Validation report form for CDM project activities

(Version 04.0)

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

BASIC INFORMATION	
Title of the project activity	70MW Solar Power Plant Project in Ba Ria – Vung Tau, Vietnam
Scale of the project activity	☒ Large-scale ☐ Small-scale
Version number of the validation report	V.2.1
Completion date of the validation report	20/01/2020
Version number of the PDD to which this report applies	V.1.7
Date when PDD was uploaded for global stakeholder consultation	14/05/2019
Project participants	SH Solar Farm Vina Co., Ltd SH Power Co., Ltd
Host Party	Socialist Republic of Viet Nam
Applied methodologies and standardized baselines	ACM0002 (Grid-Connected Electricity Generation from Renewable Sources – Version 19.0)
Mandatory sectoral scopes	Sectoral Scope: 01. Energy industries(renewable-/non-renewable sources)
Conditional sectoral scopes, if applicable	N/A
Estimated amount of annual average GHG emission reductions or GHG removals by sinks	98,545 tCO_2e
Name and UNFCCC reference number of the DOE	Korean Standards Association(KSA) / E-0039
Name, position and signature of the approver of the validation report	JinSeong Park Director General of Certification Service Division

SECTION A. Executive summary

>> Korean Standards Association (KSA), commissioned by SH Power Co., Ltd, has performed a validation of large-scaled CDM project "70MW Solar Power Plant Project in Ba Ria – Vung Tau, Vietnam" (hereafter referred to as "the Project") with regard to the relevant requirements for CDM project activities, UNFCCC's CDM criteria, subsequent decisions of COP/MOP and CDM-EB and host country criteria.

The main purpose of the project activity is to generate electrical energy by new installation of photovoltaic powerplant and to export it to the Vietnamese national grid. The renewable energy, generated from the Project, partially displace fossil fuelled electricity which have been fed into the Vietnamese national grid, thus contributing to the global climate change mitigation, regional sustainable development regarding social, environment and economy.

The annual average emission reductions achieved from the project activity are estimated to be 98,545 tCO_2e over the 7-year renewable crediting period.

The scope of the validation is defined as an independent and objective review of the submitted PDD, the project baseline study, monitoring plan and other relevant documents, and consists of the review of the PDD and relevant documents, the follow-up actions of on-site inspection and interview with the PPs and stakeholders and the resolution of raised CARs and CLs and the issuance of the final validation report and opinion.

In conclusion, KSA hereby state that the Project correctly applies the methodology ACM0002 version 19.0 and comply with all the relevant UNFCCC's CDM criteria, subsequent decisions of COP/MOP and CDM-EB and host country criteria. Thus, KSA requests the registration of the project as a CDM project activity.

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	IR	Moon	HyunMan	KSA	√	√	√	√
2.	Validator	ER	Park	SeongYong	KSA	√	√	√	√
3.	Validator	IR	Yun	ChanSik	KSA	√	√	√	√
4.	Local Expert	ER	Nguyen	Doan Quoc Anh	KSA	√	√	√	-

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

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	ER	Sohn	KyuIl	KSA
2.	Approver	IR	Park	JinSeong	KSA

SECTION C. Means of validation

C.1. Desk/document review

>> The desk review for the validation was conducted primarily as a review of the publicly available project design document (PDD) version 1.0 dated 30/04/2019 and the subsequent and final version 1.7 dated 17/01/2020. And other documents were also reviewed to cross check information provided in the PDD. KSA's CDM validation protocol was used to conduct the desk review.
The details of reviewed documents during the desk review are listed in Appendix 3 of this validation report.

C.2. On-site inspection

Duration of on-site inspection: 18/06/2019 to 19/06/2019				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Validation team checked followings at PP's Vietnamese office; - Project characteristics · Identification of project · Prior consideration · Project boundary · Start date, crediting period type and duration · Environmental impact assessment · Application of methodology - Emission reductions · Emission factor · Baseline Scenario · Project emission · Leakage	HoChiMinh, Viet Nam	18/06/2019	Moon, HyunMan Park, SeongYong Yun, ChanSik Nguyen, Doan Quoc Anh
2.	Validation team checked followings at powerplant site; - Technologies and measures employed · Solar photovoltaic module · Inverter · Electricity transmission & distribution · Service power · Construction of power plant · Project emission - Monitoring plan · Data and parameters to be monitored · Data and parameters fixed ex-ante - Local stakeholder's consultation · Interview with local employees · Interview with local residents - Etc · Environmental impact assessment · Project emission & leakage · Project boundary	Ba Ria – Vung Tau, Viet Nam	19/06/2019	Moon, HyunMan Park, SeongYong Yun, ChanSik Nguyen, Doan Quoc Anh

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Kwon	OhJun	PP / Director / SH Solar Farm Vina Co., Ltd.	18/06/2019 19/06/2019	Prior Consideration, Start date	Park, SeongYong
2	Park	EunHwan	PP / Team leader / SH Solar Farm Vina Co., Ltd.	18/06/2019 19/06/2019	Technologies and measures employed, Project emission, Leakage, Monitoring plan	Park, SeongYong Moon, HyunMman
3	Le	Thanh Lam	Local employee / SH Solar Farm Vina Co., Ltd.	19/06/2019	Local Stakeholder consultation, Baseline Scenario(Greenfield project)	Moon, HyunMan Nguyen, Doan Quoc Anh
4	Nguyen	Huu Dung	Local employee / SH Solar Farm Vina Co., Ltd.	19/06/2019	Local Stakeholder consultation, Baseline Scenario(Greenfield project)	Moon, HyunMan Nguyen, Doan Quoc Anh
5	Kim	CheolYoung	Project Identifier / Team leader / Haemaroo Solar Co., Ltd.	18/06/2019 19/06/2019	Identification of project	Yun, ChanSik
6	Kim	YunHo	Project EPC Contractor / Team leader / Halla E&C	19/06/2019	Environmental impact assessment, Local Stakeholder consultation	Moon, HyunMan Park, SeongYong
7	Jung	SunCheol	Consultant / Team leader / Eco Network Co. Ltd.	18/06/2019 19/06/2019	Baseline Scenario, Emission factor	Park, SeongYong Moon, HyunMan
8	Seol	SeHwan	Consultant / Team member / EcoNetwork Co. Ltd.	18/06/2019 19/06/2019	Crediting period type, Application of methodology	Yun, ChanSik
9	Le	Van Hai	Local resident	19/06/2019	Local Stakeholder consultation, Baseline Scenario(Greenfield project)	Moon, HyunMan Nguyen, Doan Quoc Anh
10	Nguyen	Hoang Thanh	Local resident	19/06/2019	Local Stakeholder consultation, Baseline Scenario(Greenfield project)	Moon, HyunMan Nguyen, Doan Quoc Anh

C.4. Sampling approach

>> No sampling approach has been considered for the Project.

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

Areas of validation findings	No. of CL	No. of CAR	No. of FAR
Demonstration of prior consideration of the CDM	-	1	-
Identification of project type	-	1	-
Description of project activity	5	-	-
Application and selection of methodologies and standardized baselines	-	-	-
- Application of methodologies and standardized baselines	-	-	-
- Deviation from methodology and/or methodological tool	-	-	-
- Clarification on applicability of methodology, tool and/or standardized baseline	-	-	-
- Project boundary, sources and GHGs	-	1	-
- Baseline scenario	-	3	-
- Demonstration of additionality	-	2	-
- Estimation of emission reductions or net anthropogenic removals	-	1	-
- Monitoring plan	-	1	-
Start date, crediting period type and duration	-	1	-
Environmental impacts	-	-	-
Local stakeholder consultation	-	1	-
Sustainable development co-benefits	-	-	-
Approval	-	1	-
Authorization	-	-	-
Modalities of communication	-	1	-
Global stakeholder consultation	-	-	-
Others _ Basic Information	1	-	-
Total	6	14	-

SECTION D. Validation findings

D.1. Demonstration of prior consideration of the CDM

Means of validation	
	Start date Validation team reviewed PDD and found that the PP specified the start date of the Project as 19/10/2018, the signed date of Photovoltaic Module Master Supply Agreement. Validation team checked the submitted evidence, Photovoltaic Module Master Supply Agreement signed on 19/10/2018, and confirmed that the start date of the Project, 19/10/2018, is specified with evidence. Validation team concluded, according to the latest CDM term – glossary version 10.0, that the start date of the Project is determined to be 19/10/2018. **Prior consideration** Validation team reviewed the PDD and found that the PP notified the Vietnamese DNA and the UNFCCC secretariat of the prior consideration of the Project on 27/02/2019 about the commencement of a new project activity and the intention to seek the CDM status.

Validation team checked the 'Prior Consideration of the CDM' page on UNFCCC website[1] and confirmed that the notification is duly received on 28/02/2019.

Timeline	Date	Reference
Start date of the Project	19/10/2018	PV module purchase signed dated
Prior consideration notification received	28/02/2019	UNFCCC website

Validation team also cross - checked the e-mail that PP sent to the Vietnamese DNA and the UNFCCC secretariat dated on 27/02/2019 and its confirmation reply from Vietnamese DNA dated on 28/02/2019 and UNFCCC secretariat dated on 01/03/2019.
Validation team confirmed, as the start date of the Project, 19/10/2018, is after 02/08/2008, the notification of prior consideration to the DNA of the host country and UNFCCC is duly made within 180 days of the start date of the Project

Consideration of CDM benefits in the decision of the Project
Validation team reviewed PDD and found that PP considered CDM benefits before the decision of the Project. The PP considered CDM benefits during their investment analysis and brought the result on their board meeting for approval of the Project dated on 23/05/2018, before the start date of the Project.

Validation team checked the minutes of the board meeting for approval of the Project and confirmed that the PP considered CDM benefits, *i.e.* CER and KOC, for the decision to undertake the Project as a CDM project.
Validation team confirmed that the PP considered CDM benefits in the decision of the Project.

Findings	CAR 06. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 39 to 45 of VVS for PA version 02.0, KSA concluded that the proposed CDM project activity is complies with the applicable requirements of the prior consideration of CDM.

D.2. Identification of project type

Means of validation	**Type of CDM project activity** Validation team reviewed the PDD and found that the PP marked as 'Large-scale' on basic information section, the front page, of the PDD and describes the total installed capacity of the Project is 69.552 MW. Validation checked completion report for construction of the Project and confirmed total installed capacity is of the Project is 69.552 MW. Validation team concluded that the PP correctly identified the Project as large-scale. **Valid version of the PDD form and its instruction** Validation team reviewed the PDD and checked UNFCCC website[2], and confirmed that the PP duly used the CDM-PDD-FORM version 11.0 which is appropriate to large-scale project and up-to dated template. Validation team also confirmed that the PDD is completed by following the instruction therein.
Findings	CAR 01. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with section 7.3 of VVS version 02.0, KSA concluded that the proposed CDM project activity complies with the requirement of the identification of project type.

D.3. Description of project activity

Means of validation	Validation team reviewed PDD and found that the PP described the Project as follows:

[1] https://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html
[2] https://cdm.unfccc.int/Reference/PDDs_Forms/index.html

	Title 70MW Solar Power Plant Project in Ba Ria – Vung Tau, Vietnam Validation team checked the Letter of Approval (LoA) from Vietnamese DNA and confirmed that the title of the Project identical with the project title on the LoA. **Scale** Large-scale Validation team checked the total installed capacity of the solar power plant from the completion report for construction of the Project and confirmed that the Project is large-scale as the total installed capacity of the Project is 69.552 MW. **Project participants** SH Solar Farm Vina Co., Ltd SH Power Co., Ltd Validation team checked the PDD & LoA and confirmed that the PPs are authorized by the host Party, Vietnamese DNA. Validation team checked Modalities of Communication (MoC) statement and confirmed that the information on PPs & authorizing party of the Project are duly indicated in the MoC. **Host country** Socialist Republic of Viet Nam Validation team checked the LoA and confirmed the Host country of the Project is Socialist Republic of Viet Nam. This was also confirmed during the on-site assessment. **Methodology** ACM0002 _ Grid-Connected Electricity Generation from Renewable Sources _ Version 19.0 Validation team checked the applicability of the methodology ACM0002 version 19.0 and confirmed that the methodology is applicable to the Project. Detailed assessment for the application of the methodology is described on the section D.4.1. of the report. **Sectoral Scope** 1. Energy industries (renewable/non-renewable sources) Validation team checked the “Standard: Applicability of sectoral scopes” version 01.0 and “CDM accreditation standard” version 07.0, and confirmed that the sectoral scope of the applied methodology ACM0002 to the Project is 1. Energy industries (renewable/non-renewable sources). Validation team also confirmed that there is no applicable conditional sectoral scope for the applied methodology ACM0002. **Purpose** Generate clean electricity energy through renewable solar energy source and supply the electricity into Vietnamese national grid by displacing the fossil fuelled electricity generation. Validation team checked the power purchasing agreement (PPA) established between the PP, i.e. the electricity seller and the Vietnam electricity (EVN), i.e. the electricity buyer, and confirmed that the purpose of the project is correctly described.

General description

The project activity is installation and operation of new solar power plant in the Chau Duc district, Ba Ria – Vung Tau province in Vietnam. The total installed capacity of the Project is 69.552 MW and the estimated electricity from the Project is 116,045 MWh/year. The estimated annual GHG emission reductions are 98,545 tCO_2e per year and 689,815 tCO_2e during the 7 years' crediting period.
The Project is not a capacity addition nor retrofit nor replacement of any existing plant.

Validation team checked the completion report for construction of the Project and confirmed that the installed capacity and estimate electricity from the Project is correctly described.
Validation team checked emission reduction calculation sheet developed by the PP and confirmed that the calculation is correct, reproducible and evident.
Validation team interviewed the local residents of the Project site and local employees of the Project during the on-site assessment, and confirmed that the project is installation of new solar power plant, and not a capacity addition nor retrofit nor replacement of any existing plant.
Validation team also confirmed that the project location is Chau Duc district, Ba Ria – Vung Tau province in Vietnam during the on-site assessment.

Contribution to the sustainable development of the Host party

i) The Project provides clean electricity by reducing the use of fossil energy which causes environmental pollution.
ii) The Project provides electricity to the host country which is suffering short of electricity that cause negative impacts on development of the host country.
iii) The Project contributes to reduce dependence of fossil fuel which is imported and to promote the best use of natural resource.
iv) The Project adopted more advanced equipment from Korea which is highly efficient and thus will encourage and promote development of renewable energy technology in the host country.
v) The Project contributes to employment of locals during the construction phase and during its operation.
vi) The Project contributes to local economy by tax payment from its electricity sales and ensuring energy security thereby prompting the industrialization.

Validation team checked Letter of Approval (LoA) from Vietnamese government and confirmed that the Vietnamese government confirms that the Project contributes to sustainable development in Vietnam on its LoA.

Location of project activity

Road No. D15, Chau Duc Industrial Park, Nghia Thanh Commune, Chau Duc District, Ba Ria – Vung Tau Province, Vietnam.

The coordinates of the Project location are as follow;

No	Lattitude	Longtitude
1	10.578124^o North	107.191825^o East
2	10.580135^o North	107.180151^o East
3	10.573212^o North	107.185474^o East
4	10.584318^o North	107.181822^o East

Validation team confirmed that the project location is correctly described in the PDD during the on-site assessment. Validation team checked the coordinates of the Project with project location map from the google earth during the desk review and with GPS device during the on-site assessment, and confirmed that the specification of coordinate of the Project location is correct.

Technology/measure

The technology adopted to the Project is photovoltaic power generation.
Technical details are as follow;

Equipment	Indicators	Specification
Solar Panel	Manufacturer	Hanwha Q CELLS
	Type	Poly Cristal
	Rated Max. power at STC	345W
	Module Efficiency	17.8%
	Warranty	83% of nominal power up to 25 years
	Quantity	201,600
Inverter	Manufacturer	HYOSUNG
	Model	HS-P625GLO
	Quantity	112 e.a.
	Input	
	Rated DC Input Power	685kW
	Max. DC Input Voltage	1,000V
	DC Voltage Range	550-1,000V
	MPP Voltage Range	550-850V
	Max. DC Current	1,245A
	Output	
	Rated AC Output Power	625kW
	Max. AC Output Power	625kW
	Rated AC Voltage Range	340V (-12 ~ +10)%
	Rated Grid Voltage	340V
	Rated Output Current	1,061A
	Max. Efficiency	> 98%
Transformer	Manufacturer	HYOSUNG
	Rating Power	1300/(650+650) kVA
	Rated Voltage	HV 22,000V, LV 340V

Validation team checked the completion report for construction of the project and specification of the equipment and confirmed that the technical details were correctly described in the PDD.

Life time
The life time of the main equipment, PV panel, is 25 years.

Validation team checked the PV module manufacturer's specification and warranty of the PV module from the PV module master supply agreement, and confirmed the life time of the project, 25 years, is correctly specified.

Public funding
There is no public funding for the Project.

Validation team interviewed the PP and confirmed that there is no public funding for the project.

Etc
The proposed CDM project activity is neither registered as a CDM PA nor included as a CPA in a registered PoA.
The proposed CDM project activity is not a PA that has been deregistered.
The proposed CDM project activity is not a debundled component of a large-scale

	project activity Validation team checked the 'Project Search' page of UNFCCC website[3] and confirmed that there is no other solar power generation CDM project is registered nor under validation near the Project site at the time of PDD submission.
Findings	CL 02, CL 03, CL 04, CL 05 & CL06. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 56 of VVS for PA version 02.0, KSA concluded that the proposed CDM project activity complies with the requirement of the description of project type.

D.4. Application and selection of methodologies and standardized baselines

D.4.1. Application of methodologies and standardized baselines

Means of validation	The PP applied approved methodology ACM0002 _ Grid-connected electricity generation from renewable source _ Version 19.0 to the Project. Validation checked the methodology page of UNFCCC website[4] and confirmed that the PP applied valid and the latest version of methodology ACM0002 at the time of PDD submission. And validation team checked the applicability of ACM0002 version 19.0. The methodology describes as follows on its para. 3: *This methodology is applicable to grid-connected renewable energy power generation project activities that:* *(a) Install a Greenfield power plant;* *(b) Involve a capacity addition to (an) existing plant(s);* *(c) Involve a retrofit of (an) existing operating plants/units;* *(d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or* *(e) Involve a replacement of (an) existing plant(s)/unit(s).* Validation team checked that the Project is installation of new solar power plant, a Greenfield renewable energy power generation project activity, which is connected to the grid from the assessment of the PDD and its submitted evidences, and during the on-site assessment. Validation team also interviewed the local employees of the Project and local residents of the Project site during the on-site assessment and confirmed that the Project is installation of new solar power plant. Validation confirmed that the project satisfies *(a) Install a Greenfield power plant*. The methodology describes as follows on its para. 4: *The methodology is applicable under the following conditions:* *(a) The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit;* *(b) In the case of capacity additions, retrofits, rehabilitations or replacements (except for wind, solar, wave or tidal power capacity addition projects) the existing plant/unit started commercial operation prior to the start of a minimum historical reference period of five years, used for the calculation of baseline emissions and defined in the baseline emission section, and no capacity expansion, retrofit, or rehabilitation of the plant/unit has been undertaken between the start of this minimum historical reference period and the implementation of the project activity.* Validation team checked that the Project is solar power plant typed renewable

[3] https://cdm.unfccc.int/Projects/projsearch.html
[4] https://cdm.unfccc.int/methodologies/DB/VJI9AX539D9MLOPXN2AY9UR1N4IYGD

energy power plant from the assessment of the PDD and its submitted evidences, and during the on-site assessment.
Validation confirmed that the project satisfies *(a) The project activity may include renewable energy power plant/unit of one of the following types: hydro power plant/unit with or without reservoir, wind power plant/unit, geothermal power plant/unit, solar power plant/unit, wave power plant/unit or tidal power plant/unit*.

The methodology describes as follows on its para. 5 & 6:

In case of hydro power plants, one of the following conditions shall apply:
- *(a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or*
- *(b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (3), is greater than 4 W/m2; or*
- *(c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (3), is greater than 4 W/m2; or*
- *(d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (3), is lower than or equal to 4 W/m2, all of the following conditions shall apply:*
  - *(i) The power density calculated using the total installed capacity of the integrated project, as per equation (4), is greater than 4 W/m2;*
  - *(ii) Water flow between reservoirs is not used by any other hydropower unit which is not a part of the project activity;*
  - *(iii) Installed capacity of the power plant(s) with power density lower than or equal to 4 W/m2 shall be:*
    - *a. Lower than or equal to 15 MW; and*
    - *b. Less than 10 per cent of the total installed capacity of integrated hydro power project.*

In the case of integrated hydro power projects, project proponent shall:
- *(a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity of the integrated hydro power project; or*
- *(b) Provide an analysis of the water balance covering the water fed to power units, with all possible combinations of reservoirs and without the construction of reservoirs. The purpose of water balance is to demonstrate the requirement of specific combination of reservoirs constructed under CDM project activity for the optimization of power output. This demonstration has to be carried out in the specific scenario of water availability in different seasons to optimize the water flow at the inlet of power units. Therefore, this water balance will take into account seasonal flows from river, tributaries (if any), and rainfall for minimum five years prior to implementation of CDM project activity.*

Validation team checked that the Project does not include any hydro power activity from the assessment of the PDD and its submitted evidences, and during the on-site assessment.
Validation confirmed that the above para. are not applicable to the Project.

The methodology describes as follows on its para. 7:

The methodology is not applicable to:
- *(a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site;*
- *(b) Biomass fired power plants/units.*

Validation team checked that the Project does not include any switching from fossil fuels to renewable energy source at the site of the project activity nor biomass fired power plants/units, from the assessment of the PDD and its submitted evidences,

	and during the on-site assessment. Validation confirmed that the above para. is unrelated to the Project. The methodology describes as follow on its para. 8: *In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".* Validation team checked that the Project is not retrofits, rehabilitations nor capacity additions from the assessment of the PDD and its submitted evidences, and interview with local residents and local employees during the on-site assessment. Validation confirmed that the above para. are not applicable to the Project. The methodology describes as follow on its para. 9: *In addition, the applicability conditions included in the tools referred to below apply.* Validation team checked the tools, TOOL01, TOOL02, TOOL03, TOOL05, TOOL07, TOOL10 and TOOL11, referred to para. 13 of the methodology, and confirmed that the Project is also applicable to the tools. Validation team confirmed that the Project is satisfies the applicability of the methodology ACM0002 version 19.0.
Findings	No findings were raised during the validation activity
Conclusion	From the assessment above, in line with section 2.2 of approved & latest methodology ACM0002 version 19.0, KSA concluded that the proposed CDM project activity complies with all the applicability conditions therein.

D.4.2. Deviation from methodology and/or methodological tool

Means of validation	There was no deviation from the selected methodology ACM0002 version 19 sought by the PP for the Project from UNFCCC Secretariat.
Findings	N/A
Conclusion	KSA confirms that there was no deviation from the applied methodology, ACM0002 version 19.0, for the Project.

D.4.3. Clarification on applicability of methodology, tool and/or standardized baseline

Means of validation	There was no clarification on applicability of methodology, tool and/or standardised baseline to the Project has been issued.
Findings	N/A
Conclusion	KSA confirms that there was no clarification on applicability of methodology, tool and/or standardised baseline.

D.4.4. Project boundary, sources and GHGs

Means of validation	The methodology, ACM0002 Version 19.0, defines the project boundary as follow on its para. 20: *The spatial extent of the project boundary includes the project power plant/unit and all power plants/units connected physically to the electricity system that the CDM project power plant is connected to.* Validation team checked the spatial extent of the project boundary thorough the section B.3. of initial PDD version 1.0 as received for GSC and re-checked it during the on-site assessment. At the time of on-site assessment for the power plant, dated on 19/06/2019, the construction was completed and commissioning test was in progress. Validation team checked PV panels, inverters, transformer and the

	power connection to Vietnamese national grid during the on-site assessment and confirmed that the PP duly described the project boundary, PV panels, inverters, transformer, Vietnamese national grid and power plants connected to Vietnamese national grid on its revised PDD version 1.7. Validation team checked the applied methodology ACM0002 version 19.0 and confirmed that the greenhouse gases and emission sources included in or excluded from the project boundary is duly described on its revised PDD version 1.7.
Findings	CAR 03. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 74 of VVS for PA version 02.0, KSA concluded that identified boundary and the selected sources and gases are justified for the Project. Validation team did not identify any emission sources that will be affected by the implementation of the proposed project activity and which are expected to contribute more than 1 per cent of the overall expected average annual emission reductions or net anthropogenic GHG removals, and that are not addressed by the selected approved methodology, ACM0002 Version 19.0.

D.4.5. Baseline scenario

Means of validation	The methodology, ACM0002 version 19.0, defines the baseline scenario for Greenfield power plant as follow on its para. 22: *If the project activity is the installation of a Greenfield power plant, the baseline scenario is electricity delivered to the grid by the project activity would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in "TOOL07: Tool to calculate the emission factor for an electricity system".* Validation team checked the baseline scenario of the Project through the section B.4. of initial PDD version 1.0 as received for GSC and revised PDD version 1.7. *The Project involves the installation and operation of new, solar power plant and will supply generated electricity to the Vietnamese national grid.* *The baseline emission includes only CO_2 emission from electricity generation in fossil fuel fired power plants connected to the Vietnamese national grid that are displaced due to the Project. Thus, baseline emissions are calculated by multiplying of the electricity, generated from the Project, and the Vietnamese national grid factor, i.e. combined margin emission factor.* Validation team checked that it is the installation of a grid connected new solar power plant, Greenfield project, through the document review from the submitted evidence, e.g. construction completion report & power purchasing agreement, from the on-site inspection and from the interview with the local residents & local employees during the on-site assessment for the power plant. The PP calculated the emission factor as a combined margin (CM) according to the "Tool to calculate the emission factor for an electricity system" version 07.0. The PP used official government data to calculated the emission factor from "Vietnam grid emission factor 2017 report"[5, 6], which is published by the Department of Climate Change, Ministry of natural resources and environment. Validation team checked that the "Vietnam grid emission factor 2017 report" and confirmed that it applied the latest version, 07.0, of the 'Tool to calculate the emission factor for an electricity system' and the report is the latest available

[5] http://www.dcc.gov.vn/van-ban-phap-luat/1053/He-so-phat-thai-luoi-dien-Viet-Nam-2017.html
[6] http://www.dcc.gov.vn/van-ban-phap-luat/1054/Nghien-cuu,-xay-dung-he-so-phat-thai-(EF)-cua-luoi-dien-Viet-Nam-(K%C3%A8m-CV-330/BDKH-GNPT).html

	officially published on the website of the Department of Climate Change at the time of revised PDD submission And validation team have sent an e-mail inquiry to the official contact point on DCC's website, requesting that the confirmation of the up-to-dated publish of the report, however the DCC did not reply. Validation team searched other reference of the Vietnamese electricity grid emission factor by internet searching, however, could not find any up-to-dated officially published data other than the Viet Nam grid emission factor 2017 report dated 29/03/2019 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to calculate the Vietnamese electricity grid emission factor.
Findings	CAR 02, CAR 05, CAR 08. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with section. 7.6.3 of VVS for PA version 02.0, KSA concluded that the identification and establishment of baseline scenario of the Project is duly demonstrated in accordance with the applicable requirements and the data used to establish the baseline scenario is valid and credible.

D.4.6. Demonstration of additionality

Means of validation	The PP described that the Project is automatically additional according to the section 5.3.1. simplified procedure to demonstrated additionality of the applied methodology ACM0002 version 19.0. The methodology, ACM0002 version 19.0, describes that the project activity is automatically additional if it meets conditions follows on its para. 28 & 29: *28. The simplified procedure to demonstrate additionality is applicable to the following grid connected electricity generation technologies (positive list):* *(a) Solar photovoltaic technologies;* *(b) Solar thermal electricity generation including concentrating Solar Power (CSP);* *(c) Off-shore wind technologies;* *(d) Marine wave technologies;* *(e) Marine tidal technologies;* *(f) Ocean thermal technologies.* *29. A specific technology in the positive list is defined as automatically additional if at the time of PDD submission any of the following conditions is met:* *(a) The percentage share of total installed capacity of the specific technology in the total installed grid connected power generation capacity in the host country is equal to or less than two per cent; or* *(b) The total installed capacity of the technology in the host country is less than or equal to 50 MW.* Validation team checked the demonstration of additionality of the Project through the section B.5. PDD version 1.7. The Project is installation of a grid connected solar power plant, i.e. solar photovoltaic technology that is listed on the positive list of the methodology ACM0002 version 19.0, and the percentage share of total installed capacity of the solar power photovoltaic technology in the total installed grid connected power generation in the Vietnam is less than two per cent.

Total installed power plant capacity in Vietnam (MW)	42,135	a
Total installed capacity of the solar power plant in Vietnam (MW)	106	b
Percentage share of solar power plant in Vietnam	0.25%	(b / a) x 100

Validation team checked that total installed power plant capacity of Vietnam, 42,135MW, from the "Vietnam Electricity Annual Report 2017"[7], submitted by PP as

[7] https://en.evn.com.vn/c3/gioi-thieu-l/Annual-Report-6-13.aspx

	an evidence, which is published by Vietnam Electricity, EVN[8], an entity established by Vietnamese government. Validation team also checked that the total installed capacity of the solar power photovoltaic technology, 106MW, from the "Renewable Energy Statics 2019"[9] submitted by PP as an evidence, from International Renewable Energy Agency, IRENA[10], the intergovernmental organization on renewable energy. Validation team have sent an e-mail inquiry to the official contact point on the website, requesting that the confirmation of the up-to-dated publish of the report, however the EVN did not reply. Validation team searched other reference of the total installed power plant capacity of Vietnam by internet searching, however, could not find any up-to-dated officially published data other than the Vietnam Electricity Annual Report 2017 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to for the total installed power plant capacity of Vietnam. Validation team searched other reference of the total installed solar photovoltaic capacity of Vietnam by internet searching, however, could not find any up-to-dated officially published data other than the IRENA RE Capacity Statistics 2019 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to for the total installed solar photovoltaic power plant capacity of Vietnam. Validation team confirmed that the both of the evidences are the latest available officially published on the website of each publishers at the time of PDD submission and thus, validation team concluded that the sources used are valid and credible. And the validation team re-calculated the percentage share of solar power plant in the total installed grid connected power generation in Vietnam and confirmed that it is less than two per cent, 0.25% at the time of PDD submission. And validation team also confirmed that the Project is installation of gird connected solar photovoltaic during the desk review and during the on-site assessment.
Findings	CAR 07, CAR 14. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 86 to 90 of VVS for PA version 02.0, KSA concluded that the additionality of the Project is automatically additional as described in the PDD in accordance with the applicable requirements and the data used to prove the additionality is valid and credible.

D.4.7. Estimation of emission reductions or net anthropogenic removals

Means of validation	The PP described how they carried out the emission reduction, and calculated the emission reduction with excel sheet and included the result on the section B.6. of the PDD. And, the methodology, ACM0002 version 19.0, describes how to carry out estimation of emission reductions as follow on its para. 57: *Emission reductions are calculated as follows:* $ER_y = BE_y - PE_y$ *Where:* ER_y = *Emission reductions in year y (t CO_2e/yr)* BE_y = *Baseline emissions in year y (t CO_2/yr)* PE_y = *Project emissions in year y (t CO_2e/yr)* Validation team checked the description on how PP carried out of the emission reductions for the Project and its result on the section B.6. of the PDD along with

[8] https://en.evn.com.vn/c3/gioi-thieu-f/Overview-2-3.aspx
[9] https://www.irena.org/publications/2019/Jul/Renewable-energy-statistics-2019
[10] https://www.irena.org

the emission calculation excel sheet version 1.5. Validation team confirmed that the calculation is correct, reproducible and evident.

The PP carried out the emission reductions for the Project according to the applied methodology ACM0002 version 19.0 and relevant tool "Tool07: Tool to calculate the emission factor for an electricity system" version 07.0 as follows:

Project Emission
As the Project is a solar power plant which does not use fossil, project emission is considered Zero. Thus,

$$PE_y = 0$$

Baseline Emission
As the Project includes the installation of solar, renewable, energy power plant, the baseline emissions only includes CO2 emissions from the amount of electricity provided by the fossil fueled power plants which will be replaced by the Project. Thus,

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

Where:

BE_y	=	Baseline emissions in year y (tCO_2/yr)
$EG_{PJ,y}$	=	Quantity of net electricity genenration that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)
$EF_{grid,CM,y}$	=	Combined margin CO_2 emission factor for grid connected power generation in year y (tCO_2/MWh)

And, as the project is the installation of new power plant, a Greenfield project, the net electricity by project activity, $EG_{PJ,y}$, is as follow:

$$EG_{PJ,y} = EG_{facility,y}$$

Where:

$EG_{PJ,y}$	=	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr)
$EG_{facility,y}$	=	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

And combined margin grid emission factor, $EF_{grid,CM,y}$, is calculated as follow:

$$EF_{grid,CM,y} = EF_{grid,OM,y} \times w_{OM} + EF_{grid,BM,y} \times w_{BM}$$

Where:

$EF_{grid,BM,y}$	=	Build margin CO_2 emission factor in year *y* (t CO_2/MWh)
$EF_{grid,OM,y}$	=	Operating margin CO_2 emission factor in year *y* (t CO_2/MWh)
w_{OM}	=	Weighting of operating margin emissions factor (per cent)
w_{BM}	=	Weighting of build margin emissions factor (per cent)

And, as the Project is solar power generation project, the combined margin grid emission factor, $EF_{grid,CM,y}$, is weighed as follow:

w_{OM} = 0.75 and w_{BM} = 0.25

For the values of operating margin emission factor ($EF_{grid,OM,y}$) and build margin emission factor ($EF_{grid,BM,y}$), the PP used official government data from 'The study and calculation of the emission factor (EF) in Viet Nam electricity grid', which is published by the Department of Climate Change, Ministry of natural resources and environment.
Each of the values are as follows:

Operating Margin Emission Factor : $EF_{grid,OM,y}$ = 0.8336 tCO_2/MWh; *and*

Build Margin Emission Factor : $EF_{grid,BM,y}$ = 0.8961 tCO_2/MWh

And thus, the combined margin emission factor ($EF_{grid,CM,y}$) is calculated as follow:

$EF_{grid,CM,y}$ = 0.75 x 0.8336 + 0.25 x 0.8961 = 0.8492 (tCO_2/MWh)

Leakage
According to the applied methodology ACM0009 version 19.0, no other leakage emissions are considered. The emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, transport etc.) are neglected.

Ex ante calculation of Emission Reduction
The PP estimated annual generated electricity with the values/data follows:

Item	Value/Data	Unit	Reference
Capacity of a PV panel	345	W/EA	Manufacturer's specification
Number of panels	201,600	EA	Construction completion report
Average generation time per day	4.57114	Hour/Day	Construction completion report (PVSYST S/W)
Operating days	365	Day/Year	Construction completion report

From the value above, estimated annual generated electricity ($EG_{PJ,y}$) is calculated as follow:

$EG_{PJ,y}$ = 345 W/EA x 201,600 EA x 4.57114 Hour/Day x 365 Day/Year
= 116,045 MWh/Year

And thus, baseline emission (BE_y) for the Project is calculated as follow:

BE_y = 116,045 MWh/Year x 0.8492 tCO_2/MWh = 98,545 tCO_2/Year

Therefore, ex ante calculation of emission reduction is,

$ER_y = BE_y - PE_y$ = 98,545 - 0 = 98,545 tCO_2e/Year; *and*
And, for the 7 years' crediting period is 98,545 x 7 = 689,818 tCO_2e/7-Year

Validation team confirmed that the PP correctly carried out calculation of the ex ante emission reduction with the equations as per the applied methodology ACM0002 version 19.0 and relevant tool "Tool07: Tool to calculate the emission factor for an electricity system". Validation team also confirmed that the data/values on the Emission reduction calculation sheet and PDD are correctly quoted and

	interpreted.
Findings	CAR 09. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 113 of VVS for PA version 02.0, KSA concluded that the estimation of emission reductions quoted and interpreted in the PDD and the emission reduction calculation sheet is in accordance with the applicable requirements and the data/value used to calculate emission reduction is valid and credible.

D.4.8. Monitoring plan

Means of validation	The PP specified the data and parameter to be monitored for the Project is the quantity of net electricity generation supplied by the PP to the Vietnamese national grid ($EG_{PJ,y}$) and dscribed that the quantity of the net electricity will be calculated by the difference between the export electricity and the import electricity to the grid from the Project on the section B.7.1. of the PDD. The PP also described following equation will be applied to calculate the net electricity to the grid on the same section of the PDD. $EG_{PJ,y} = EG_{PJ,Facilty,y} = EG_{export} - EG_{import}$ Validation team checked that the import electricity meter were installed by the Vietnam Electricity (EVN) and also checked that the export electricity meter along with its backup meter was installed by the Vietnam Electricity (EVN) during the on-site assessment. Validation team confirmed that the PP specified the data and parameter to be monitored in accordance with the applied methodology ACM0002 version 19.0 and the relevant tool “Tool05 : Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation”. The PP described that the electricity generated will be measured by electricity meter continuously and recorded monthly, and reading will be taken every month for billing to the power purchaser. And all data collected as part of monitoring will be achieved electronically and be kept at least for two years after the end of the last crediting period. The PP also described that electricity meter will be calibrated periodically per 2 years according to Vietnamese standards and regulations. Validation team checked that electricity generated is measured by electricity meter continuously during the on-site assessment. Validation team also found that Vietnamese government request to calibrate the electricity meter per 2 years by the regulations on measurement for group measure 2 from the Ministry of Science and Technology (23/2013 / TT-BKHCN).[11] Thus, Validation team confirmed that the PP properly planned continuous measurement and electronical data collection, and also properly planned calibration frequency in accordance with the applied methodology ACM0002 version 19.0 and the relevant tool “Tool05 : Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation”.
Findings	CAR 04. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, KSA concluded that the monitoring plan of the Project is described in accordance with the applied methodology ACM0002 version 19.0 and the relevant tool “Tool05 : Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation” and the monitoring plan of the Project is implementable and adequate.

D.5. Start date, crediting period type and duration

Means of validation	**Start date of the Project** The PP specified the start date of the project as 19/10/2018 on its revised PDD

[11] https://www.most.gov.vn/vn/Pages/ChiTietVanBan.aspx?vID=28318&TypeVB=1

version 1.7.

And the latest Glossary – CDM Terms version 10.0 defines as follow on its page 20:

> ***For a CDM project activity (non-A/R)*** *or CPA (non-A/R), the date on which the project participants commit to making expenditures for the construction or modification of the main equipment or facility (e.g. a wind turbine), or for the provision or modification of a service (e.g. distribution of energy-efficient light bulbs, change of transport management system), for the CDM project activity or CPA. Where a contract is signed for such expenditures (e.g. for procurement of a wind turbine), it is the date on which the contract is signed. In other cases, it is the date on which such expenditures are incurred. If the CDM project activity or CPA involves more than one of such contracts or incurred expenditures, it is the first of the respective dates. Activities incurring minor pre-project expenses (e.g. feasibility studies, preliminary surveys) are not considered in the determination of the start date.*

Validation team checked revised PDD version 1.7 and the submitted evidence, Photovoltaic Module Master Supply Agreement signed on 19/10/2018, and confirmed that the start date of the Project, 19/10/2018, is specified with evidence. Validation team concluded, according to the latest CDM term – glossary version 10.0, that the start date of the Project is determined to be 19/10/2018.

Expected Operational Life Time of the Project

The PP specified the expected operational lifetime of the Project by 25 years in the PDD.

Validation team checked the PV module manufacturer's specification and warranty of the PV module from the PV module master supply agreement, and confirmed the life time of the project, 25 years, is correctly specified.

Type of crediting period & Duration of crediting period

The PP selected the renewable crediting period and determined duration of crediting period for 7 years on its initially submitted PDD and revised PDD version 1.7.

And, the CDM project standard for project activities version 2.0, request the type and duration of the crediting period as follow on its para. 87 (a) & (b) :

> *87. The project participants shall select a type (renewable or fixed) and specify the duration of the crediting period for the proposed CDM project activity, taking into account that:*
> *(a) Each renewable crediting period shall be at most seven years and may be renewed at most two times, for a maximum total length of 21 years;*
> *(b) A fixed crediting period shall be at most 10 years.*

Validation confirmed that the PP correctly selected the crediting period, renewable, and determined duration of the crediting period for 7 years as the CDM project standard for project activities version 2.0 allows.

Start date of crediting period

The PP determined the start date of crediting period '01/01/2019 or the CDM registration date whichever is late'.

And, the CDM project standard for project activities version 2.0, request the start

	date of crediting period as follow on its para. 88 to 90 : *88. The project participants shall determine the start date of the crediting period of the proposed CDM project activity, which shall be on or after the date of registration of the project activity as a CDM project activity.* *89. The project participants shall determine only one start date for the crediting period of the proposed CDM project activity, even in cases of phased implementation of the project activity.* *90. The project participants shall state the start date of the crediting period of the proposed CDM project activity in the format dd/mm/yyyy, and shall not attach any qualifications to the start date, such as "expected".* Validation team confirmed that the PP correctly determined the start date of the crediting period '01/01/2019 or the CDM registration date whichever is late' as the CDM project standard for project activities version 2.0 allows.
Findings	CAR 13. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 123 to 125 of VVS for PA version 02.0, KSA concluded that start date of the proposed project activity, expected operational life time, type and duration of the crediting period, start date of the crediting period is duly selected, specified, described and determined in accordance with the relevant requirements in PS for PA version 02.0.

D.6. Environmental impacts

Means of validation	Environment Impact Assessment (EIA) on the aspect of the Project was conducted in accordance with the requirement of Vietnamese rule on EIA, Decree 18/2015/ND-CP[12] and Circulars 27/2015/TT-BTNMT[13], and the Environment Impact Assessment (EIA) report was approved by Vietnamese local government. The PP provided the summary of the EIA report on the Section D. of the initially submitted PDD version 1.0 and its revised PDD version 1.7. Validation team checked PDD, EIA report & its approval letter dated on 27/07/2018 from Vietnamese local government and the Vietnamese regulation on EIA, and confirmed that the EIA for the Project was carried out according to the Vietnamese regulation and the summary of the EIA is duly described on its revised PDD version 1.7.
Findings	No findings were raised during the validation activity
Conclusion	From the assessment above, in line with para. 129 of VVS for PA version 02.0, KSA concluded that EIA of the Project was duly carried out in accordance with the host party, the Vietnamese, rules and it satisfied the requirements of PS for PA version 02.0.

D.7. Local stakeholder consultation

Means of validation	Local Stakeholder Consultation (LSC) of the Project was conducted on 04/05/2018 in accordance with the requirement of Vietnamese rule on LSC, article 12 of Decree 18/2015/ND-CP, as a part of environmental impact analysis, and the result was approved by the Vietnamese local government. The PP described the process, summary of comment received and summary of comments received on the Section E. of revised PDD version 1.7 Validation team checked the article 12 of Decree 18/2015/ND-CP and confirmed that the PP's description of the process of LSC in the PDD is corresponds with the Vietnamese rule, the article 12 of Decree 18/2015/ND-CP. The PP submitted evidences of the implementation of the LSC, *e.g.* letter 'No. 17 / CV-Halla', reply 'No. 223 / UBND-VP' and minute of meeting from the consultation. Validation team checked the submitted evidences during document review stage and on-site assessment, and confirmed that the LSC was carried out as per the

[12] https://m.thuvienphapluat.vn/van-ban/tai-nguyen-moi-truong/Nghi-dinh-18-2015-ND-CP-bao-ve-danh-gia-moi-truong-chien-luoc-danh-gia-tac-dong-moi-truong-266409.aspx
[13] https://m.thuvienphapluat.vn/van-ban/tai-nguyen-moi-truong/Thong-tu-27-2015-TT-BTNMT-danh-gia-moi-truong-chien-luoc-tac-dong-moi-truong-bao-ve-moi-truong-277442.aspx

	process described in the PDD which is corresponds with the Vietnamese rule, the article 12 of Decree 18/2015/ND-CP. Validation team also checked the final EIA report and its approval letter from the Vietnamese local government, and confirmed that the implementation results of the LSC and its relevant evidences are included in the final EIA report and it is approved by the Vietnamese local government. Validation team also interviewed with the local employees of the Project and local residents of the Project site during the on-site assessment. Questions put to the locals by the team were translated into Vietnamese language by the interpreter presented on the meeting for the understanding. Validation team could not observe any complaint for the Project from the locals. Validation team confirmed that the LSC of the Project is duly carried out by the PP.
Findings	CAR 10. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 131 and 137 of VVS for PA version 02.0, KSA concluded that LSC of the Project was duly carried out in accordance with the host party, the Vietnamese, rules and it satisfied the requirements of PS for PA version 02.0.

D.8. Sustainable development co-benefits

Means of validation	The PP did not submit any sustainable development co-benefit related document to validation team. Validation team confirmed that the criterion is voluntary initiative as per the para. 111 of PS for PA version 02.0
Findings	No findings were raised during the validation activity
Conclusion	From the demonstration above, in line with para. 111 of PS for PA version 02.0, KSA reports that no document, describing how the sustainable development co-benefits of the Project separate from the monitoring plan, was submitted by the PP.

D.9. Approval

Means of validation	The PP obtained the Letter of Approval (LoA) from the Designated National Authority (DNA) of the host Party, Vietnam, on 28/10/2019. The PP submitted the LoA to the validation team. Validation team confirmed that the LoA clearly indicates the title of the Project “70MW Solar Power Plant Project in Ba Ria – Vung Tau, Vietnam” as exactly the same with the Project title in the PDD, and issued by the Designated National Authority (DNA) of Vietnam under the Ministry of Natural Resources and Environment (MONRE). Validation team also confirmed that there is neither attachment nor a separated authorization letter with the LoA. The Parties involved in the Project and indicated in the revised PDD are Socialist Republic of Viet Nam and LoA is duly issued from the Vietnamese DNA. Validation team confirmed that the LoA clearly mentions all the PPs involved in the Project, the SH Solar Farm Vina Co,. Ltd and the SH Power Co., Ltd. on it. Thus, validation team concluded that the LoA satisfies the requirement of para. 113 of PS for PA version 02.0. Validation team confirmed that the LoA clearly describes as follow; 1. *The Government of Viet Nam has ratified the Kyoto Protocol on 25 September 2002;* 2. *This is approval of voluntary participation of in the proposed CDM project activity; and* 3. *The above-mentioned project activity contributes to sustainable development in Vietnam.* Validation team also confirmed that the LoA is unconditional with respect to the description 1 to 3 above and the precise title of the Project.

	Validation team confirmed that the LoA indicates the Project have only one host Party, Vietnam, in which the Project is located, as set out in the PDD. Validation team searched information on Vietnamese DNA from the UNFCCC CDM website[14] to check whether the LoA has been issued by the Vietnamese DNA and is valid for the Project. Validation team confirmed that the LoA issuing organization and the organization information of Vietnamese DNA from the UNFCCC CDM website is exactly the same as 'Ministry of Natural Resources and Environment of Viet Nam'. Validation team also confirmed that the signatory of LoA and the focal point information of Vietnamese DNA from the UNFCCC CDM website is exactly the same as 'Tang The Cuong'. Validation team have sent an e-mail to the official e-mail address of the Vietnamese DNA[15] inquiring the confirmation of the authenticity of LoA and acquired an e-mail confirmation from Vietnamese DNA. And, thus, validation team concluded that the issuance of LoA valid. Validation team checked that the duration of validity of the LoA is 24 months and the LoA is issued on 28/10/2019. Thus, validation team confirmed that the LoA is valid at the time of PDD submission. Validation team confirmed that the LoA is not refer to a specific version of validation report. Validation team checked and confirmed during its document review stage and on-site assessment that the Vietnamese grid is not extended across to other Party involved in the Project, the Republic of Korea. Thus, validation team confirmed that the para. 116 of PS for PA version 02.0 is not applicable for the Project.
Findings	CAR 11. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 139 to 144 of VVS for PA version 02.0, KSA concluded that the LoA of the Project was issued as per the requirement of CDM regulation and is valid at the time of PDD submission.

D.10. Authorization

Means of validation	Based on the assessment from 'D.9. Approval' above, the validation team confirms as follows: Each PP of the Project has been authorized to participate in the Project by the Party involved with the LoA from the Vietnamese DNA. It was checked and confirmed from the LoA. The PPs of the Project are listed in the PDD and that this information is consistent with the information provided is consistent with the information provided in the section that contains the contact information of the PPs. It was checked and confirmed from the PDD. No entities other than those authorized as the PP of the Project are included in these sections of the PDD. It was checked and confirmed from the LoA and the PDD.

[14] https://cdm.unfccc.int/DNA/index.html
[15] VietnamDNA@monre.gov.vn

	The LoA has been issued form the host Party of the Project, Vietnam, and it is of no doubt that as the LoA issuing organization and the organization information of Vietnamese DNA from the UNFCCC CDM website is exactly the same as 'Ministry of Natural Resources and Environment of Viet Nam'. And the signatory of LoA and the focal point information of Vietnamese DNA from the UNFCCC CDM website is exactly the same as 'Tang The Cuong'. The signature of the focal point of DNA and seal of the DNA are confirmed from the LoA. Validation team have sent an e-mail to the official e-mail address of the Vietnamese DNA inquiring the confirmation of the authenticity of LoA and acquired an e-mail confirmation from Vietnamese DNA. Each PP has been authorized to participate in the Project by Vietnam government and Vietnam has ratified the Kyoto Protocol on 25 September 2002. It was checked and confirmed from the LoA and from the UNFCCC website[16].
Findings	No findings were raised during the validation activity
Conclusion	From the assessment above, in line with para. 147 to 151 of VVS for PA version 02.0, KSA concluded that the Project is authorized as per the requirement of CDM regulation.

D.11. Modalities of communication

Means of validation	PP submitted revised MoC along with the revised PDD. SH Power Co., Ltd., the PP who has contractual relationship with KSA submitted their Modalities of Communication (MoC) statement to KSA along with the e-mail confirmation which states all the detail included in the MoC statement valid and accurate. The submission of the MoC statement along with the confirmation is made by Mr. Byeong-Kyu Kim of SH Power Co., Ltd. who is primary authorized signatory of sole focal point authority. Validation team checked e-mail address of Mr. Byenog-Kyu Kim on the MoC statement and the submission e-mail and confirmed that the e-mail address is identical as 'kbk0311@soosan.co.kr'. Mr. Byeong-Kyu Kim and his e-mail address, 'kbk0311@soosan.co.kr', is also evident in Appendix 1. Contact information of project participant of the PDD. Validation team also cross-checked the validity of the completion and submission of the MoC statement by telephone call interview with the alternate authorized signatory of sole focal point authority, Mr. Sang-Hwan, Choung. Validation team reviewed the MoC and confirmed that the information on the revised MoC is correct and consistent with the information on revised PDD and LoA. Validation team also confirmed followings; - The latest version which is versioned 3.0 of the form "Modalities of Communication statement" (CDM-MOC-FORM) has been used; - The information required as per the CDM-MOC-FORM, including its annex 1, is correctly completed; - The project participants' authorized signatories signing the CDM-MOC-FORM correspond to the project participants' authorized signatories included in the CDM-MOC-FORM, annex 1. Thus, validation concluded that the filling of MoC is correct and submission of MoC statement is made official, valid and accurate.
Findings	CAR 12. Please refer to appendix 4 of the report for detail.
Conclusion	From the assessment above, in line with para. 152 to 159 of VVS for PA version 02.0, KSA concluded that the MoC Statement was duly completed and authorized in accordance with the valid version of the form and the information required therein.

[16] https://unfccc.int/node/61236

D.12. Global stakeholder consultation

Means of validation	The PP submitted initial PDD version 01.0 to KSA and KSA uploaded it on the UNFCCC website publicly available for the global stakeholder consultation (GSC)[17]. The period for comments was from 14/05/2019 to 12/06/2019 and no comments were received. The initial PDD version 01.0 was revised by the PP for the corrective actions during the validation process, however, following issues mentioned para. 262 (a) to (c) of VVS for PA version 02.0 are not occurred: *(a) The project participants that have a contractual relationship with the DOE have been replaced;* *(b) Significant changes have been made to the project design; or* *(c) The selected methodologies, the selected standardized baselines and/or the combination thereof have been changed by the project participants, unless the change only involves the removal and no addition of methodologies and/or standardized baselines, and the removal of the methodologies and/or the standardized baselines does not affect the physical design of, and the end-use services provided by, the proposed CDM project activity.* Thus, validation team confirmed that it is not necessary to make revised PDD publicly available for another GSC for the Project.
Findings	No findings were raised during the validation activity
Conclusion	From the assessment above, in line with para. 254 to 265 of VVS for PA version 02.0, KSA concluded that the GSC of the Project is duly implemented and completed as per the requirement of CDM regulation.

SECTION E. Internal quality control

>> The draft final validation report including the validation findings before submitted to UNFCCC for request for registration was subjected an independent internal technical review to confirm that all validation activities had been completed according to the KSA procedures.

Also the technical reviewer is qualified by KSA's qualification scheme for CDM validation and verification. As a result of the internal technical review process, the validation opinion and the topic specific assessments as prepared by the validation team may be confirmed or revised.

SECTION F. Validation opinion

>> SH Power Co., Ltd. has commissioned the Korean Standards Association (KSA) to validate the CDM project "70MW Solar Power Plant Project in Ba Ria – Vung Tau, Vietnam", in line with all relevant UNFCCC requirements.

The review of the updated Project design document and additional documents related to the project, the baseline and monitoring methodology, the subsequent background investigation, follow-up interviews have provided KSA with sufficient evidence to validate the fulfilment of the eligibility of the CDM project. In detail the conclusions can be summarized as follows:

- The Project is in line with all relevant host country criteria (Vietnam) and all relevant UNFCCC requirements for CDM. Project activity approval has been obtained from DNA of Host Country provide the Letter of Approval dated 28/10/2019.
- The baseline has been appropriately identified as per the applied methodology.
- The framework for determination project additionality is sufficiently justified in the PDD in line with the applied methodology.
- All applicability conditions of the applied methodology and tool have been fulfilled.
- The calculation of the emission reductions is carried out in a transparent and conservative manner, so that the calculated emission reductions of 98,545 tCO_2e annually and 689,818 tCO_2e during the 7 years' 1st renewable crediting period are most likely to be achieved.

[17] https://cdm.unfccc.int/Projects/Validation/DB/H68WK4TBJUE0KVHDFSR5CR0Q1U6FWZ/view.html

- Information on the environmental impact assessment and local stakeholders' consultation by the project participant is sufficiently provided.

Appendix 1. Abbreviations

Abbreviations	Full texts
UNFCCC	United Nations Framework Convention on Climate Change
CDM	Clean Development Mechanism
COP/MOP	Conference of the Parties / Meeting of the Parties
EB	Executive Board
DNA	Designated National Authority
DOE	Designated Operational Entity
KSA	Korean Standards Association
PP	Project Participants
MoC	Modality of Communication
LoA	Letter of Approval
EIA	Environmental Impact Assessment
LSC	Local Stakeholder Consultation
GSC	Global Stakeholder Consultation
VVS	Validation and Verification Standard
PS	Project Standard
ACM	Approved Consolidated Methodology
PA	Project Activity
PDD	Project Design Documents
CAR	Corrective Action Requested
CL	Clarification Requested
PV	Photovoltaic
EF	Emission Factor
CER	Certified Emission Reduction
KOC	Korean Offset Credit

Appendix 2. Competence of team members and technical reviewers

Name	Mr. Moon, Hyunman	Mr. Park, SeongYong	Mr. Yun, ChanSik	Mr. Sohn, Kyull
Role	Validation Team Leader	Validator	Validator	Technical reviewer
Competence in relevant sector	Competent in sector 1	Competent in sector 1	N/A	Competent in sector 1
Responsibility	Document Review Interview Findings & resolution VR preparation	Document Review Interview Findings & resolution	Document Review Interview Findings & resolution	Technical review

KSA

CDM Validator/Verifier Certificate

HyunMan Moon

Certificate No. : CDM-030

Technical Area : 1.2, 3.1

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	VALID UNTIL
2019.05.01	2021.04.30

PRESIDENT OF KSA

KOREAN STANDARDS ASSOCIATION

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

KSA-QEF-506(Rev.1, '09.01.05) 1/1

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	VALID UNTIL
2019.04.04	2022.04.03

PRESIDENT OF KSA

KOREAN STANDARDS ASSOCIATION

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

KSA-BF-506(Rev.2, '09.12.05) 1/1

KSA

CDM Validator/Verifier Certificate

ChanSik Yun

Certificate No. : CDM-006

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	VALID UNTIL
2019.04.04	2022.04.03

PRESIDENT OF KSA

KOREAN STANDARDS ASSOCIATION

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

KSA-QEF-506(Rev.1,'09.01.05) 1/1

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	VALID UNTIL
2019.04.04	2022.04.03

PRESIDENT OF KSA

KOREAN STANDARDS ASSOCIATION

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

KSA-BF-506(Rev.2, '09.12.05) 1/1

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	Project Participants	Project Design Document	Ver. 1.0 https://cdm.unfccc.int/Projects/Validation/DB/H68WK4TBJUE0KVHDFSR5CR0Q1U6FWZ/view.html Ver. 1.7	Project Participants
2	Project Participants	Emission Reduction Calculation Sheet	Ver. 1.0 Ver. 1.5	Project Participants
3	DNA of Host party	Letter of approval (LoA)	28/10/2019 08/2019/DCC-BCD	Project Participants
4	Project Participants	Modality of Communication (MoC) Statement	10/10/2019	Project Participants
5	Project Participants	PP's confirmation on MoC	10/10/2019	Project Participants
6	CDM EB	CDM-MOC-FORM	CDM-MOC-FORM (Ver. 03.0) https://cdm.unfccc.int/Reference/PDDs_Forms/index.html	CDM EB
7	DNA of Host party	Host party DNA's confirmation on LoA	13/11/2019	DNA of Host party
8	CDM EB	ACM0002: Grid-connected electricity generation from renewable sources	Version 19.0 https://cdm.unfccc.int/UserManagement/FileStorage/58IAGB7SZUDEO2VN6LYM30K41HFPRQ	CDM EB
9	CDM EB	TOOL05: Baseline, project and/or leakage emissions from electricity consumption and monitoring of electricity generation	Version 03.0 https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-05-v3.0.pdf	CDM EB
10	CDM EB	TOOL07: Tool to calculate the emission factor for an electricity system	Version 07.0 https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v7.0.pdf	CDM EB
11	Project Participants & Module manufacturer	Photovoltaic Module Master Supply Agreement	19/10/2018	Project Participants
12	Module manufacturer	Photovoltaic module specification	N/A	Project Participants
13	Inverter manufacturer	Inverter specification	N/A	Project Participants
14	Project Participants & EPC Contractor	Contract for construction	27/09/2018 SH-HL/270918	Project Participants
15	Engineering Consultant	Completion report of construction of the Project	14/06/2019	Project Participants

16	Project Participants & Electricity Buyer	Power purchasing agreement	09/11/2018 /2018/HD-NMDMT-KCN CHAU DUC	Project Participants
17	Project Participants	Location map of the Project	Google Earth	Project Participants
18	Project Participants	Notification of prior consideration of CDM of the Project	28/02/2019 https://cdm.unfccc.int/Projects/PriorCDM/notifications/index_html	UNFCCC
19	Project Participants	E-mail notification of prior consideration of CDM of the Project to Host party and UNFCCC	28/02/2019	Project Participants
20	Project Participants	Prior consideration submission confirmation from Host party DNA	28/02/2019	Host party DNA
21	Project Participants	Prior consideration submission confirmation from UNFCCC Secretariat	01/03/2019	UNFCCC Secretariat
22	Project Participants	The minute of the board meeting for approval of the Project	23/05/2018	Project Participants
23	CDM EB	CDM Term - Glossary	CDM-EB07-A04-GLOS (Version 10.0) https://cdm.unfccc.int/Reference/Guidclarif/glos_CDM.pdf	CDM EB
24	CDM EB	CDM-PDD-FORM	CDM-PDD-FORM (Ver. 11.0) https://cdm.unfccc.int/Reference/PDDs_Forms/index.html	CDM EB
25	CDM EB	CDM project standard for project activities	CDM-EB93-A04-STAN (Version 02.0) https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20181221092046526/Reg_stan04v02.pdf	CDM EB
26	CDM EB	CDM validation and verification standard for project activities	CDM-EB93-A05-STAN (Version 02.0) https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20181221092105818/Reg_stan06v02.pdf	CDM EB
27	CDM EB	Applicability of sectoral scope	CDM-EB88-A04-STAN (Version 01.0) https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20160314113213746/accr_stan03.pdf	CDM EB
28	CDM EB	CDM accreditation standard	CDM-EB46-A02-STAN (Version 07.0) https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20180323155152132/accr_stan01.pdf	CDM EB
29	CDM EB	Project Search	https://cdm.unfccc.int/Projects/projsearch.html	CDM EB

30	The Ministry of Natural Resources and Environment	Regulation on Environmental protect planning, strategic environmental assessment, environmental impact assessment and environmental protection plan	14/02/2015 Decree 18/2015/ND-CP https://m.thuvienphapluat.vn/van-ban/tai-nguyen-moi-truong/Nghi-dinh-18-2015-ND-CP-bao-ve-danh-gia-moi-truong-chien-luoc-danh-gia-tac-dong-moi-truong-266409.aspx	Project Participants
31	The Ministry of Natural Resources and Environment	Regulation on Strategic environmental assessment, environmental impact assessment and environmental protection plan	29/05/2015 CIRCULAR 27/2015/TT-BTNMT https://m.thuvienphapluat.vn/van-ban/tai-nguyen-moi-truong/Thong-tu-27-2015-TT-BTNMT-danh-gia-moi-truong-chien-luoc-tac-dong-moi-truong-bao-ve-moi-truong-277442.aspx	Project Participants
32	Project Participants	Environmental Impact Assessment (EIA) of the Project	01/06/2018	Project Participants
33	The Vietnamese local government (Ba Ria – Vung Tau province)	Approval letter on EIA report	27/07/2018 2009/QD-UBND	Project Participants
34	Project Participants	Letter of sending EIA report and request for receiving cousltation	27/04/2018 No. 17 / CV-Halla'	Project Participants
35	Nghia Thanh Commune People's Committee	Committee's opinion on EIA report	03/05/2018 No. 223/UBND-VP	Project Participants
36	Project Participants & Nghia Thanh Commune People's Committee	Miniute of Local Stakeholder Consultation (LSC)	04/05/2018	Project Participants
37	Project Participants, Nghia Thanh Commune People's Committee & etc	Attendance confirmation of LSC	04/05/2018	Project Participants
38	CDM EB	List of Designated National Authority	https://cdm.unfccc.int/DNA/index.html	CDM EB
39	CDM EB	List of Kyoto Protocol Ratified Nations	https://unfccc.int/node/61236	CDM EB
40	CDM EB	List of Global Stakeholder Consultation (GSC)	https://cdm.unfccc.int/Projects/Validation/DB/H68WK4TBJUE0KVHDFSR5CR0Q1U6FWZ/view.html	UNFCCC Secretariat

41	The Department of Climate Change, Ministry of natural resources and environment.	Vietnam grid emission factor 2017 report	19/04/2019 330/BĐKH-GNPT http://www.dcc.gov.vn/ /upload/services/1405 307908_Bao%20cao% 20cuoi%20cung%20E F%202017.pdf http://www.dcc.gov.vn/ /upload/services/1044 955968_HSPT%20luoi %20dien%20Viet%20n am%2020170001.pdf	Project Participants
42	Vietnam Electricity (EVN)	Vietnam Electricity Annual Report 2017	02/02/2018 https://en.evn.com.vn/ c3/gioi-thieu-l/Annual-Report-6-13.aspx	Project Participants
43	International Renewable Energy Agency (IRENA)	Renewable Energy Statics 2019	07/2019 ISBN 978-92-9260-137-9 https://www.irena.org/publications/2019/Jul/Renewable-energy-statistics-2019	Project Participants
44	The Ministry of Science and Technology	Regulations on measurement for group measure 2	26/09/2013 23/2013 / TT-BKHCN https://www.most.gov.vn/Images/Attachments/02044fedc4a842639ec756852432f8df-Thong%20tu%2023_2013_TT_BKHCN.doc https://www.most.gov.vn/Images/Attachments/9e24987ce944420388695e63690e8206-Phu%20luc_thong%20tu%2023.doc	Project Participants

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

Table 1. CLs from this validation

CL ID	01	**Section no.**	BASIC INFORMATION	**Date:** 25/06/2019
Description of CL				
PP shall follow the specific instructions in the table: Estimated amount of annual average GHG emission reductions during the crediting period (t CO2e).				
Project participant response				**Date:** 25/07/2019
Revised – PP modified units according to methodology and tool.				
Documentation provided by project participant				
Revised PDD				
DOE assessment				**Date:** 13/08/2019
Validation team reviewed 'BASIC INFORMATION' and other sections of the revised PDD and concluded that the PP duly revised the unit expression in the PDD in accordance with PDD form instructions. Thus, CL 01 is satisfied and closed.				

CL ID	02	**Section no.**	D.3.	**Date:** 25/06/2019
Description of CL				
PP is required to present photo which is related with locations, and furthermore all the figures, photos, and tables in the PDD shall be numbered with a title.				
Project participant response				**Date:** 25/07/2019
Revised – PP added map of Ba Ria - Vung Tau, Vietnam. PP added figure and table with number.				
Documentation provided by project participant				
Revised PDD				
DOE assessment				**Date:** 13/08/2019
Validation team reviewed the revised PDD and concluded that the PP duly revised the PDD by adding photo related with location of the Project and by numbering with a title on the figures, photos and tables. Thus, CL 02 is satisfied and closed.				

CL ID	03	**Section no.**	D.3. & etc	**Date:** 25/06/2019
Description of CL				
The PP shall describe a directly relevant information with clear expressions. And, International System Units (SI units) shall be utilized.				
Project participant response				**Date:** 25/07/2019
Revised – PP described directly relevant information with clear expressions and modified all units to SI units.				
Documentation provided by project participant				
Revised PDD				
DOE assessment				**Date:** 13/08/2019
Validation team reviewed the revised PDD and concluded that the PP duly revised the PDD by describing directly relevant information with clear and obvious expression, and by modifying all units to SI units. Thus, CL 03 is satisfied and closed.				

CL ID	04	**Section no.**	D.3. & etc	**Date:** 25/06/2019
Description of CL				
PP shall clearly express the installed capacity of the power plant. The capacity on the project title and description on the PDD do not match with the unit MWp and MW.				
Project participant response				**Date:** 25/07/2019
Revised – PP modified all generation capacity to MW unit and clearly described the installed capacity of the power plant based on the evidence.				
Documentation provided by project participant				
- Revised PDD - Completion report for the construction				
DOE assessment				**Date:** 13/08/2019

Validation team reviewed the revised PDD and confirmed that the PDD clearly and obviously describes the installed capacity of the Project, 69.552 MW. Validation team checked the completion report for the construction and concluded that the PP correctly described installed capacity of the Project, 69.552 MW, in the PDD. And validation team also confirmed that PP duly revised the PDD by modifying capacity unit MWp to MW. Thus, CL 04 is satisfied and closed.

CL ID	05	**Section no.**	BASIC INFORMATION & D.3	**Date:** 10/10/2019
Description of CL				
The list of PP between the section basic information and A.4. of the PDD are not identical. Kindly clarify.				
Project participant response				**Date:** 25/10/2019
Revised – PP is defined as SH Power Co., Ltd. and SH Solar Farm Vina Co., Ltd. SH Power Co., Ltd. participates in the project as an investor and SH Solar Farm Vina Co., Ltd. participates in the project as an operator of the solar power plant in Vietnam.				
Documentation provided by project participant				
- Revised PDD - MoC statement - LoA from Vietnamese DNA				
DOE assessment				**Date:** 28/10/2019
Validation team reviewed the revised PDD and concluded that the PP duly revised the PDD by correctly describing the actual PPs, SH Power Co., Ltd. and SH Solar Farm Vina Co., Ltd. Validation team also reviewed the MoC statement and LoA from Vietnamese DNA submitted by the PP and confirmed again that the PPs of the Project are SH Power Co., Ltd. and SH Solar Farm Vina Co., Ltd. Thus, CL 05 is satisfied and closed.				

CL ID	06	**Section no.**	A.4., F & MoC	**Date:** 17/01/2020
Description of CAR				
The PP is requested to provide consistent information. The Party involved is inconsistent throughout the PDD, MoC and LoA. Otherwise, PP is requested to submit a written letter of approval from the DNA of each Party indicated in the PDD.				
Project participant response				**Date:** 20/01/2020
Revised – PP acquired written letter of approval from the Vietnamese DNA which is the project is located/hosted. And thus, PP revised the parties involved in the Project indicated in the PDD by reflecting the acquired LoA. PP also revised the MoC by reflecting the LoA.				
Documentation provided by project participant				
- Revised PDD - Revised MoC				
DOE assessment				**Date:** 20/01/2020
Validation team reviewed revised PDD and confirmed that the Party involved is duly revised in accordance with the acquired LoA from the host party, Vietnam. Validation team reviewed the LoA again, and confirmed that both of the project participants, SH Solar Farm Vina Co., Ltd and SH Power Co., Ltd, are authorized by the host Party, the Vietnamese DNA, and concluded that this revision satisfies para. 113 of PS for PA version 02.0. Validation team also reviewed revised MoC and confirmed that the party which the country authorizing participation of the PP is duly revised by reflecting LoA. Validation team concluded that all the information regarding the Party involved is consistent throughout the PDD, MoC and LoA. Thus, CL 06 is satisfied and closed.				

Table 2. CARs from this validation

CAR ID	01	**Section no.**	D.2	**Date:** 25/06/2019
Description of CAR				
PP shall use a valid version of the applicable PDD form.				
Project participant response				**Date:** 25/07/2019
Revised – The PDD form applied “CDM-PDD-FORM Ver11.0” that is current version in CDM website.				
Documentation provided by project participant				
Revised PDD				

DOE assessment	Date: 13/08/2019
Validation team reviewed revised PDD and checked 'Forms' page of UNFCCC website(https://cdm.unfccc.int/Reference/PDDs_Forms/index.html) and concluded that the PP duly revised the PDD by using the latest PDD form, CDM-PDD-FORM Ver11.0. Thus, CAR 01 is satisfied and closed.	

CAR ID	02	Section no.	D.4.5. & etc	Date: 25/06/2019
Description of CAR				
The project participants shall provide all necessary documentations referred in the PDD to demonstrate compliance of the proposed CDM project activity to DOE, this shall be readable and understandable, and, if applicable, denote references or adequate footnotes.				
Project participant response				**Date:** 25/07/2019
Providing documentation – PP provides an English version of the Vietnam national electricity grid emission factor (2017) report and Revised – Words that need explanations are explained or linked with footnotes.				
Documentation provided by project participant				
- Revised PDD - Viet Nam grid emission factor 2017 report _ English				
DOE assessment				**Date:** 30/10/2019
Validation team reviewed revised PDD and newly submitted evidence, Vietnam EF 2017 _ English, which is translated into readable language for the validation, English. Validation team cross checked the translated evidence with the local expert in the team and confirmed that the translation is acceptable. Validation team also confirmed that the PP duly included denote references and adequate footnotes. Thus, CAR 02 is satisfied and closed.				

CAR ID	03	Section no.	D.4.4.	Date: 25/06/2019
Description of CAR				
The project participants shall describe information regarding the project boundary of the proposed CDM project activity, including the physical delineation of the project activity. The PDD presents figures only.				
Project participant response				**Date:** 25/07/2019
Revised – PP described the project boundary in figure 4 and the project boundary information.				
Documentation provided by project participant				
- Revised PDD				
DOE assessment				**Date:** 25/08/2019
Validation team reviewed revised PDD and confirmed that the PP duly added the description on project boundary of the Project, including the physical delineation of the Project. Validation team confirmed that the description is adequate in line with the PDD form instruction and applied methodology ACM0002 version 19.0. Thus, CAR 03 is satisfied and closed.				

CAR ID	04	Section no.	D.4.8.	Date: 25/06/2019
Description of CAR				
PP shall confirm that there is no GHG emission in the project activity. - No project emission regarding operation and maintenance: e.g. running inverter and transformer, air conditioning in the control room, panel cleaning, or any other power sources for operator's wellfare.				
Project participant response				**Date:** 25/07/2019
Revised – According to ACM 0002, because it is only required to use fossil fuel directly, the contents of imported electricity are described in B.7.1. Data and parameters to be monitored.				
Documentation provided by project participant				
- Revised PDD				
DOE assessment				**Date:** 25/08/2019
Validation team reviewed revised PDD and confirmed the PP duly revised the B.7.1. Data and parameters to be monitored. Revised PDD clearly describes that the Project will monitor the 'net electricity' supplied to the Vietnamese national grid which import electricity from the grid is excluded. Thus, CAR 04 is satisfied and closed.				

CAR ID	05	Section no.	D.4.5.	Date: 25/06/2019
Description of CAR				
The description of baseline scenario is not appropriately described: - PP is requested make compatible the description regarding conservative approach with methodology and Standard of CDM. As a general principle, relevant national and/or sectoral policies, regulations and circumstances shall be taken into account in the establishment of the baseline scenario. - The emission factor (EF_y) is not consistent with the source of emission factor (Ministry of Natural Resources and Environment Vietnam, 2017)				
Project participant response				**Date:** 25/07/2019
Revised – The PP described the baseline set by the "ACM0002 5.2.1. Baseline scenario for Greenfield power plant". The PP added a description of the current national power grid and explains that the power generated by this project is connected to the national grid. The PP modified source of emission factor (Department of Climate Change - Ministry of Natural Resources and Environment, Official Letter No. 330/BDKH-GNPT dated 29 March 2019 on the "Viet Nam grid emission factor 2017")				
Documentation provided by project participant				
- Revised PDD - Viet Nam grid emission factor 2017 report _ English - Revised emission reduction calculation sheet (Excel)				
DOE assessment				**Date:** 30/10/2019
Validation team reviewed revised PDD and submitted evidence, and confirmed that the PP duly described the current national power grid and the electricity generated by the Project is connected to the Vietnamese national grid.				
Validation team reviewed the Viet Nam grid emission factor 2017 report and confirmed it applied the latest tool from UNFCCC "Tool 07 - Tool to calculate the emission factor for an electricity system version 07" to calculate OM and BM of Vietnamese grid emission factor. Validation team also confirmed the report is sealed by the Department of Climate Change (DCC) and signed by the vice president of DCC. And validation team also checked the origin source, the web page link in the PDD, of the report and confirmed that it is published the host party's government body, Department of Climate Change (DCC) – Ministry of Natural Resources and Environment. And validation team have sent an e-mail inquiry to the official contact point on DCC's website, requesting that the confirmation of the up-to-dated publish of the report, however the DCC did not reply. Validation team searched other reference of the Vietnamese electricity grid emission factor by internet searching, however, could not find any up-to-dated officially published data other than the Viet Nam grid emission factor 2017 report dated 29/03/2019 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to calculate the Vietnamese electricity grid emission factor. Validation team reviewed emission reduction calculation sheet and confirmed that the PP duly applied the OM and BM value from the report above which is the latest and officially published from the host party's government. And the validation team also confirmed that the PP duly applied the weight for OM and BM for the first crediting period for solar power generation project, w_{OM} = 0.75 and w_{BM} = 0.25. Thus, CAR 05 is satisfied and closed.				

CAR ID	06	Section no.	D.1.	Date: 25/06/2019
Description of CAR				
The PP shall demonstrate that the CDM benefits were considered necessary in the decision to undertake the project as a CDM project activity, if the start date of a proposed CDM project activity is prior to the date of publication of the PDD for global stakeholder consultation.				
Project participant response				**Date:** 25/07/2019
Providing documentation – PP first held a board meeting on May 23, 2018 to consider the CDM benefits of the photovoltaic power generation project and decided to pursue the CDM project.				
Documentation provided by project participant				
- Revised PDD - PP minutes of Board Meeting 2018.05.23.pdf - PP minutes of Board Meeting 2018.09.07.pdf - PP minutes of Board Meeting 2018.09.24.pdf				

DOE assessment	Date: 25/08/2019
Validation team reviewed submitted PP's minutes of board meeting. Validation team confirmed that the PP considered CDM benefits, CERs and KOCs, on its board meeting dated 23/05/2018 deciding the undertaking of the Project. Validation team confirmed that the meeting considered investment analysis of the Project in two ways, electricity sales benefit only or electricity sales benefit with CDM benefit, and their conclusions that CDM project is necessary for reasonable investment on the Project, and their decision on undertaking the Project as a CDM project. Validation team also confirmed that the minute of the meeting duly sealed by the attended board members. Validation team confirmed that the date of the board meeting, 23/05/2018, is prior to the start date of the Project, PV module purchase contract date, 19/10/2019, and also prior to the date when the PP sent prior consideration form to UNFCCC and the host party DNA, 28/02/2019. Hence, validation team concluded that the PP duly considered CDM benefits in the decision to undertake the project as a CDM project. Thus, CAR 06 is satisfied and closed.	

CAR ID	07	Section no.	D.4.6	Date: 25/06/2019
Description of CAR				
The description of demonstration of additionality is not appropriately described but unclear and incomprehensible. It requires elaboration regarding power mix and figures in Vietnam.				
Project participant response				**Date:** 25/10/2019
Revised – According to the EVN annual report 2017, in Vietnam, total installed power plant capacity is 42,135MW. And According to IRENA Renewable Capacity Statistics 2018, solar photovoltaic capacity is 8MW in Vietnam. Therefore, the total installed capacity of a grid-connected plant in the host country is less than 2%, so the total installed capacity of a particular technology meets (a) of the two conditions, which automatically proves additionality. Since the project stands automatically additionality because of fulfilling the above a condition, "the Tool for the Demonstration & Assessment of Additionality" needs not be used here. Revised – During the validation, 2019 renewable energy statistics of IRENA is published. According to IRENA Renewable Capacity Statistics 2019, solar photovoltaic capacity is 108MW in Vietnam. The data has been applied to the PDD. Therefore, the total installed capacity of a grid-connected plant in the host country is less than 2%.				
Documentation provided by project participant				
- Revised PDD - IRENA RE Capacity Statistics 2018 - IRENA RE Capacity Statistics 2019 - Vietnam Electricity Annual Report 2017				
DOE assessment				**Date:** 30/10/2019
Validation team reviewed revised PDD and submitted evidences and confirmed that the PP clearly described the total installed power plant capacity of Vietnam and total installed solar photovoltaic capacity of Vietnam. Validation team reviewed the Vietnam Electricity Annual Report 2017 and confirmed that the total installed power plant capacity of Vietnam is 43,135 MW as the PP described in the revised PDD. And validation team also checked the origin source, the web page link in the PDD, of the report and confirmed that it is published by Vietnam Electricity (EVN) which is established by Vietnamese government and most up-to-dated report. And validation team have sent an e-mail inquiry to the official contact point on the website, requesting that the confirmation of the up-to-dated publish of the report, however the EVN did not reply. Validation team searched other reference of the total installed power plant capacity of Vietnam by internet searching, however, could not find any up-to-dated officially published data other than the Vietnam Electricity Annual Report 2017 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to for the total installed power plant capacity of Vietnam. Validation team also reviewed the IRENA RE Capacity Statistics 2019 and confirmed that the total installed solar photovoltaic capacity of Vietnam is 106 MW as the PP described in the revised PDD. And validation team also checked the origin source, the web page link in the PDD, of the report and confirmed that it is published by International Renewable Energy Agency (IRENA) which is the intergovernmental organization and renewable energy and most up-to-dated report. Validation team searched other reference of the total installed solar photovoltaic capacity of Vietnam by internet searching, however, could not find any up-to-dated officially published data other than the IRENA RE Capacity Statistics 2019 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to for the total installed solar photovoltaic power plant capacity of Vietnam. And thus, validation team confirms that the sources used are valid and credible.				

And the validation team re-calculated the percentage share of solar power plant in the total installed grid connected power generation in Vietnam and confirmed that it is less than two per cent, 0.25%

(106 MW $_{\text{Total Solar PV in Vietnam}}$ ÷ 42,135 MW $_{\text{Total Power Plant in Vietnam}}$) x 100 = 0.25%

Validation team concluded that the Project is automatically additional according to the applied methodology ACM0002 version 19.0.
Thus, CAR 07 is satisfied and closed.

CAR ID	08	**Section no.**	D.4.5.	**Date:** 25/06/2019
Description of CAR				
The parameters about emission factors (EF_y) are not consistent with the source of emission factor (Ministry of Natural Resources and Environment Vietnam, 2017).				
Project participant response				**Date:** 25/07/2019
Revised – PP Modified source of emission factor (Department of Climate Change - Ministry of Natural Resources and Environment, Official Letter No. 330/BDKH-GNPT dated 29 March 2019 on the "Viet Nam grid emission factor 2017")				
Documentation provided by project participant				
- Revised PDD - Viet Nam grid emission factor 2017 report _ English - Revised emission reduction calculation sheet (Excel)				
DOE assessment				**Date:** 25/08/2019
Validation team reviewed the Viet Nam grid emission factor 2017 report and confirmed it applied the latest tool from UNFCCC “Tool 07 - Tool to calculate the emission factor for an electricity system version 07” to calculate OM and BM of Vietnamese grid emission factor. Validation team also confirmed the report is sealed by the Department of Climate Change (DCC) and signed by the vice president of DCC. And validation team also checked the origin source, the web page link in the PDD, of the report and confirmed that it is published the host party’s government body, Department of Climate Change (DCC) – Ministry of Natural Resources and Environment. And validation team have sent an e-mail inquiry to the official contact point on DCC’s website, requesting that the confirmation of the up-to-dated publish of the report, however the DCC did not reply. Validation team searched other reference of the Vietnamese electricity grid emission factor by internet searching, however, could not find any up-to-dated officially published data other than the Viet Nam grid emission factor 2017 report dated 29/03/2019 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to calculate the Vietnamese electricity grid emission factor. Validation team confirmed that the PP duly applied emission factor to calculate emission reduction and described it in the PDD. Thus, CAR 08 is satisfied and closed.				

CAR ID	09	**Section no.**	D.4.7.	**Date:** 25/06/2019
Description of CAR				
The PP shall to enable the reader to reproduce the calculation. Estimated annual power generation (EG pj,y) is not detailed in the excel spread sheet.				
Project participant response				**Date:** 25/07/2019
Revised – The average daily generation time derived from the photovoltaic analysis program is 4.57 hours per day. This data was described in the completion report. The amount of greenhouse gas reduction considering generation time and generation capacity is 98,545tCO2e.				
Documentation provided by project participant				
- Revised PDD - Revised emission reduction calculation sheet (Excel) - Completion Report for the Construction of Solar Power Plant in Chau Duc				
DOE assessment				**Date:** 25/08/2019
Validation team reviewed revised emission reduction calculation sheet and confirmed that the calculation is reproducible by the reader. Capacity of a PV panel, number of panels, average generation time per day were used for the calculation on the sheet and validation team confirmed that the PP correctly applied the evident data from the completion report of the solar power plant and PV manufacturer’s specification. Validation team also confirmed that the PP duly described the data applied to calculate emission reduction on the revised PDD. Thus, CAR 09 is satisfied and closed.				

CAR ID	10	Section no.	D.7.	Date: 25/06/2019
Description of CAR				
PP shall describe relevant information regarding local stakeholder's consultation in the PDD. The relevant PDD section is undescribed.				
Project participant response				**Date:** 25/07/2019
Revised – PP described relevant information regarding local stakeholder's consultation in the PDD. Decree No. 18/2015 / ND-CP dated February 14, 2015 of the Government regulating strategic environmental assessment, environmental impact assessment, environmental protection plan				
Documentation provided by project participant				
- Revised PDD - Environmental Impact Assessment Report (English) - Approval of Environmental Impact Assess Report (2009/QD-UBND)				
- Law of Environmental Impact Assessment in Vietnam (Decree 18/2015/ND-CP) - Law of On Strategic Environmental Impact Assessment in Vietnam (Circular 27/2018/TT-BTNMT) - Letter of request for LSC (17/CV-Halla) _ 27/04/2018 - Answer on request for LSC (223 UBND-VP) _ 03/05/2018 - Meeting of minute at LSC _ 04/05/2018 - Attendance Confirmation				
DOE assessment				**Date:** 25/08/2019
Validation team reviewed Law of EIA in Vietnam (Decree 18/2015/ND-CP) and Law of On Strategic EIA in Vietnam (Circular 27/2018/TT-BTNMT) and confirmed that the Vietnamese regulation request to carry out consultation with community councils that are directly affected by the Project during the Environmental Impact Analysis (EIA) stage. Validation team confirmed that the PP have sent a Letter to the People's Committee of Nghia Thanh Commune (17/CV-Halla) along with draft EIA report on 27/04/2018, the Committee answered (223 UBND-VP) on 03/05/2018 and the consultation was held by the PP and the Committee on 04/05/2018. Validation team confirmed that the comments from the consultation and the PP's answers & considerations were reflected to the Final EIA report. Validation team also confirmed that the Final EIA report was approved by the Vietnamese local government on 27/07/2017 (2009/QD-UBND). Validation concluded that the LSC of the Project is duly implemented by the PP and described in the PDD. Thus, CAR 10 is satisfied and closed.				

CAR ID	11	Section no.	D.9. & D.10.	Date: 01/07/2019
Description of CAR				
The PP did not submit Letter of Approval (LoA) to validation team.				
Project participant response				**Date:** 01/11/2019
Revised – The Letter of Approval (LoA) from the Vietnamese DNA is issued and submitted to DOE.				
Documentation provided by project participant				
- Letter of Approval (LoA) - Revised PDD				
DOE assessment				**Date:** 20/01/2020
[Revised Assessment _ 20/01/2020] The PP obtained the Letter of Approval (LoA) from the Designated National Authority (DNA) on 28/10/2019. The PP submitted the LoA to the validation team. Validation team confirmed that the LoA clearly indicates the title of the Project "70MW Solar Power Plant Project in Ba Ria – Vung Tau, Vietnam" as exactly the same with the Project title in the PDD, and issued by the Designated National Authority (DNA) of Vietnam under the Ministry of Natural Resources and Environment (MONRE). Validation team also confirmed that there is neither attachment nor a separated authorization letter with the LoA. The Parties involved in the Project and indicated in the revised PDD version 1.7 is Socialist Republic of Viet Nam, and the PPs duly obtained the LoA only from the Vietnamese DNA. Validation team confirmed that the LoA clearly mentions all the PPs involved in the Project, the SH Solar Farm Vina Co,. Ltd and the SH Power Co., Ltd. on it. Thus, validation team concluded that the LoA satisfies the requirement of para. 113 of PS for PA version 02.0. Thus, CAR 11 is still satisfied and kept be closed.				

[Initial Assessment _ 13/11/2019]

The PP obtained the Letter of Approval (LoA) from the Designated National Authority (DNA) on 28/10/2019. The PP submitted the LoA to the validation team. Validation team confirmed that the LoA clearly indicates the title of the Project "70MW Solar Power Plant Project in Ba Ria – Vung Tau, Vietnam" as exactly the same with the Project title in the PDD, and issued by the Designated National Authority (DNA) of Vietnam under the Ministry of Natural Resources and Environment (MONRE). Validation team also confirmed that there is neither attachment nor a separated authorization letter with the LoA.

The Parties involved in the Project and indicated in the PDD are Socialist Republic of Viet Nam and Republic of Korea, however, the PP obtained the LoA only from the Vietnamese DNA.

Validation team confirmed that the LoA clearly mentions all the PPs involved in the Project, the SH Solar Farm Vina Co,. Ltd and the SH Power Co., Ltd. on it.

Thus, validation team concluded that the LoA satisfies the requirement of para. 113 of PS for PA version 02.0.

Validation team confirmed that the LoA clearly describes as follow;

1. *The Government of Viet Nam has ratified the Kyoto Protocol on 25 September 2002;*
2. *This is approval of voluntary participation of in the proposed CDM project activity; and*
3. *The above-mentioned project activity contributes to sustainable development in Vietnam.*

Validation team also confirmed that the LoA is unconditional with respect to the description 1 to 3 above and the precise title of the Project.

Validation team confirmed that the LoA indicates the Project have only one host Party, Vietnam, in which the Project is located, as set out in the PDD.

Validation team searched information on Vietnamese DNA from the UNFCCC CDM website[18] to check whether the LoA has been issued by the Vietnamese DNA and is valid for the Project.

Validation team confirmed that the LoA issuing organization and the organization information of Vietnamese DNA from the UNFCCC CDM website is exactly the same as 'Ministry of Natural Resources and Environment of Viet Nam'. Validation team also confirmed that the signatory of LoA and the focal point information of Vietnamese DNA from the UNFCCC CDM website is exactly the same as 'Tang The Cuong'. Validation team have sent an e-mail to the official e-mail address of the Vietnamese DNA[19] inquiring the confirmation of the authenticity of LoA and acquired an e-mail confirmation from Vietnamese DNA.
And, thus, validation team concluded that the issuance of LoA valid.

Validation team checked that the duration of validity of the LoA is 24 months and the LoA is issued on 28/10/2019.

Thus, validation team confirmed that the LoA is valid at the time of PDD submission.

Validation team confirmed that the LoA is not refer to a specific version of validation report.

Validation team checked and confirmed during its document review stage and on-site assessment that the Vietnamese grid is not extended across to other Party involved in the Project, the Republic of Korea.

Thus, validation team confirmed that the para. 116 of PS for PA version 02.0 is not applicable for the Project. Thus, CAR 11 is satisfied and closed.

[18] https://cdm.unfccc.int/DNA/index.html
[19] VietnamDNA@monre.gov.vn

CAR ID	12	Section no.	D.11.	Date: 01/07/2019
Description of CAR				
The PP did not submit Modalities of Communication (MoC) statement to validation team.				
Project participant response				**Date:** 10/10/2019
Revised – PP defined modalities of communication and Modalities of Communication (MoC) statement is submitted to DOE.				
Documentation provided by project participant				
- MoC Statement - Revised PDD				
DOE assessment				**Date:** 28/10/2019
SH Power Co., Ltd., the PP who has contractual relationship with KSA submitted their Modalities of Communication (MoC) statement to KSA along with the e-mail confirmation which states all the detail included in the MoC statement valid and accurate. The submission of the MoC statement along with the confirmation is made by Mr. Byeong-Kyu Kim of SH Power Co., Ltd. who is primary authorized signatory of sole focal point authority. Validation team checked e-mail address of Mr. Byenog-Kyu Kim on the MoC statement and the submission e-mail and confirmed that the e-mail address is identical as 'kbk0311@soosan.co.kr'. Mr. Byeong-Kyu Kim and his e-mail address, 'kbk0311@soosan.co.kr', is also evident in Appendix 1. Contact information of project participant of the PDD. Validation team also cross-checked the validity of the completion and submission of the MoC statement by telephone call interview with the alternate authorized signatory of sole focal point authority, Mr. Sang-Hwan, Choung. Thus, validation confirmed that the submission of MoC statement is made official, valid and accurate. Validation team checked the submitted MoC statement and confirmed followings; - The latest version which is versioned 3.0 of the form "Modalities of Communication statement" (CDM-MOC-FORM) has been used; - The information required as per the CDM-MOC-FORM, including its annex 1, is correctly completed; - The project participants' authorized signatories signing the CDM-MOC-FORM correspond to the project participants' authorized signatories included in the CDM-MOC-FORM, annex 1. Thus, CAR 12 is satisfied and closed.				

CAR ID	13	Section no.	D.5.	Date: 10/10/2019
Description of CAR				
The specifying of the start date of the project activity is not in accordance with the definition from the Glossary – CDM terms. Kindly clarify.				
Project participant response				**Date:** 25/10/2019
Revised – The purchase of modules was excluded from the "Contract for Construction". Because PP purchased PV module directly from the PV module supplier (Hanwha Q-CELLS), the project start date is specified as the date of the PV module purchase according to the CDM Term - Glossary.				
Documentation provided by project participant				
- Revised PDD - Photovoltaic module master supply agreement _ 19/10/2018 - Contract for construction _ 27/09/2018				
DOE assessment				**Date:** 28/10/2019
Validation team reviewed Contract for construction and Photovoltaic module master supply agreement, and confirmed that the purchasing of main equipment of the Project, photovoltaic module, is separated from the contract for construction. Validation team confirmed the signed date of the photovoltaic module master supply agreement, established between the PP and PV module manufacturer, is 19/10/2018. As the Glossary – CDM Terms version 10.0 defines the start date of the project as *"the date on which the project participants commit to making expenditures for the construction or modification of the main equipment or facility (e.g. a wind turbine)"*, validation team concluded that the PP's specifying on the start date of the Project on which the date photovoltaic module master supply agreement was signed, 19/10/2018, is adequate and correct. Thus, CAR 13 is satisfied and closed.				

CAR ID	14	Section no.	D.4.6	Date: 10/10/2019
Description of CAR				
PP is requested to include all of the applied Data / parameter in the PDD.				
Project participant response				**Date:** 25/10/2019
Revised – PP added data/parameter of Total installed power plant capacity in Vietnam(MW) and Total installed capacity of the solar power plant in Vietnam (MW)				
Documentation provided by project participant				
- Revised PDD - IRENA RE Capacity Statistics 2019 - Vietnam Electricity Annual Report 2017				
DOE assessment				**Date:** 28/10/2019
Validation team reviewed revised PDD and the PP duly added the missed data/parameter which is request to conclude automatic additionality of the Project, total installed power plant capacity in Vietnam(MW) and total installed capacity of the solar power plant in Vietnam (MW) on the section B.6.2 of the PDD. Validation team reviewed the Vietnam Electricity Annual Report 2017 and confirmed that the total installed power plant capacity of Vietnam is 43,135 MW as the PP described in the revised PDD. And validation team also checked the origin source, the web page link in the PDD, of the report and confirmed that it is published by Vietnam Electricity (EVN) which is established by Vietnamese government and most up-to-dated report. And validation team have sent an e-mail inquiry to the official contact point on the website, requesting that the confirmation of the up-to-dated publish of the report, however the EVN did not reply. Validation team searched other reference of the total installed power plant capacity of Vietnam by internet searching, however, could not find any up-to-dated officially published data other than the Vietnam Electricity Annual Report 2017 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to for the total installed power plant capacity of Vietnam. Validation team also reviewed the IRENA RE Capacity Statistics 2019 and confirmed that the total installed solar photovoltaic capacity of Vietnam is 106 MW as the PP described in the revised PDD. And validation team also checked the origin source, the web page link in the PDD, of the report and confirmed that it is published by International Renewable Energy Agency (IRENA) which is the intergovernmental organization and renewable energy and most up-to-dated report. Validation team searched other reference of the total installed solar photovoltaic capacity of Vietnam by internet searching, however, could not find any up-to-dated officially published data other than the IRENA RE Capacity Statistics 2019 which the PP applied to the Project. Validation team concluded that the PP duly applied the latest – official source of the data to for the total installed power plant capacity of Vietnam. And thus, validation team concluded that the sources used are valid and credible. Thus, CAR 14 is satisfied and closed.				

Table 3. FARs from this validation

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

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Document information

Version	*Date*	*Description*
04.0	31 May 2019	Revision to: • Ensure consistency with version 02.0 of the “CDM validation and verification standard for project activities” (CDM-EB93-A05-STAN); • Make editorial improvements.
03.1	11 January 2018	Editorial revision to remove an erroneously included instruction paragraph in section D.2 (Identification of project type).
03.0	31 October 2017	Revision to align with the requirements of the “CDM validation and verification standard for project activities” (version 01.0).
02.0	22 July 2016	EB 90, Annex 3 Revision to include provisions related to automatically additional project activities.
01.0	23 March 2015	Initial publication.

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