




Validation report form for renewal of crediting period of component project activities

(Version 03.0)

Complete this form in accordance with the instructions attached at the end of this form.

BASIC INFORMATION

Title and UNFCCC reference number of the programme of activities (PoA)	Programme of Activities to introduce renewable energy system into collective housing, Republic of Korea Reference# 9247		
Version number of the validation report	1.1		
Completion date of the validation report	12/02/2020		
Version numbers of PoA-DD to which this report applies	Ver. 2 (25/12/2019)		
Title and UNFCCC reference number of each CPA for renewal	CPA Ref. no.	Title	
	9247-P1-0001-CP1	PV power plants project on collective housing of 2011-<2011-LH-001-01457>	
Sectoral scopes for each CPA	CPA Ref. no.	Sectoral scopes (indicate mandatory and conditional sectoral scopes)	
	9247-P1-0001-CP1	01- Energy industry (mandatory)	
Applied methodologies and standardized baselines for each CPA	CPA Ref. no.	Applied methodologies and standardized baselines	
	9247-P1-0001-CP1	AMS-I.F. (Ver.3)	
Number and duration of the next crediting period (CP)	CPA Ref. no.	No. of CP	Duration of the CP
	9247-P1-0001-CP1	2	27/12/2019 – 26/12/2026
Coordinating/managing entity (CME)	Korea Land & Housing Corporation (Shortly called as LH Corp)		
Host Parties	Republic of Korea		
Estimated amount of annual average greenhouse gas (GHG) emission reductions or GHG removals by sinks in the next crediting period (tCO ₂ e), per CPA	CPA Ref. no.	Annual emission reductions or removals (tCO ₂ e)	
	9247-P1-0001-CP1	1,307	
Name and UNFCCC reference number of the DOE	CDME-0039 / Korean Standards Association		
Name, position and signature of the approver of the validation report	JinSeong Park Director General of Certification Service Division 		

SECTION A. Executive summary

>> Korea Land and Housing Corporation (hereafter LH Corp), the CME, has contracted Korean Standards Association (hereafter, KSA) to assess renewal of crediting period of included CPA "PV power plants project on collective housing of 2011-<2011-LH-001-01457>" under registered PoA, "Programme of Activities to introduce renewable energy system into collective housing, Republic of Korea (reference# 9247)".

Validation was conducted in accordance with UNFCCC criteria for the clean development mechanism programme of activities, CDM validation and verification standard for PoA (ver.2.0), and host country criteria, as well as criteria given to provide for consistent PoA operations, monitoring and reporting.

The proposed CPA is to install solar panels on the roofs of the public rental collective housings in the host country. Electricity produced by PV is consumed for common facilities of the collective housings.

The scope of the validation is to determine whether the proposed CPAs comply with the requirements in para 37 of CDM M&Ps (with the exception of para 37(c) for CCS CDM project activities), the eligibility criteria defined in generic CPA, and the other applied methodological regulatory documents and guidance provided by EB.

The KSA validation team follows a risk-based approach in the validation focusing on the identification of significant risks for project implementation and generation of certified emission reductions (CERs). Validation is not meant to provide any consulting toward the project participants. However, the corrective action requests (CARs) and clarifications (CL) may have provided input for improvement of the CPA design.

To assess proposed CPA, validation team applied standard audit technique including (i) review of documents provided by CME and additional evidences validation team found, (ii) on-site assessment including interviews with relevant personnel, and (iii) follow-up actions and reporting. As a result of validation process, KSA concluded the proposed CPAs meet all applicable CDM requirements and eligibility criteria defined in the registered PoA-DD, and will result in greenhouse gas emission reductions that are real, measurable, and give long-term benefits to the mitigation of climate change.

This report summarizes the findings over the validation process that has been performed in accordance with CDM VVS PoA (ver.2.0).

SECTION B. Validation team, technical reviewer and approver**B.1. Validation team member**

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interviews	Validation findings
1.	Team Leader	EI	Choi	SeungKeun	KSA	V	V	V	V
2.	Validator	EI	Sohn	Kyuil	KSA	V	-	-	V
3	Trainee	EI	Hong	SeungHyeong	KSA	V	V	V	V

B.2. Technical reviewer and approver of the validation report for RCP

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer	EI	Park	SeongYong	KSA
2.	Approver	IR	Park	JinSeong	KSA

SECTION C. Means of validation**C.1. Desk/document review**

>> All documents reviewed or referenced during the validation is listed in Appendix 3 below

C.2. On-site inspection

Duration of on-site inspection: 20/11/2019				
No.	Activity performed on-site	Site location	Date	Team member
1.	CME's management system	CME's office	20/11/2019	SeungKeun Choi SeungHyeong Hong

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Kim	Sun Kyung	CME office	20/11/2019	CME's management system	SeungKeun Choi SeungHyeong Hong
2	Cho	Jonghyun	CME office	20/11/2019	Monitoring procedure	SeungKeun Choi SeungHyeong Hong

C.4. Sampling approach

>> Sampling approach is not applied for this assessment.

C.5. Clarification requests (CLs), corrective action requests (CARs) and forward action requests (FARs) raised

Area of validation findings (SECTION D)	No. of CL	No. of CAR	No. of FAR
CPAs to be renewed and corresponding generic CPAs	-	-	-
Compliance with CPA-DD form	-	-	-
Application and selection of methodologies and standardized baselines	-	-	-
Validity of original baseline or its update	-	-	-
Demonstration of eligibility of the CPAs	1	1	-
Estimated emission reductions or net anthropogenic removals	-	1	-
Validity of monitoring plan	1	-	-
Crediting period	-	-	-
CME and project participants	-	-	-
Post-registration changes	-	-	-
Others (management system of CME)	-	-	-
Total	2	2	0

SECTION D. Validation findings**D.1. CPAs to be renewed and corresponding generic CPAs**

Title and UNFCCC reference number of the CPA	Version number of the CPA-DD	Host Party	Title and reference number of the corresponding generic CPA	Version number of the PoA-DD on which the RCP is based
PV power plants project on collective housing of 2011- <2011-LH-001-01457> UNFCCC ref# 9247-P1-0001-CP1	Ver.1	Republic of Korea	PV power plants project on collective housing Ref# Generic CPA 1	Ver.2

D.2. Compliance with CPA-DD form

Means of validation	<p>Validation team visited UNFCCC website to check latest template of CPA design document, then concluded whether CPA-DD provided by CME utilized appropriate version.</p> <p>Validation team also compared original CPA-DD /01/ with updated CPA-DD /02/ to determine whether description is materially same, in accordance with instruction of the form.</p>
Findings	<p>Validation team found that PRC was happened during 1st crediting period, so original CPA-DD /01/ was already written on latest version of CPA-DD form /03/. Validation team also compared original CPA-DD /01/ with updated CPA-DD, then found description in the updated CPA-DD is materially same except following changes:</p> <ol style="list-style-type: none"> (1) applied methodology is changed to latest version, AMS-I.F. (ver.3) /04/ (2) baseline scenario is updated in accordance with updated PoA-DD for 2nd PoA period /05/ and "TOOL11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (ver.3.0.1)" /06/ (3) Emission factor for electricity grid is updated in accordance with updated PoA-DD for 2nd PoA period /05/ and "TOOL07: Tool to calculate the emission factor for an electricity system (ver.7.0)" /07/ (4) Section F. eligibility for inclusion was updated by reflecting revised eligibility criteria in the updated PoA-DD for 2nd PoA period /05/ <p>Above changes are required by paragraph 299 of CDM PS PoA (ver.2.0) /08/ to update at the time of renewal, so appropriate.</p> <p>No CARs, CLs and FARS were</p>
Conclusion	<p>Validation team confirmed that revised CPA-DD is prepared on valid version of CPA-DD form <CDM-CPA-DD-FORM (ver.9.0)> and relevant sections were appropriately updated.</p>

D.3. Application and selection of methodologies and standardized baselines

Means of validation	<p>At first, validation team reviewed whether updated CPA-DD applied latest version of methodology in accordance with updated PoA-DD for 2nd PoA period /05/. Then, validation team also assessed whether the CPA still meets applicability conditions defined in the latest version of applied methodology AMS-I.F. (ver.3.)</p>
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Findings	Validation team reviewed each applicability conditions in the latest version of methodology, AMS-I.F. (ver.3.0) and assessed to determine whether the CPA still meets all conditions as below:		
	Para.	Assessment	Conclusion
	2	The CPA was to install PV plants and supply electricity to the collective housings, so in the absence of the CPA, the residents would have been supplied electricity from national grid (so called KEPCO grid). By on-site interview, validation team confirmed no changes were made during 1 st crediting period.	Satisfied
	3	The CPA displace grid electricity consumption so paragraph 2 of table 3 is applied.	Satisfied
	4	The scope of CPA is to install PV plants for captive use, so this condition is not applied.	Not applied
	5	The CPA was greenfield, so paragraph 5(a) is met	Satisfied
	6	Total capacity of the CPA is less than 15 MW, and no changes have been made, so the CPA meets this condition.	Satisfied
	7	No retrofit or replacements have been made. The CPA was greenfield.	Satisfied
	8	The CPA was to install PV plants only, so this condition is not applied.	Not applied
	9	Co-generation is not considered in the CPA	Not applied
	10	Heat production is not considered in the CPA	Not applied
	11	The CPA was to install PV plants, so biomass was not considered	Not applied
	<p>The above mentioned are confirmed through relevant document review and on-site interview.</p> <p>No CARs, CLs and FARs were raised.</p>		
Conclusion	Validation team concluded that updated CPA-DD /02/ is in accordance with latest version of applied methodology AMS-I.F. (ver.3) /04/		

D.4. Validity of original baseline or its update

Means of validation	Validation team reviewed updated PoA-DD for 2 nd PoA period /05/, to identify how baseline is revised for 2 nd PoA period. Then, validation team assessed whether updated CPA-DD reflected updated baseline.
Findings	<p>Updated PoA-DD for 2nd PoA period /05/ describes how the CME updated original baseline in accordance with relevant methodological tool “TOOL11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (ver.3.0.1)” /06/. As a result, updated PoA-DD /05/ and corresponding validation report /09/ concluded that original baseline is still valid for 2nd PoA period, and emission factor for KEPCO grid was updated.</p> <p>Section B.3 and B.4.1 of updated CPA-DD correctly describes that how original baseline is updated and grid emission factor is updated, in accordance with generic CPA in the updated PoA-DD for 2nd PoA period.</p> <p>No CARs, CLs and FARs were raised.</p>
Conclusion	Validation team confirms that original baseline is appropriately updated

D.5. Demonstration of eligibility of the CPAs

Means of validation	Validation team reviewed following documents:
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	<div>(1) Eligibility for inclusion, describes in original CPA-DD /01/ (2) Validation report for CPA inclusion /10/ (3) Eligibility criteria defined in updated PoA-DD /05/ (4) Updated CPA-DD /02/ (5) CME's technical review record /11/</div> <div>Then, validation team identified changes of eligibility criteria in updated PoA-DD /05/, and assessed how the CPA meets revised criteria for 2nd crediting period.</div>			
Findings	Updated PoA-DD for 2 nd PoA period defines two(2) eligibility criteria for small scale and microscale CPAs. As per this CPA, criteria for microscale is applied in section F of updated CPA-DD.			
	Assessment result for each eligibility criterion in generic CPA is as below.			
	No	Eligibility Criterion & required conditions	CME's justification in the CPA-DD	Validation Opinion
	1	Geographical boundary: The CPA is performed within the Republic of Korea.	PV plants of the CPA located in Republic of Korea. Evidence is GPS information and address.	This criterion was already assessed at the timing of inclusion, and no physical changes have been made.
	2	Target groups CPA and remains within SSC thresholds: The CPA applies photovoltaic power plants to housings, buildings and the installed capacity is less than or equal to 5MW.	Total capacity of the CPA is about 1.457 MW. Evidence is each project plan document.	Validation team reviewed "certificates of pre-operation inspection" /12/ for all PV plants, and also reviewed verification report for 1 st monitoring period /13/, then confirmed capacity of the CPA is 1.457 MW.
	3	Double counting and confirmation that CPAs are not included in other PoAs or de-registered CDM project activities: The CPA is not involved in another renewable energy project that is registered or under validation as a CDM project activity or as a CPA under another PoA, in accordance with the signed certificate by CPA implementer.	The CPA is shown to be not a another CDM projects which are registered or under validation or CPAs of another PoAs. Evidence is section A.8 in the CPA-DD or double counting check.	This criterion was already assessed at the timing of inclusion, and no physical changes have been made.
	4	Specifications of technology/ measure: The solar modules and inverters applied to CPA obtain certification from Korea.	PV plants of the CPA obtain certificate of solar module from KEA. Evidence is a certificate from KEA	This criterion was already assessed at the timing of inclusion, and no physical changes have been made.
	5	Start date of the CPA: The CPA has the documentary evidence to check its	PV plants of the CPA were contracted since 2016. Evidence is facility supply and	This criterion was already assessed at the timing of inclusion.

		start date and does not commence prior to the start date of validation for PoA (01/09/2011)	installation contract.	
	6	Conditions that ensure applicability of the applied methodologies: The CPA meets the applicability of AMS-I.F.	The CPA meets the applicability of AMS-I.F. Evidence is a Section B.1 in the CPA-DD.	Validation team reviewed "Single Line Diagrams" /14/, validation report for inclusion /10/, and previous verification report /13/, then confirmed the PV plants supply electricity for captive use.
	7	Additionality demonstration: The CPA meets the requirements pertaining to demonstration of additionality.	The CPA is demonstrated as additional. Evidence is Section F. in the CPA-DD.	Additionality was already demonstrated at the timing of inclusion. Total installed capacity of the CPA is 1.457 MW, so additional in accordance with "Tool19.Demonstration of additionality of microscale project activities (ver.19)" /15/.
	8	Requirements for Local stakeholder consultation : The CPA performs local stakeholder consultation before the inclusion of CPA.	local stakeholders were carried out. Evidence is post in website of CME.	This criterion was already assessed at the timing of inclusion.
	9	Requirements for environmental impact analysis: The CPA considers the environmental impacts analysis according to the regulation of the Republic of Korea.	Environmental impact analysis is not applicable for the CPA.	This criterion was already assessed at the timing of inclusion.
	10	Diversion of official development assistance : The CPA has the documentary evidence to check project costs and does not result in a diversion of official development assistance from Annex I.	The CPA implementer(i.e. LH corporation) and host country is not associated with ODA from Annex I. Evidence is official notice on accounting.	This criterion was already assessed at the timing of inclusion.
	11	Debundling check: The CPA is not a de-bundled component of a large scale activity through the de-	The CPA is shown to be not a de-bundled component of a large-scale projects. Evidence is address	This criterion was already assessed at the timing of inclusion, and no physical changes have been

		bundling check.	or GPS cords and other PDD.	made.
	12	Others: The CPA makes the agreement with CME to involve the CPA in PoA and obtain CERs rights. In case that CPA implementer is same with CME, the agreement is not necessary.	The CPA implementer is the same as CME. Not applicable to this criterion.	This criterion was already assessed at the timing of inclusion.
CAR01 and CL02 were raised and closed.				
Conclusion	Validation team concluded that the included CPA still meets eligibility criteria in the latest version of PoA-DD /05/			

D.6. Estimated emission reductions or net anthropogenic removals

Means of validation	Validation team reviewed updated PoA-DD /05/ and applied methodology AMS-I.F. (ver.3.0) to figure out changes on emission reductions calculation. Then validation team checked steps to estimate emission reductions provided in the updated CPA-DD.
Findings	<p>Validation team found that revisions of methodology do not impact on the PV project. In this reason, same equations are applied to the updated CPA-DD /02/, in accordance with generic CPA in the updated PoA-DD /05/.</p> <p>Baseline emission is calculated by following equation:</p> $BE_y = EG_{BL,y} \times EF_{CO_2,y}$ <p>where,</p> <p>$EG_{BL,y}$ is quantity of net electricity displaced,</p> <p>$EF_{CO_2,y}$ is emission factor for electricity system</p> <p>And no project and leakage emissions were identified, in accordance with generic CPA.</p> <p>Based on the capacity of the CPA, emission reductions for for 2nd crediting period is expected as follow:</p> $EG_{BL,y} = 1,457 \text{ kW} \times 24\text{hr/day} \times 365 \text{ day/yr} \times 15.3\%$ $= 1,953 \text{ MWh}$ $ER = BE = 1,953 \text{ MWh} \times 0.6693 \text{ tCO}_2/\text{MWh}$ $= 1,307 \text{ tCO}_2/\text{yr}$ <p>To estimate amount of electricity production, updated CPA-DD applied 15.3% of load factor, same with generic CPA, sourced from press release by Host party's government /16/. The document was released on 12/08/2019, so can be regarded as very recent data. In addition approximately 15% is applied to design PV plant in the host country, so validation team concluded 15.3% value is appropriate to estimate emission reduction.</p> <p>CAR02 was raised and closed.</p>
Conclusion	<p>Validation team concluded that the calculation of emission reduction are considered correct and the baseline methodology has been correctly applied according to the relevant requirements.</p> <p>(1) All the assumptions and data used by the project participants are listed in the generic CPA and applied methodology, including their references and sources;</p>

	<p>(2) All documentation used by the CME as the basis for assumptions and sources of data is correctly quoted and interpreted in the generic CPA of the PoA-DD;</p> <p>(3) All values used in the PoA-DD are considered reasonable in the context of the CPA-DD;</p> <p>(4) The baseline methodology has been applied correctly to calculate project emissions, baseline emissions, leakage and emission reductions.</p> <p>(5) All estimates of the baseline emissions can be replicated using the data and parameter values provided in the CPA-DD.</p>
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D.7. Validity of monitoring plan

Means of validation	Validation team reviewed updated PoA-DD for 2 nd PoA period /05/, and assessed whether monitoring plan in the updated CPA-DD /02/ complies with suggested monitoring plan in the updated PoA-DD.
Findings	<p>At first, by desk review, validation team also found that no material change was made in generic CPA in the updated PoA-DD for 2nd PoA period /05/, and B.5.1 of updated CPA-DD correctly describes monitoring plan in accordance with generic CPA.</p> <p>The only monitoring parameter defined in the original CPA-DD is quantity of electricity supplied to the collective housings by the CPA. At the each boudling, CME has installed watt-hour meter. By CME interview, validation team confirmed that no physical changes have been made for the included CPA.</p> <p>CL01 was raised and closed.</p>
Conclusion	Validation team concluded that monitoring plan is appropriately described in the updated CPA-DD, in accordance with updated generic CPA in the PoA-DD for 2 nd PoA period /05/ and latest version of applied methodology AMS-I.F. (ver.3) /04/.

D.8. Crediting period

Means of validation	Validation team checked 1 st crediting period and type of the CPA, and also assessed whether suggested 2 nd crediting period is appropriate.
Findings	<p>The CME selected renewable type of crediting period, which starts from 27/12/2012 and expired on 26/12/2019. Validation team confirmed it on the following UNFCCC website: https://cdm.unfccc.int/ProgrammeOfActivities/cpa_db/DGUQW36KFJ7MXAR52ZV9PTC114HN0S/view</p> <p>C.3.2 of the updated CPA-DD /02/ describes that next 7 year of 2nd crediting period would start from 27/12/2019, right after expiration of 1st crediting period</p> <p>No CARs, CLs and FARs were raised.</p>
Conclusion	In conclusion, validation team confirmed that 2 nd crediting period for the CPA is appropriately defined.

D.9. CME and project participants

Means of validation	The CME, Korea Land & Housing Corporation (shortly called LH Corporation), is public company which has national-wide organization to provide public collective rental housing. Validation team visited CME's website (www.lh.or.kr) then confirmed the name has not been changed. Same name is included as CME in the revised PoA-DD for 2 nd PoA period /05/
Findings	No CARs, CLs and FARs were raised.
Conclusion	Validation team concluded that the name of the CME included in the updated CPA-DD is consistent with the latest version of PoA-DD /05/ and MoC /17/

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D.10. Post-registration changes

>> No PRCs would be submitted with this validation report.

Type of post-registration changes (PRCs)	Confirmation (Y/N)	Validation report for PRCs	
		Version	Completion date
Temporary deviations from the registered monitoring plan, applied methodologies, standardized baselines or other methodological regulatory documents ¹	N		
Corrections	N		
Changes to the start date of the crediting period of component project activity	N		
Inclusion of monitoring plan	N		
Permanent changes to the registered monitoring plan, or permanent deviation of monitoring from applied methodologies, standardized baselines, or other methodological regulatory documents	N		
Changes to the project design	N		
Changes specific to afforestation and reforestation activities	N		
Others (Changes to generic CPA in the PoA-DD)	N		

SECTION E. Internal quality control

>> After validation team prepared draft validation report for the updated CPA-DD, KSA designated technical review team, in accordance with internal procedure, to conduct independent technical review. As a result, the validation report was revised.

SECTION F. Validation opinion

>> >> Korean Standards Association (KSA) has carried out a validation of the renewal of crediting period for included CPA "PV power plants project on collective housing of 2011-<2011-LH-001-01457>", under registered PoA "Programme of Activities to introduce renewable energy system into collective housing, Republic of Korea (reference# 9247)". The validation has performed on the basis of UNFCCC criteria for the Clean Development Mechanism and the host country criteria. The validation process especially focused on an assessment of the following issues:

- The impact of current national and/or sectoral policies and circumstances on the baseline taking into account relevant guidance from the Board with regard to renewal of crediting period at the time of assessment;
- The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the renewal of crediting period.

The review of the original/updated CPA-DD and additional documents related to baseline and monitoring methodology, subsequent background investigation and follow-up interviews have provided KSA with sufficient evidence to determine the validity of the original baseline and/or its update through an assessment. The project activity correctly applies the baseline and monitoring methodology AMS-I.F. (ver.03).

In KSA's opinion, included CPA "PV power plants project on collective housing of 2011-<2011-LH-001-01457>" under registered PoA "Programme of Activities to introduce renewable energy system

¹ Other standards, methodologies, methodological tools and guidelines (to be) applied in accordance with the applied(selected) methodologies are collectively referred to as the other (applied) methodological regulatory documents).

into collective housing, Republic of Korea (reference# 9247)", as described in the updated CPA-DD, meets all relevant UNFCCC requirements for CDM and the host country criteria, is eligible as small-scale CDM PoA, and correctly applies latest version of both methodology AMS-I.F. (ver.03) and generic CPA. Hence, KSA requests the renewal of crediting period of the included CPA.

Appendix 1. Abbreviations

Abbreviations	Full texts
CDM	Clean Development Mechanism
CME	Coordinating/Managing Entity
CI	CPA Implementer
CPA	Component Project Activities
DOE	Designated Operational Entity
KESCO	Korea Electrical Safety Corporation
KSA	Korean Standards Association
LH	Korea Land & Housing Corporation
PoA	Programme of Activities
PoA-DD	PoA Design Document
PS	Project Standard
PV	Photovoltaic
UNFCCC	United Nations Framework Convention on Climate Change
VVS	Validation and Verification Standard

Appendix 2. Competence of team members and technical reviewers

Name	Mr. Choi, SeungKeun	Mr. Sohn, Kyuill	Mr. Hong, SeungHyeong	Mr. Park, SeongYong
Role	Validation Team Leader	Validator	Validator (Trainee)	Technical reviewer
Competence in relevant sector	Competent in sector 1 (Especially for T.A. 1.2.)	Competent in sector 1 (Especially for T.A. 1.2.)	N/A	Competent in sector 1 (Especially for T.A. 1.2.)
Responsibility	Document Review, Interview, Findings & resolution VR preparation	Document Review, Findings & resolution	Document Review, Interview, Findings & resolution	Technical review

KSA

GHG Validator/Verifier Certificate

SeungKeun Choi

Certificate No. : CDM-015

Technical Area : 1.1, 1.2, 2.1, 3.1, 13.1, 13.2

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

VALID FROM

2019.04.04

VALID UNTIL

2022.04.03

PRESIDENT OF KSA



KOREAN STANDARDS ASSOCIATION

20F, Kotech Center Bldg, 305 Teheran-ro, Gangnam-gu, Seoul, Korea

KSA

CDM Validator/Verifier Certificate

Kyull Sohn

Certificate No. : CDM-001

Technical Area : 1.1, 1.2, 2.1, 3.1, 13.1, 13.2

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

VALID FROM

2019.04.04

VALID UNTIL

2022.04.03

PRESIDENT OF KSA



KOREAN STANDARDS ASSOCIATION

20F, Kotech Center Bldg, 305 Teheran-ro, Gangnam-gu, Seoul, Korea

KSA

CDM Validator/Verifier Certificate

SeungHyeong Hong

Certificate No. : CDM-032

Technical Area : -

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

VALID FROM

2019.05.01

VALID UNTIL

2021.04.30

PRESIDENT OF KSA



KOREAN STANDARDS ASSOCIATION

20F, Kotech Center Bldg, 305 Teheran-ro, Gangnam-gu, Seoul, Korea

KSA

CDM Validator/Verifier Certificate

SeongYong Park

Certificate No. : CDM-014

Technical Area : 1.1, 1.2, 4.1, 5.1, 9.2, 13.1

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

VALID FROM

2019.04.04

VALID UNTIL

2022.04.03

PRESIDENT OF KSA



KOREAN STANDARDS ASSOCIATION

20F, Kotech Center Bldg, 305 Teheran-ro, Gangnam-gu, Seoul, Korea

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	CME	original CPA-DD	ver.10	CME
2	CME	updated CPA-DD	ver.2.0	CME
3	CME	CPA-DD form	ver.9.0	CME
4	UNFCCC	AMS-I.F.	ver.3	Other
5	CME	Updated PoA-DD for 2nd PoA period	ver.2	Other
6	UNFCCC	TOOL11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period	ver.3.0.1	Other
7	UNFCCC	TOOL07: Tool to calculate the emission factor for an electricity system	ver.7.0	Other
8	UNFCCC	CDM Project Standard for PoA	ver.2.0	Other
9	KSA	Validation report for 2 nd PoA period	ver.1.1	Other
10	KSA	Validation report for CPA 001 inclusion		Other
11	CME	CME's technical review record		CME
12	KESCO	Certificates of pre-operation inspection		Other
13	KFQ	Verification report for 1st monitoring period		Other
14	CME	Single line diagrams		Other
15	UNFCCC	Tool19.Demonstration of additionality of microscale project activities	ver.19	Other
16	Ministry of industry, trade, and energy	Load factors for renewable energy facilities	02/08/2019	Others
17	CME	MoC statement		CME
18	CME	Emission reduction calculation spreadsheet	Ver.2	CME
19	CME	CME Operation Manual	Ver.10	CME

Appendix 4. Clarification requests, corrective action requests and forward action requests

Table 1. CL from this validation

CL ID	01	Section no.	D.7	Date:	19/01/2020
Description of CL					
Please provide latest version of CDM operation manual, prepared by CME					
CME response					Date: 12/02/2020
Relevant document is attached					

Documentation provided by CME	
CDM Operation Manual (ver.10)	
DOE assessment	Date: 12/02/2020
Validation team reviewed the document and found updated eligibility criterias for the renewed PoA period is reflected. CL closed.	

CL ID	02	Section no.	D.5	Date: 19/01/2020
Description of CL				
Please provide sample of actual monitoring record for the CPA.				
CME response				Date: 12/02/2020
Monitoring record for last year is attached				
Documentation provided by CME				
Monitoring record of Changwon Bongrim site				
DOE assessment				Date: 12/02/2020
Validation team reviewed the record and found that actual monitoring and reporting activity has been implementing. CL closed				

Table 2. CAR from this validation

CAR ID	01	Section no.	D.5	Date: 19/01/2020
Description of CAR				
No 8 of eligibility criterion required condition is not in line with criterion in the generic CPA of latest version of PoA-DD.				
CME response				Date: 12/02/2020
<i>The eligibility criterion was revised in accordance with PoA-DD</i>				
Documentation provided by CME				
<i>Revised CPA-DD</i>				
DOE assessment				Date: 12/02/2020
Validation team reviewed CPA-DD and confirmed it. CAR closed				

CAR ID	02	Section no.	D.6	Date: 19/01/2020
Description of CAR				
Information in the emission reduction calculation worksheet is not correct: (1) title of CPA (2) applied methodology (3) amount of ER (4) Baseline emission				
CME response				Date: 12/02/2020
<i>ER sheet revised</i>				
Documentation provided by CME				
<i>Revised ER sheet</i>				
DOE assessment				Date: 12/02/2020
Validation team reviewed ER sheet and closed.				

Table 3. FAR from this validation

FAR ID	xx	Section no.		Date: DD/MM/YYYY
Description of FAR				
N/A				
CME response				Date: DD/MM/YYYY
Documentation provided by CME				
DOE assessment				Date: DD/MM/YYYY

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Document information

<i>Version</i>	<i>Date</i>	<i>Description</i>
03.0	31 May 2019	Revision to: <ul style="list-style-type: none"> Ensure consistency with version 02.0 of the “CDM validation and verification standard for programmes of activities” (CDM-EB93-A08-STAN); Make editorial improvements.
02.0	29 December 2017	Revision to align with the requirements of the “CDM validation and verification standard for programme of activities” (version 01.0). Change form symbol from CDM-CPA-RCPV-FORM to CDM-CPA-RCPV-FORM.
01.0	3 August 2015	Initial publication.
Decision Class: Regulatory Document Type: Form Business Function: Renewal of crediting period Keywords: component project activity, crediting period, validation report		