at PoA-DD to clearly describe applicability condition. (PP applies methodologies AMS-I.D (ver.17) and AMS-I.F (ver.2))	DOE review comment #2 Explanation of the criteria are not in accordance with the methodologies							
		Corrective Action or a Clarification #3 PP added the contents that are stated in methodologies AMS-I.D. and I.F	DOE review comment #3 Keco confirms that the explanation of the criteria is in accordance with the methodologies. So CAR2 is closed.							
CAR3 PP needs to correctly describe emissions sources included in or excluded from the project boundary in accordance with the ACM0002(ver 12.1.0) PP described that there are no emission	5.10	Corrective Action or a Clarification #1 According to ACM0002(ver.12.2.0), For hydro power project activities that result in reservoirs or result in the increase of existing reservoirs, project proponents shall account for CH ₄ and	DOE review comment #1 PP added CH ₄ as a project emission source for hydropower plant. So CAR3 is closed.	OK						

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
source for project activity but emissions of CH ₄ needs to be considered for hydro power plants.		CO ₂ emissions from the reservoirs. PP added this project emission category.		
<p>CAR4</p> <p>The procedures to calculate project activity emissions from water reservoir and leakage emissions are not clear. (If the energy generating equipment is transferred from another activity, leakage is to be considered in accordance with the AMS- I.D & F)</p>	5.20	<p>Corrective Action or a Clarification #1</p> <p>The energy generating equipment for this PoA is not transferred from another activity.</p> <p>The main emissions potentially giving rise to leakage in the context of electric sector projects are emissions arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, and transport). So, there are no leakage emission from this PoA.</p>	<p>DOE review comment #1</p> <ul style="list-style-type: none"> – PP needs to submit evidence documents and clear expression in the PoA that the energy generating equipment will not be transferred from another activity. – Emissions from water reservoirs of hydro power plants needs to be considered as a project emission. It is calculated based on ACM0002 and the calculation method explained in the PoA-DD. 	OK
		<p>Corrective Action or a Clarification #2</p>	<p>DOE review comment #2</p> <p>Parameter, PE_{total,y}, is not correctly used in the emission reduction calculation in PoA-DD page 41.</p>	
		<p>Corrective Action or a Clarification #3</p> <p>PP divided the parameter of project emission into three parts, as photovoltaic, wind power and small-hydro power and added the parameter for calculation of project emission about hydro power.</p>	<p>DOE review comment #3</p> <p>Project emissions are correctly expressed in the PoA-DD.</p> <p>So CAR4 is closed.</p>	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
<p>CAR5</p> <p>PP used 'Tool to calculate the emission factor for an electricity system' (ver 2) but it needs to be changed to ver 02.2.0. Please correctly apply newly adopted tool to the PoA-DD.</p> <p>PP describes that the 32.7% of electricity is from mainland through submarine cable and 67.3% of electricity is from own fire power plant as of 2007. So, PP needs to clearly explain that if there is a need to calculate OM separately.</p>	5.22	<p>Corrective Action or a Clarification #1</p> <p>PP revised the version of applied 'Tool to calculate the emission factor for an electricity system' from 2 to 02.2.1. and the emission factor calculation procedure.</p> <p>The electricity generated by the project activity is to be supplied to the KEPCO grid which is the only grid in the host country. Thus project electricity system is defined as the KEPCO grid.</p> <p>The Jeju island where the proposed project is located is connected to the KEPCO grid with subsea cable.</p> <p>Generation electricity in Jeju special self-governing province is not enough to supply Jeju Special self-governing province, so that to use interconnection tie from inland. The statistics of yearly electricity generation in Jeju island shows that the electricity supply from the inland contributes 32.7% of total electricity consumed in Jeju island while 67.3% were generated by the power plants in Jeju island.</p>	<p>DOE review comment #1</p> <ul style="list-style-type: none"> - PP explained that the Jeju island is connected to the KEPCO grid so there are no need to calculate OM separately. Keco confirms it through 'Jeju Special Self-Governing Province renewable energy dissemination action plan by Jeju Special Self-Governing Province'. - PP needs to apply 'Tool to calculate the emission factor for an electricity system' ver 02.2.1. which is the latest version consistently. - PP did not used latest statistical data to calculate Emission factor. 	OK

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
		And according to "Tool to calculate the emission factor for an electricity system (ver.02.2.1)", Step 1, A provincial grid definition may indeed in many cases be too narrow. So PP doesn't calculate OM separately.		
		Corrective Action or a Clarification #2 PP revised the version of 'Tool to calculate the emission factor for an electricity system' to 02.2.1 and used the latest statistical data to calculate Emission factor. Reference for calculation of EF is 'KEPCO in brief, 2011 (KEPCO)' and 'Statistical data of Electricity in 2011 (KPX)'.	DOE review comment #2 – PP used 'Tool to calculate the emission factor for an electricity system' ver 02.2.1, which is the latest version consistently. And PP used latest statistical data to calculate Emission factor. But PP needs to submit emission factor calculation sheet using correct data.	
		Corrective Action or a Clarification #3 PP submitted revised Emission factor calculation sheet for CPA.	DOE review comment #3 Keco confirms that PP will calculate emission factor at the time of CPA inclusion. So CAR5 is closed.	
CAR6 PP calculated emission factor for the ex-ante calculation of emission reductions. But PP needs to calculate OM, BM and CM using the most recent data available at the time of submission of the CPA submission to the DOE for	5.25	Corrective Action or a Clarification #1 PoA calculates and applies 2010 Emission factor for this project activity. CPA will apply Emission factor under the year corresponding to the CPA is added.	DOE review comment #1 PP needs to clearly express that CPA will apply Emission factor under the year corresponding to the CPA is added in the PoA-DD.	OK
		Corrective Action or a Clarification #2	DOE review comment #2	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
inclusion in to the PoA.		PP added the criteria about Emission factor calculation for CPA. When other CPA project will be added after registered PoA, PP should calculate emission factor under the year corresponding to the CPA is added.	CPA will apply emission factor at the time of inclusion for the CPA. So CAR6 is closed.	
<p>CAR7</p> <p>The stakeholder survey has carried out using internet website of Jeju special self-governing province from 1 May 2011 to 15 May 2011 and 35 people participated on the web survey totally. But the PoA-DD publically opened for Global stakeholders at 15 Apr 2011 which is earlier than stakeholder survey. 35 people participated on the web survey totally. But there are no explanation on how they had been invited.</p>	9.1	<p>Corrective Action or a Clarification #1</p> <p>JGP did advertise this PoA in Jeju newspaper before public comment of PoA-DD and conducted an accessional stakeholder survey about the implementation of this PoA after public comment.</p>	<p>DOE review comment #1</p> <ul style="list-style-type: none"> – PP has submitted Jeju newspaper published by Jeju Special Self-Governing Province at 15/01/2010 and Keco cross-check it's website (http://news.jeju.go.kr/). – But there is no comments about the project (CDM or programme CDM) but only explains about policy of Jeju Special Self-Governing Province on renewable energy. PP needs to submit evidence documents for local stakeholder consultation. 	OK
		<p>Corrective Action or a Clarification #2</p> <p>The purpose of 'Local Stakeholder consultation' is to notify implementation of project to related person. In other word, PP (JGP) should do something to provide the information about project activity that promotes</p>	<p>DOE review comment #2</p> <p>PP chose to carry out local stakeholder comments at the CPA level. The evidence documents will be covered and examined at the CPA level. So CAR7 is closed.</p>	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
		introduction of renewable energy system to Jeju island to stakeholders. To satisfy this requirement, JGP advertised in Jeju newspaper and surveyed in JGP web site about it.		
CAR8 PP needs to submit operational and management arrangements or contract between CME and CPA implementer.	12.1.1	Corrective Action or a Clarification #1 PP makes the operating manual for this PoA and prepared the standard contract that will be used to contract with CPA projector.	DOE review comment #1 PP submitted operational manual related with PoA. But the procedure to prevent double counting is not clear. And the explanation on EIA is not correct.	OK
		Corrective Action or a Clarification #2 PP makes up for the operating manual's defect about prevention of double counting. PP submits the criteria of EIA again.	DOE review comment #2 - PP chose to carry out EIA at the CPA level. The evidence documents will be covered and examined at the CPA level. - Each CPA implementer will describe and demonstrate no double counting in the CPA-DD. Keco has cross-checked 'Operating Manual for the PoA' <20> and confirms. So CAR8 is closed.	
CI1 Keco needs to cross-check the contract between Jeju Special Self-Governing Province and Ecoeye Co.,Ltd.	2.1	Corrective Action or a Clarification #1 PP attaches the contract between Jeju Special self-governing province and Ecoeye Co.,Ltd.	DOE review comment #1 Keco has cross-checked the agreement between Jeju Special Self-Governing Province and Ecoeye Co.,Ltd thorough the agreement between them, it confirms that they are PPs for the project. So CI1 is closed.	OK

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
CI2 PP described that private entity can participate in the section A.2. Keco needs to check the evidence documents above.	2.6	Corrective Action or a Clarification #1 PP attaches the contract between CME(the office of Jeju special self-governing province) and CPA proponent.	DOE review comment #1 The contract does not ensure that CER distribution and double counting.	OK
		Corrective Action or a Clarification #2 PP attaches the revised contract between CME(the office of Jeju special self-governing province) and CPA proponent.	DOE review comment #2 The contract form revised to ensure CER distribution. So CI2 is closed.	
CI3 PP needs to submit MoC in accordance with the latest procedure.	2.11	Corrective Action or a Clarification #1 PP will make the MoC for register the approval from the DNA. It will include detail about Project proponent (CME, CPA), focal point and detail description about this project.	DOE review comment #1 PP needs to submit MOC for the project.	OK
		Corrective Action or a Clarification #2 PP makes the draft MoC and attached it.	DOE review comment #2 Keco has cross-checked MoC but it did not follow 'Procedures for modalities of communication between project'(ver.01), EB45 Annex59.	
		Corrective Action or a Clarification #3 PP submitted revised MoC.	DOE review comment #3 Keco has cross-checked MoC and it is correctly revised. So CI3 is closed.	
CI4 PP needs to update version number and	3.2.1	Corrective Action or a Clarification #1 PP updates the version number and	DOE review comment #1 PP updated version number of PoA-DD.	OK

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
revised date		date of PoA-DD.	So CI4 is closed.	
CI5 PP describe that the program will include photovoltaic, wind and small hydro power to Jeju Island. But a completed CDM-CPA-DD only includes photovoltaic power generation. PP needs clarifications on above.	3.3	Corrective Action or a Clarification #1 Clarification is in progress. (the document of clarification was sent at 12.Dec.11)	DOE review comment #1 CI5 can be cleared after clarification from CDM EB.	OK
		Corrective Action or a Clarification #2 –	DOE review comment #2 Keco has raised question during 6 th teleconference which held after EB65 meetings. The secretariat explained that real case CPA does not need to contain each of the technologies. Real case CPA just has to describe how the framework PoA is being applied to a particular CPA. Real case CPA of the project describes how the framework PoA is being applied to a particular CPA. And additionally, 'Clarification on the combination of multiple methodologies and technologies for PoA', SSC_621, indicated that usage of AMS-I.A, AMS-I.D, and AMS-I.F together with various renewable energy technologies (e.g. Wind, hydro, solar, geothermal etc.) can be applied alone and in their various combinations both within a specific CPA and/or across several CPAs under a single PoA is requested. So CI5 is closed.	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
CI6 PP needs to clearly indicated that the Party involved wishes to be considered or not.	3.5.1	Corrective Action or a Clarification #1 PP revised PoA-DD to clearly indicate about below. – Main Project participant and CME for this PoA is JGP – Ecoeye Co.,Ltd is just PoA participant, not a CPA project participant.	DOE review comment #1 The revised PoA-DD clearly indicating that the Party involved wishes to be not considered. So CI6 is closed.	OK
CI7 The program applies AMS-I.D.(ver16.0) and AMS-I.F.(ver1.0). Keco request for approval on the application of multiple methodologies which are AMS-I.D. and AMS-I.F at 5 August 2011. But the combination of the methodologies is not approved yet.	3.5.6	Corrective Action or a Clarification #1 EB approve the application of multiple methodologies in a Programme of Activity and issue the standard about it at EB 65 meeting. (Refer to standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for PoA, paragraph 28.)	DOE review comment #1 The CDM EB approved the combination of AMS-I.A with AMS-I.D and/or AMS-I.F for application at EB 63 rd meeting. So CI7 is closed.	OK
CI8 Definition of eligibility criteria are expressed in PoA-DD section A.4.2.2. But more clarifications are needed as belows; – Specific type of eligible technology. For example; · Hydro power: run of river or dam type · Wind power: gear or gearless type · Photovoltaic power: Cell type, fixed or non-fixed	3.5.7	Corrective Action or a Clarification #1 PP adds the 'Check list for each CPA' contents. – Specific type of eligible technology. For example; * Hydro power: run of river or dam type * Wind power: gear or gearless type * Photovoltaic power: Cell type, fixed or non-fixed	DOE review comment #1 – PP submitted standard contract form between CME and CPA implementer. But it does not indicate who are the counterparts of the contract. – Each CPA does not fully demonstrate additionality based on 'Tool for the demonstration and assessment of additionality'. PP needs to establish the criteria at PoA level(No-18).	OK

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
<ul style="list-style-type: none"> - Contractual relationship between CPA implementer and CME - Criteria related with small scale type I project - Characteristic of power plant(newly built, retrofitting or modifying of an existing facility for renewable energy generation) 		<ul style="list-style-type: none"> - Contractual relationship between CPA implementer and CME - Criteria related with small scale type I project (installed capacity is less than 15MW) - Characteristic of power plant(newly built, retrofitting or modifying of an existing facility for renewable energy generation) - etc... 	<ul style="list-style-type: none"> - There are two eligibility criteria for hydropower. It needs to be changed to wind power(No-20). 	
		<p>Corrective Action or a Clarification #2 PP attaches the revised contract between CME(the office of Jeju special self-governing province) and CPA proponent.</p>	<p>DOE review comment #2</p> <ul style="list-style-type: none"> - The contract form revised to indicating who are the counterparts of the contract. - Each CPA does not needs to be fully demonstrated additionality based on 'Tool for the demonstration and assessment of additionality'. PP needs to establish the criteria at PoA level(No-18). - There are two eligibility criteria for hydropower. It needs to be changed to wind power(No-20). 	
		<p>Corrective Action or a Clarification #3 PP revised the overall table 3 'Eligibility Check list'.</p> <ul style="list-style-type: none"> - Capacity of entire added CPA will not increase beyond 15MW to satisfy the criteria of small-scale 	<p>DOE review comment #3</p> <ul style="list-style-type: none"> - PP needs to submit eligibility criteria in accordance with the EB 65, Annex 3, 'Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for 	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
		project. In some case, CPAs up to 5MW can apply 'Guideline for demonstrating additionality of Micro-scale project activities' and if the CPA satisfies the conditions in the guideline, the CPA is additional project.	programme of activities' (ver.01.0). But minimum criteria such as (d),(e),(g),(j) are not listed in the [Tabel4] and [Table5].	
		Corrective Action or a Clarification #4 PP added the criteria as below. (d) – 7. CPA start date (e) – 9. Applicability of methodology (g) – 11. Stakeholder consultant – 12. Environmental Impact Analysis (j) – 14. Sampling method	DOE review comment #4 Keco has cross-checked revised eligibility criteria and confirms that it is clear and unambiguous criteria for the inclusion of the CPA. The criteria's have been described voluntary action, boundary, double counting, de-bundling, additionality, EIA, stakeholder comments and technology. So CI8 is closed.	
CI9 PP needs to submit evidence documents for the start date.	3.5.8	Corrective Action or a Clarification #1 PP changes the start date to 19th Oct, 2010 and Crediting Period of this PoA project is 28-years.	DOE review comment #1 PP changed start date from 17 Oct. 2010 to 19th Oct, 2010 and submitted internal decision document.	OK
		Corrective Action or a Clarification #2 –	DOE review comment #2 The start date of the PoA is 19/10/2010, which is based on the date of the 'JGP internal decision documents for the PoA by Future strategy division of JGP' (19) but it is not the earliest date at which either the implementation or construction or real action	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
			of a PoA begins, corresponding to the start date of the first CPA. The first construction contract dates for Cheongsu community centre photovoltaic power system is 02/05/2011 and it shall be taken as the start date of the CPA and PoA. Since the project developer had not undertaken any construction or any real action on the implementation of the project activity prior to this date, as per Glossary of CDM terms (ver.05), this date shall be treated as the start date of the CPA.	
		Corrective Action or a Clarification #3 According to the 'Glossary of CDM terms', EB 66, Anx 63, Start date of PoA is the date of PoA begins. So, the start date of this Jeju PoA was 02/05/2011 that the first construction contract dates for Cheongsu community centre's photovoltaic system. [Reference] Start date (EB 66, Anx 63). In the context of a CDM project activity or PoA, The earliest date at which either the implementation or construction or real action of a CDM project activity or PoA begins.	DOE review comment #3 Keco has cross-checked 'Construction completion check for Cheongsu community centre photovoltaic system' dated 02/05/2011 and confirms it is the date of real action on the implementation of the PoA. So CI9 is closed.	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion								
CI10 PP needs to submit evidence documents related with a record keeping system, a system/procedure to avoid double accounting and etc.	3.5.9	Corrective Action or a Clarification #1 PP makes the Monitoring control/procedure and attaches it.	<div>DOE review comment #1</div> <div><div><div>– PP submitted 'Monitoring procedures for program CDM'. It indicates record keeping system. The procedure to avoid double accounting is explained in 'Operating Manual'.</div><div>– PP submitted management system including belows in accordance with the EB 65, Annex 3, 'Standard for demonstration of additionality, development of eligibility criteria and application of multiple methodologies for programme of activities' (ver.01.0):</div></div><table><tr><td>(a)</td><td>A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;</td></tr><tr><td>(b)</td><td>Records of arrangements for training and capacity development for personnel;</td></tr><tr><td>(c)</td><td>Procedures for technical review of inclusion of CPAs;</td></tr><tr><td>(d)</td><td>A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as</td></tr></table></div>	(a)	A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;	(b)	Records of arrangements for training and capacity development for personnel;	(c)	Procedures for technical review of inclusion of CPAs;	(d)	A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as	OK
(a)	A clear definition of roles and responsibilities of personnel involved in the process of inclusion of CPAs, including a review of their competencies;											
(b)	Records of arrangements for training and capacity development for personnel;											
(c)	Procedures for technical review of inclusion of CPAs;											
(d)	A procedure to avoid double counting (e.g. to avoid the case of including a new CPA that has already been registered either as											

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion								
			<table><tr><td></td><td>a CDM project activity or as a CPA of another PoA);</td></tr><tr><td>(e)</td><td>Records and documentation control process for each CPA under the PoA;</td></tr><tr><td>(f)</td><td>Measures for continuous improvements of the PoA management system;</td></tr><tr><td>(g)</td><td>Any other relevant elements.</td></tr></table> <p>– But ‘Competence review process’, ‘Records and documentation control process’ and ‘Measures for continuous improvements’ are not detailed.</p>		a CDM project activity or as a CPA of another PoA);	(e)	Records and documentation control process for each CPA under the PoA;	(f)	Measures for continuous improvements of the PoA management system;	(g)	Any other relevant elements.	
			a CDM project activity or as a CPA of another PoA);									
		(e)	Records and documentation control process for each CPA under the PoA;									
(f)	Measures for continuous improvements of the PoA management system;											
(g)	Any other relevant elements.											
Corrective Action or a Clarification #2 PP revised the ‘Operation Manual’ in accordance with the standard (EB 65, Annex 3) – Document and Data control – Improvement of operation manual – Competence Criteria	DOE review comment #2 Keco confirms that ‘Operation Manual’ includes ‘Competence review process’, ‘Records and documentation control process’ and ‘Measures for continuous improvements’. So CI10 is closed.											
CI11 DOE needs evidence documents for the monitoring plan.	3.5.10	Corrective Action or a Clarification #1 PP makes the Monitoring control/procedure and attaches it.	DOE review comment #1 PP submitted ‘Monitoring procedures for program CDM’ but it is not clear how monitoring equipment will be calibrated.	OK								
		Corrective Action or a Clarification #2 PP makes up for the operating	DOE review comment #2 Keco checked ‘Monitoring procedure’ In the									

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
		manual's defect about calibration of monitoring equipment. There is 'Monitoring procedure' In the part 7 of 'operating manual'; this monitoring procedure involves the QA/QC procedure to assess the reliability and accuracy of monitoring data. it involves the calibration of monitoring equipment.	part 7 of 'Operating manual' and the procedure involves QA/QC for monitoring equipments, parameters and accuracy of the equipments. So CI11 is closed.	
CI12 PP chooses to carry out EIA at PoA level and explained that it is not required for this program. But it is applicable only when the PP install hydro, wind and photovoltaic power plant smaller than 10MW capacity not 100MW. In case of hydropower projects, if PP planed to build new dam or reservoir, PP need to carry our EIA bigger than 3MW capacity. Please refer to the Environmental Impact Assessment Act of the Republic of Korea.	3.5.12	Corrective Action or a Clarification #1 'Annex 1 of Environmental Impact Assessment Act enforcement' fix the EIA conduct standards as below. 1) Power plant's generating capacity is over 10,000kW. 2) Power plant accompanying construction of the dam and/or reservoir has over 3,000kW generating capacity. 3) solar/wind/fuel cell Power plant's generating capacity is over 100,000kW.	DOE review comment #1 Keco confirms that PP chooses to carry out EIA at PoA level and EIA is not required for this programme activity. But it is applicable only when the PP install wind and photovoltaic power plant smaller than 100MW. In case of hydropower projects, if PP planed to build new dam or reservoir with bigger than 3MW capacity, PP needs to carry out EIA. The explanation in the PoA-DD is not in accordance with the Environmental Impact Assessment Act.	OK
		Corrective Action or a Clarification #2 PP will do Environmental Analysis at SSC-CPA level, and indicate about it at PoA-DD, section C.	DOE review comment #2 Keco confirms that PP chooses to carry out EIA at CPA level. So CI12 is closed.	
CI13	3.5.13	Corrective Action or a Clarification #1	DOE review comment #1	OK

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
35 people participate on the web survey totally but PP do not clearly show how due account has taken of any comments received. And PP needs to submit evidence documents for advertisements in newspapers.		JGP did advertise about this PoA at Jeju newspaper, but doesn't provide advertisements document yet.	PP submitted countermeasure for web survey. PP needs to explain how does PP notice countermeasure to stakeholder. Please submit newspaper advertisement used for public notice.	
		Corrective Action or a Clarification #2 – PP uploaded the countermeasure for web survey in the JGP website to supply the information about this PoA (i.e. countermeasures) . – PP submitted the newspaper article related to this renewable energy project.	DOE review comment #2 PP chose to carry out local stakeholder comments at the CPA level. The evidence documents will be covered and examined at the CPA level by Keco. So CI13 is closed.	
CI14 In the PoA-DD, detailed technological specification for photovoltaic system, wind, Small hydro power plant and relevant equipments is not described.	4.7	Corrective Action or a Clarification #1 Detailed specification for applied technology will be explained at specific CPA-DD when CPA is added, so PP makes the form for specification at generic CPA-DD and deletes the form from PoA-DD.	DOE review comment #1 PP needs to describe applied technology at PoA level.	OK
		Corrective Action or a Clarification #2 –	DOE review comment #2 – PP revised PoA-DD and add some of explanation of hydro power plant and system. – Keco confirms that the photovoltaic system will not include battery through on-site visit.	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
			– PP explained that they will apply gear or gearless type of wind power plant but there is only explanations of gear type of wind power plant in PoA-DD page 7.	
		Corrective Action or a Clarification #3 – The photovoltaic system won't have battery in the system – The diagram of wind power plant in 'Figure 3' is just written to explain the principle of wind power plant. So, PP added the overview about gearless type wind power plant.	DOE review comment #3 Keco confirms that the PoA-DD included information related with technologies to be employed by the SSC-CPA. So CI14 is closed.	
CI15 PoA-DD describe yearly proportion of the generation of electricity based on the source of energy in page25. But the proportion of hydro at 2006 is different from the evidence documents. And PP needs to calculate low cost/must run sources ratio and describe in the table.	5.24	Corrective Action or a Clarification #1 PP revised and made up for lacking in the explanation of EF calculation.	DOE review comment #1 PP did not submit EF calculation sheet.	OK
		Corrective Action or a Clarification #2 PP submitted EF calculation sheet.	DOE review comment #2 PP submitted 'ER sheet' and EF calculation sheet' but they are not consistent with the PoA-DD. And PP did not used statistical data correctly to calculate emission factor in 'EF calculation sheet'.	
		Corrective Action or a Clarification #3 PP will submit EF calculation sheet	DOE review comment #3 PP did not submit revised EF calculation sheet.	
		Corrective Action or a Clarification #4 PP submitted EF calculation sheet.	DOE review comment #4 PP chose to calculate EF at the time of CPA inclusion.	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
			So CI15 is closed.	
CI16 PP needs to submit emission reduction calculation sheet.	5.26	Corrective Action or a Clarification #1 PP makes the Excel sheet about calculation of emission reduction.	DOE review comment #1 ER sheet needs to be cross-checked with CPA-DD.	OK
		Corrective Action or a Clarification #2 PP submitted CPA-DD.	DOE review comment #2 DOE checked ER sheet and it is not consistent with the PoA-DD.	
		Corrective Action or a Clarification #3 PP revised the Emission reduction calculation sheet and attached it.	DOE review comment #3 PP needs to submit fully translated version of ER sheet in English.	
		Corrective Action or a Clarification #4 PP translated ER sheet in English.	DOE review comment #4 OK So CI16 is closed.	
CI17 The parameters related with photovoltaic system are not expressed in the same manner.	5.27	Corrective Action or a Clarification #1 It requires further examination.	DOE review comment #1 The parameters related with photovoltaic system are not expressed in the same manner in 39page of PoA-DD.	OK
		Corrective Action or a Clarification #2 PP revised the parameter of baseline emission.	DOE review comment #2 PP did not used same parameter in accordance with the methodology.	
		Corrective Action or a Clarification #3 PP revised the parameter for $EG_{PJ,y}$ calculation in accordance with the combined methodology 'ACM0002' .	DOE review comment #3 The parameters related with photovoltaic system are expressed in the same manner through the PoA-DD. So CI17 is closed.	
CI18 PP needs to submit evidence documents	6.13	Corrective Action or a Clarification #1 PP provides evidence documents for	DOE review comment #1 PP submitted utilization coefficient of wind,	OK

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
for utilization coefficient of wind, hydro, photovoltaic power plant.		utilization coefficient of wind, hydro, photovoltaic power plant.	hydro, photovoltaic power plant but it is data for 2007 and 2008. Please submit the latest documents if it is applicable.	
		Corrective Action or a Clarification #2 PP provides evidence of utilization coefficient about renewable energy power plant; the evidence was surveyed at 2007~2008 and issued the report about it at 2009.	DOE review comment #2 Keco confirms that the utilization coefficient of wind, hydro, photovoltaic power plants are calculated based on 2007 and 2008 data <23> and it is published by 'KPX(Korea Power Exchange)' which is a non profit organization focusing on power market operation in Korea. So CI18 is closed.	
CI19 Type of storage system is not clearly noted.	7.1	Corrective Action or a Clarification #1 PP added content about monitoring data storage period and system.	DOE review comment #1 PP explained that monitoring data will be stored by electric file type and kept for two years after the end of crediting period. It is regulated in the 'Monitoring procedure' submitted by PP. So CI19 is closed.	OK
CI20 PP needs to described data and parameters as below format. - Data and parameters not monitored	7.5	Corrective Action or a Clarification #1 PP uses the PoA-DD format that is provided by EB, so parameter format shall not be modified. Parameters such as CapPJ and APJ that used to calculate project emission by small-hydro power plant is not the monitored parameter.	DOE review comment #1 PP used correct format for 'Data and parameters that are to be reported in CDM-SSC-CPA-DD form' and 'Data and parameters that are to be monitored by each SSC-CPA'. - In accordance with the para 17 (c) of 'General Guidelines to SSC CDM	OK

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion																												
<table><tr><td>Data / Parameter:</td><td></td></tr><tr><td>Data unit:</td><td></td></tr><tr><td>Description:</td><td></td></tr><tr><td>Source of data:</td><td></td></tr><tr><td>Value to be applied:</td><td></td></tr><tr><td>Any comment:</td><td></td></tr></table> <p>– Data and parameters monitored</p> <table><tr><td>Data / Parameter:</td><td></td></tr><tr><td>Data unit:</td><td></td></tr><tr><td>Description:</td><td></td></tr><tr><td>Source of data:</td><td></td></tr><tr><td>Measurement procedures (if any):</td><td></td></tr><tr><td>Monitoring frequency:</td><td></td></tr><tr><td>QA/QC procedures:</td><td></td></tr><tr><td>Any comment:</td><td></td></tr></table> <p>– In accordance with the para 17 (c) of ‘General Guidelines to SSC CDM methodologies’, measuring equipment should be certified to national or IEC standards and calibrated according to the national standards at lease once in three years.</p> <p>– Parameters related with the small hydro plant which are installed capacity of the hydro power plant after the implementation of the project activity(Cap_{PJ}) and area of the reservoir</p>	Data / Parameter:		Data unit:		Description:		Source of data:		Value to be applied:		Any comment:		Data / Parameter:		Data unit:		Description:		Source of data:		Measurement procedures (if any):		Monitoring frequency:		QA/QC procedures:		Any comment:			<p>It requires further examination.</p> <p>Corrective Action or a Clarification #2</p> <p>– PP added the contents about installation and calibration of monitoring equipment in the PoA-DD and operating manual.</p> <p>– PP added the parameter ‘Cap_{PJ}’ and ‘A_{PJ}’ for calculation of project emission.</p> <p>– ‘Monitoring procedure’ In the ‘operating manual’ involves the required specification of monitoring equipment and the QA/QC procedure to assess the reliability and accuracy of monitoring data.</p> <p>Corrective Action or a Clarification #3</p>	<p>methodologies`, measuring equipment should be certified to national or IEC standards and calibrated according to the national standards at least once in three years.</p> <p>– Please refer to ACM0002 related with Cap_{PJ} and A_{PJ}.</p> <p>– PP submitted ‘Monitoring procedure` but it does not clearly explain about calibration standard, a specification of monitoring equipment to verify its capability and excellence.</p> <p>DOE review comment #2</p> <p>– PP did not explained parameters related with the capacity addition, retrofit and replacement of the project.</p> <p>– PP submitted ‘Monitoring procedure` and it has clearly explained the calibration standard, a specification of monitoring equipment to verify its capability and excellence. But it is not explained in the PoA-DD.</p> <p>DOE review comment #3</p>	
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Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
<p>measured in the surface of the water, after the implementation of the project activity, when the reservoir is full(A_{PJ}) not listed.</p> <p>– A monitoring manner(i.e. reporting procedure), calibration standard, personnel information, a specification of monitoring equipment to verify its capability and excellence and an organization chart of the assigned team for monitoring emission reductions should be provided.</p>		<p>– PP revised the equation of baseline emission calculation and monitoring parameters in accordance with project scenario.</p> <p>– PP revised and added the contents about monitoring procedure.</p>	<p>– Keco has checked revised PoA-DD and confirms that parameters related with the capacity addition, retrofit and replacement are correctly revised.</p> <p>– Keco confirms the calibration standard, a specification of monitoring equipment are in the PoA-DD.</p> <p>So CI20 is closed.</p>	
<p>CI21</p> <p>An operating manual for the program and evidence on training of monitoring staff should be provided.</p>	7.7	<p>Corrective Action or a Clarification #1</p> <p>PP makes and attaches an operating manual for the program and monitoring procedure for monitoring staff.</p>	<p>DOE review comment #1</p> <p>Training of monitoring staff is regulated in 'Monitoring procedure'.</p> <p>So CI21 is closed.</p>	OK
<p>CI22</p> <p>There are no countermeasure for the received comments from stakeholder in the PoA-DD.</p>	9.7	<p>Corrective Action or a Clarification #1</p> <p>PP prepares a countermeasure about stakeholder survey and will notify it at Jeju self-governing province web-site.</p>	<p>DOE review comment #1</p> <p>Please refer to CI13</p>	OK
		<p>Corrective Action or a Clarification #2</p> <p>– PP uploaded the countermeasure for web survey in the JGP website to supply the information about this PoA (i.e. counter-measure) .</p> <p>– PP submitted the newspaper article</p>	<p>DOE review comment #2</p> <p>PP chose to carry out local stakeholder comments at the CPA level. The evidence documents will be covered and examined at the CPA level by Keco.</p> <p>So CI22 is closed.</p>	

Draft report clarifications and corrective action requests by Validation team	Ref. to checklist question in table 2	Summary of the project participants responses	Review by DOE	Conclusion
		related to this renewable energy project.		