Validation report form for renewal of crediting period for Gold Standard project activities	
BASIC INFORMATION	
Title of the project activity	42 MWp Bundled Solar Photovoltaic Power project in Indonesia
GS Reference Number	GS7553
Scale of the project activity	Large Scale
Number and duration of the next crediting period	Number of crediting period: 2 Duration of Crediting period: 02/07/2024 to 01/07/2029
Version number of the validation report	1
Completion date of the validation report	28/06/2024
Version number of GS PDD to which this report applies	4.1
Project participants	PT Infrastruktur Terbarukan Adhiguna PT Infrastruktur Terbarukan Buana PT Infrastruktur Terbarukan Cemerlang PT Infrastruktur Terbarukan Lestarix
Project Representative	Kosher Climate India Pvt. Ltd.
Host Party	Indonesia
Certification Pathway	Impact statements and Products
Product to be certified	GS VER
Activity Requirements applied	Renewable energy activity requirement, v1.4
Product Requirement	GHG Emission Reduction & Sequestration Product Requirement, v2.2
Applied Methodology	ACM0002 “Grid-connected electricity generation from renewable sources” (Version 21)
Sectoral scopes	Sectoral Scope 1: Energy industries (renewable-/non-renewable sources)
Estimated amount of SDG Impact	**SDGs** / **Estimated SDG Impact** SDG 13 / 57,565 tCO_2/annum SDG 7 / 62,907 MWh electricity generation SDG 8 / 70 number jobs created
Name of the VVB	4K Earth Science Private Limited
Name, position and signature of the approver of the validation report	Chandrakala R  Managing Director

SECTION A. Executive summary

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4K Earth Science Private Limited has been contracted by 'Kosher Climate India Pvt. Ltd' to perform a validation of the registered GS VER Project '42 MWp Bundled Solar Photovoltaic Power project in Indonesia' (GS Ref# GS7553) in Indonesia for renewal of crediting period.

The scope of the validation is defined as an independent and objective review of the revised GS Project Design Document, project's baseline study and monitoring plan and other relevant documents. The information in these documents is reviewed against the Gold Standard Principles and Requirements (Version 1.2).

The report is based on the assessment of the Project design document (PDD) undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., on site visit, electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools and guidance

The GS Project activity is involves installation of 4 solar project comprise with the total capacity of 42 MWp as given below:

No	Developer	Capacity	Location
1	PT Infrastruktur Terbarukan Adhiguna (ITA)	7 MWp/ 5.4 MWac	Cemporonan sub-village, Pringgabaya Utara village, Pringgabaya district, Lombok Timur regency, Nusa Tenggara Barat province, Indonesia
2	PT Infrastruktur Terbarukan Buana (ITB)	7 MWp/ 5.4MWac	Geres Baret sub-village, Geres village, Labuhan Haji district, Lombok Timur regency, Nusa Tenggara Barat province, Indonesia
3	PT Infrastruktur Terbarukan Cemerlang (ITC)	7 MWp/ 5.4 MWac	Sengkol 1 sub-village, Sengkol village, Pujut district, Lombok Tengah regency, Nusa Tenggara Barat province, Indonesia
4	PT Infrastruktur Terbarukan Lestari (ITL)	21 MW/ 15.3 MWac	Wineru Village, Likupang Timur District, Minahasa Utara Regency, Sulawesi Utara Province, Indonesia

The projects generates renewable electricity and supplied to grid and thereby avoiding CO_2 emission by displacing equivalent electricity produced from grid connected power plants. The project is registered in GS and currently applying renewal for second crediting period ie, 02/07/2024 to 01/07/2029.

The project correctly applies CDM methodology ACM0002 "Grid-connected electricity generation from renewable sources" (Version 21)

The emission reductions attributable to the project are hence additional to any that would occur in the absence of the project activity.

The estimated SDG impacts from the project are as follows:

SDGs	Estimated SDG Impact
SDG 13	57,565 tCO_2/annum emission reduction
SDG 7	62,907 MWh electricity generation
SDG 8	70 jobs created

The SDG estimation has been checked and it is deemed likely that the stated amount is achievable given the underlying assumptions do not change

The review of the project design document and the subsequent follow-up interviews have provided 4KES with sufficient evidence to determine the project's fulfillment of all the stated criteria. In our opinion, the project meets all applicable Gold Standard requirements and hence the request for renewal of crediting period is considered acceptable..

☒The project will be recommended to the Gold Standard with a request for renewal of crediting period.
☐The project is not recommended for renewal of crediting period

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 VVB or outsourced entity)	Involvement in			
						Desk/document review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader/ Technical Expert (1.2)	IR	Acharya	Swati S	Central Office	x	x	x	x
2.	Trainee ()	IR	B R	Ragul	Central Office	x	x	x	x

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

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	IR	S	Stalin	Central office
2	Approver	IR	R	Chandrakala	Central Office

SECTION C. Means of validation

C.1. Desk/document review

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The report is based on the assessment of the project design document undertaken through stakeholder consultations, application of standard auditing techniques including but not limited to desk review, follow up actions (e.g., on site visit, electronic (telephone or e-mail) interviews) and also the review of the applicable approved methodological and relevant tools, guidance and GS decisions.

All the documents used for arriving validation conclusion are listed in Appendix 03 and referenced accordingly in validation report

C.2. On-site inspection

Duration of on-site inspection: 24/05/2024 & 27/05/2024				
No.	**Activity performed on-site**	**Site location**	**Date**	**Team member**
1.	Opening Meeting, Office Inspection, interviews and project design review	ITA Site office	24/05/2024	Swati S Acharya
2.	Plant visit and interview with stakeholders	ITA, ITB & ITC Sites	24/05/2024	Ragul B R

3	Office Inspection, interviews and project design review	ITL Site office	27/05/2024	
4	Closing meeting	ITL Site office	27/05/2024	

C.3. Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Akhmalaganı	Yadin	ITA, ITB & ITC	24/05/2024	- Roles and responsibilities - Technical details - Revised baseline - Revised monitoring requirement - Stakeholder consultation process	Swati S Acharya Ragul B R
2	Watania	Kezia	ITL	24/05/2024		
3	Riski	Noor Adha	ITA, ITB, ITC & ITL	24/05/2024 & 27/05/2024		
4	Kumar	Narendra	Kosher	24/05/2024 & 27/05/2024		

C.4. Sampling approach

No sampling approach is followed in the validation.

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

Area of validation findings	No. of CL	No. of CAR	No. of FAR
D.1 Compliance with PDD form	-	-	-
D.2 Eligibility of the project under Gold Standard	-		-
D.3 Application and selection of methodologies and standardized baselines	-		-
D.4 Validity of original baseline or its update	1	1	-
D.5 Contribution to SDGs	-		-
D.6 Assessment of SDG outcomes	-	2	-
D.7 Validity of monitoring plan	-	-	-
D.8 Crediting period	-	-	-
D.9 Gold Standard Requirement on Design Certification Renewal	-	-	-
D.10 Assessment of safeguarding principles	-	1	-
D.11 Stakeholder Consultation	-	-	-
D.12 Post-registration changes	-	-	-
Others (please specify)	-	-	-
Total	**1**	**4**	-

SECTION D. Validation findings

D.1. Compliance with PDD form

Means of validation	Validation team checked the GS4GG Project Design Document with latest version of 'Gold Standard for the Global Goals Key Project Information & Project Design Document (PDD)' in the GS website (ie, version 1.5). PP used the same latest version for preparation of PDD.
Findings	No finding
Conclusion	PP prepared the revised PDD based on the version 1.5 of the template. Validation team confirms that final PDD is completed using the valid version of the applicable GS4GG PDD form at the time of submission.

D.2. Eligibility of the project under Gold Standard

Means of validation	The eligibility requirements are updated based on the latest GS4GG Requirements. With regard to Design Certification Renewal, the followed is assessed:

	(a) Changes in the Project as related to the General Eligibility Criteria • There are no changes in the general eligibility criteria. • The type of project remains the same – Renewable energy which is approved by GS • The location of the project is Indonesia and continues to be the same • Project Area, Project Boundary and Scale – the project boundary is defined as per applied methodology and there is no change in it. • Host Country Requirements – the project is in compliance with the host country's legal, environmental, ecological and social regulations. • Contact Details – there is no change in the Project Proponent and remains same. • Legal Ownership – Continues to be the same and ITA, ITB, ITC & ITL are the uncontested legal owner of the carbon credits generated from the respective project. • Other rights – There is no change in other resource use as no other resources are involved. • ODA Declaration – No ODA funds involved in the project which is confirmed from ODA Declaration provided by the project owner. As per the assessment above, the project is incompliance with the GS4GG eligibility criteria.
Findings	No finding
Conclusion	PP has justified the eligibility of the project as per the Gold Standard General eligibility requirements. Based on the document review and interview with PP, the validation team confirms that the project is in compliance with the Section 3 requirements of GS4GG Principles Requirements, v1.2.

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

Means of validation	For the 1st crediting period, the project applied the following methodology ACM0002 "Grid-connected electricity generation from renewable sources" (Version 20). During this renewal of the crediting period the PP is using the GS approved methodology and complies with all the requirements of the below mentioned methodology: ACM0002 "Grid-connected electricity generation from renewable sources" (Version 21) The assessment team has validated the documentation referred to in the revised PDD for renewable of crediting period and verified the documentation content for verifying the justification of the applicability of the methodologies and confirmed that the documentation referred to in the PDD is correctly quoted and interpreted.

Applicability Criteria	**Assessment**
This methodology is applicable to grid-connected renewable power generation project activities that: (a) install Greenfield power plant; (b) involve a capacity addition to (an) existing plant(s); (c) involve a retrofit of (an) existing plant(s)/unit(s); (d) involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) involve a replacement of	The project is a grid connected greenfield power plant. Hence satisfy the criterion.

	(an) existing plant(s)/unit(s)	
	In case the project activity involves the integration of a BESS, the methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Integrate BESS with a Greenfield power plant; (b) Integrate a BESS together with implementing a capacity addition to (an) existing solar photovoltaic1 or wind power plant(s)/unit(s); (c) Integrate a BESS to (an) existing solar photovoltaic or wind power plant(s)/unit(s) without implementing any other changes to the existing plant(s); (d) Integrate a BESS together with implementing a retrofit of (an) existing solar photovoltaic or wind power plant(s)/unit(s)	The project does not involve BESS. Hence not applicable.
	The methodology is applicable under the following conditions: (a) 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; (c) In case of Greenfield project activities applicable under paragraph 5 (a) above, the project participants shall demonstrate that the BESS was an integral part of the design of the renewable energy project activity (e.g. by referring to feasibility studies or investment decision documents); (d) The BESS should be charged with electricity generated from the associated renewable energy power plant(s). Only during exigencies2 may the BESS be charged with electricity from the grid or a fossil fuel electricity generator. In such cases, the	The project activity is the installation of a new grid connected renewable solar power project. Hence satisfy the criterion.

	corresponding GHG emissions shall be accounted for as project emissions following the requirements under section 5.4.4 below. The charging using the grid or using fossil fuel electricity generator should not amount to more than 2 per cent of the electricity generated by the project renewable energy plant during a monitoring period. During the time periods (e.g. week(s), months(s)) when the BESS consumes more than 2 per cent of the electricity for charging, the project participant shall not be entitled to issuance of the certified emission reductions for the concerned periods of the monitoring period.	
	In case of hydro power plants, one of the following conditions shall apply: (a) –(d) as per methodology	The project is the installation of solar power project. Therefore, the said criterion is not applicable
	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 indifferent 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.	The project is the installation of solar power project. Therefore, the said criterion is not applicable
	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;	The project is the installation of solar power project. Therefore, the said criterion is not applicable
	In the case of retrofits, rehabilitations,	The proposed project activity

	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".	is the installation of solar power project. Therefore, the said criteria is not applicable

Applicability conditions of "Tool to calculate the emission factor for an electricity system" v7 /15/:

- OM, BM and CM are estimated using the tool under section B.4 of the PDD for calculating baseline emissions.
- The project activity is grid connected and thus emission factor is calculated and thus OM, BM and CM are estimated using the tool under section B.4 of the PDD for calculating baseline emissions.
- The project activity is located in Indonesia, a non-Annex I country. Therefore, this criterion is not applicable for the project activity.
- The project activity is a grid connected solar power project. Therefore, this criterion is not applicable for the project

Hence, the project satisfy all relevant criteria of "Tool to calculate the emission factor for an electricity system" v7.

Findings	No finding
Conclusion	The project fulfils all relevant criteria of the applied ACM0002 "Grid-connected electricity generation from renewable sources" (Version 21) and relevant Tool referred by the methodology "Tool to calculate the emission factor for an electricity system" (version 7). Hence use of the selected methodology is appropriate for this project activity.

D.4. Validity of original baseline or its update

Means of validation	The baseline scenario as depicted in the PDD is checked during the interview with the plant official and project consultant. Assessment team referred "CDM Methodological tool (EB 66, Annex 47) "Assessment of the validity of the original / current baseline and update of the baseline at the renewal of the crediting period." (Version 03.0.1)" to check the validity of the original baseline or its update. Following are the observation of the assessment team regarding selected baseline for the project activity in this present 2nd crediting period: Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies The PDD discusses any new national and/or sectoral policies or regulations which entered into force since the time of registration of the project activity that could have an impact on the baseline or GHG emission reductions. The Government of Indonesia has put into effect the following regulations since that time: • Presidential Regulation No.4/2010 concerning the assignment to PT PLN to conduct electric power development acceleration using renewable, coal and gas. The regulation means that the Government of Indonesia will speed up the development of 3,977 MW of new geothermal power between 2010 and 2014, and the regulation provides some incentives for the development of geothermal capacity . • Ministry of Energy and Mineral Resources Regulation No 15 / 2010 on the List of Electric Power Development Acceleration Projects Using Renewable, Coal and Gas which has been amended by the Minister of Energy, Mineral Resources Regulation No 1/2012, and Ministry of Energy and Mineral Resources Regulation

	No 21 / 2013 . • Presidential Regulation No.61/2011 on National Action Plan in Reducing GHG Emission (RAN-GRK). The regulation provides various measures for incentivising emissions reductions and clean energy technologies. • Presidential Regulation No 62/2014 on the Ratification of the Statute of the International Renewable Energy Agency. The regulation further sets the framework for the support of renewable energy in Indonesia. • Ministry of Energy and Mineral Resources Regulation No. 17/2014 on Purchase of Electricity and Steam From Geothermal by PLN. The regulation governs the purchase by the state-owned electricity company of electricity from geothermal plants in Indonesia. • Ministry of Energy and Mineral Resources Regulation No. 50/2017 on the use of Renewable Energy for Electricity Supply. The baseline of continuation of the current situation remains valid under these regulations, and the overall energy mix of the respective grid has not changed dramatically since the start of the first crediting period. Hence, the baseline remains unchanged for the present (2nd) crediting period since there is no policy been revised and/or is currently in force as well, therefore the baseline scenario is still in compliance with all the relevant mandatory national and/or sectoral policies. <u>Step 1.2: Assess the impact of circumstances</u> There are no new circumstances that can impact the original baseline. The baseline emission factor value is however updated based on the current data available for the grid. <u>Step 1.3: Assess whether the continuation of the use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested.</u> The baseline scenario was the electricity import/generation from the power plants connected to the electricity grid. The project activity is green field project and there is no any baseline equipment or investment involved in project activity. Therefore, this condition is not applicable to the project activity. <u>Step 1.4: Assessment of the validity of the data and parameters</u> This step stipulates that “Where emission factors, values or emission benchmarks are used and determined only once for the crediting period, they should be updated, except if the emission factors, values or emission benchmarks are based on the historical situation at the site of the project activity prior to the implementation of the project and cannot be updated because the historical situation does not exist anymore as a result of the CDM project activity.” In the registered PDD, no parameters are fixed ex-ante. However, PP now included the combined margin emission factor ex-ante in the PDD for the 2nd crediting period. Though the baseline remains same, the baseline emission factor needs to be updated as the latest data available. Now the emission factor is fixed ex-ante and thus will be used for the complete 2nd renewable crediting period and for entire verification conducted under 2nd renewable crediting period. Application of Steps 1.1, 1.2, 1.3 and 1.4 confirmed that the current baseline is valid for the Second crediting period but data and parameters needs to be updated. Therefore step 2 is used

	Step 2: Update the current baseline and the data and parameters Assessment in the Steps 1.1, 1.2, 1.3 and 1.4 shows that the current baseline emission factor needs to be updated. Hence step 2 is applicable. Step 2.1: Update the current baseline PP has updated the baseline emission factor for the 2nd crediting period based on the latest approved version of the methodology applicable to the project activity (ie, ACM002, version 21). Since the latest grid emission factor considers all sectoral policies and circumstances that are applicable at the time of request for renewal of the crediting period, the baseline emission factor is estimated in the context of sectoral policies and circumstances that are applicable at the time of request for renewal of the crediting period. Step 2.2: Update the data and parameters In the registered PDD, no parameters are fixed ex-ante. However, PP now included the combined margin emission factor ex-ante in the PDD for the 2nd crediting period As per the PDD, the project is connected to the respective grid. Hence the ex-ante parameter "Combined margin CO_2 Emission Factor" is determined ex-ante for the 2nd crediting period. The "Combined margin CO_2 Emission Factor" is estimated as per the Guidance given in "Tool to calculate the emission factor for electricity system" version 07 and the results are published in Greenhouse Gas (GHG) Emission Factors for Electricity Interconnection Systems, 2019 published by the Director General of Electricity, Government of Indonesia. The value considered is checked by the assessment team and found correct. Hence as per para 24 of ACM002 version 21 (latest Methodology), the baseline of the project is as follows: "*If the project activity is the installation of a Greenfield power plant with or without a BESS as described under paragraph 4(a) or paragraph 5(a), the baseline scenario is electricity delivered to the grid by the project activity that 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*". The project activity involves implementation of green field power plant and supply generated electricity to the grid. In the absence of the project activity, the equivalent amount of power would have been supplied by the grid, which is fed mainly by fossil fuel fired plants. The above selected baseline is correct and thus applicable to the project activity and in line with approved methodology for the applied renewable of crediting period.
Findings	CL-01 & CAR-04 are raised and closed satisfactorily.
Conclusion	Validity of the baseline has been correctly assessed and the parameters are updated as per the Methodological Tool "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" Version 03.0.1 in the PDD submitted for the renewal of crediting period. The baseline parameters affecting the baseline emission that is sensitive to changes in policies and circumstances are OM, BM & CM which is updated for the 2nd crediting period based on the latest Greenhouse Gas (GHG) Emission Factors for Electricity Interconnection Systems, 2019 published by the Director General of Electricity, Government of Indonesia which valid at the time of this validation. The latest methodology and tools are applied correctly for determination of the updated baseline and the estimation of GHG emission reductions for the applicable crediting period.

D.5. Contribution to SDGs

Means of validation	PP has provided the assessment of project contributions to UN's Sustainable Development Goals (SDGs) in the section B.6 of GS PDD.

	In PDD, PP claims the project contributes to the following sustainable development goals: • SDG 13: Climate Action • SDG 7: Affordable and clean Energy • SDG 8: Decent work and economic growth Validation team assessed the PPs claim on the contributions to the SDGs as below: **SDG 13- Climate action** The project avoids GHG emission from avoidance of grid electricity. Hence, the project reduces GHG emission compare to baseline condition. Hence validation team confirms the project's contribution to SDG 13. The following parameters have been chosen as monitoring parameters for SDG13: • Amount of GHGs emissions avoided **SDG 7 – Affordable and clean energy** The project is implementation of solar power projects that produce renewable electricity. Hence validation team confirms the project contribution to SDG The following parameters have been chosen as monitoring parameters for SDG7: • Total electricity produced: Renewable **SDG 8- Decent work and economic growth** The project generates new employment opportunities particularly for local people in operation of the project. Hence validation team confirms the project's contribution to SDG 8. The following parameters have been chosen as monitoring parameters for SDG 8: • Total Number of Jobs
Findings	No finding
Conclusion	a) The validation team confirms the proposed project will results in contributions to the SDGs 13, 7 & 8 b) Since the project contributes to three SDGs the validation team is in the opinion that the project is eligible under Gold standard as per GS4GG c) All the parameters chosen to monitor the SDGs are found to be appropriate.

D.6. Assessment of SDG outcomes

Means of validation	For SDG outcome, PP followed the following approach:

SDG	Baseline Scenario	Project Scenario	Net Benefit
SDG 13	GHG emission from equivalent electricity generated from grid	No emission	Baseline value – Project value
SDG 7	No renewable electricity generated	Renewable electricity generated from the project	Project value- Baseline value

SDG 8	No project related jobs created	Generation of jobs	Project value-Baseline value

SDG 13

The validation team checked whether the equations and parameters used to calculate GHG emission reductions or net anthropogenic GHG removals for project activity are in accordance with applied methodology.

Validation team checked section B.6.2 & B.6.4 of the PDD to confirm whether all formulae to calculate baseline emissions, project emission and leakage have been applied in line with the underlying methodology.

For the SDG 13, the emission reduction calculations were carried out as per the applied CDM methodology ACM0002, v21.

Baseline Emission
The baseline emission is calculated in line with para 47 of ACM0002, Version 21.0, using equation below

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

BE_y	Baseline emissions in year y (t CO_2/yr)
$EG_{PJ,y}$	Quantity of net electricity generation that is produced and fed into the implementation of the project activity in year y (MWh/yr)
$EF_{grid,CM,y}$	Combined margin CO2 emission factor for grid connected power calculated using TOOL07 (t CO_2/MWh)

AS per para 49 of ACM0002, version 21.0, when the project activity is installation of Greenfield power plant, then:
$EG_{PJ,y} = EG_{facility,\ y}$
Where,

$EG_{PJ,y}$	Quantity of net electricity generation that is produced and fed into the implementation of the project activity in year y (MWh/yr)
$EG_{facility,\ y}$	Quantity of net electricity generation supplied by the project plant (MWh/yr)

Hence the baseline emission equation is as below:
$BE_y = EG_{facility,\ y} * EF_{grid,CM,y}$

Project Emission:
The project activity involves in harnessing solar power. As per the approved consolidated Methodology ACM0002 (Version 21.0) para 31:

"For most renewable energy power generation project activities, PEy = 0. However, some project activities may involve project emissions that can be significant. These emissions shall be accounted for as project emissions by using the following equation:

$PE_y = PE_{FF,y} + PE_{GP,y} + PE_{HP,y} + PE_{BESS,y}$
Where,
PE_y *Project emissions in year y (t CO2e/yr)*

	$PE_{FF,y}$ *Project emissions from fossil fuel consumption in year y (t CO2/yr)* $PE_{GP,y}$ *Project emissions from the operation of dry, flash steam or binary geothermal powe y (t CO2e/yr)* $PE_{HP,y}$ *Project emissions from water reservoirs of hydro power plants in year y (t CO2e/yr)'* $PE_{BESS,y}$ *Project emissions from charging of a BESS using electricity from the grid or from fo electricity generators (t CO2e/yr)* As the project activity is the installation of a new grid-connected solar project and does not involve any project emissions from fossil fuel, operation of dry, flash steam or binary geothermal power plants, and from water reservoirs of hydro power plants. Therefore $PE_{FF,y}$, $PE_{GP,y}$, $PE_{HP,y}$ are equal to zero and thus, PE_y = 0. So the emissions from the project are zero. **Leakage** As per the approved consolidated Methodology ACM0002 (Version 21.0) para 61, no 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 **Emission Reduction (ER_y):** The project activity mainly reduces carbon dioxide through substitution of grid electricity generation with fossil fuel fired power plant by renewable electricity. The emission reduction ER_y by the project activity during a given year y is the difference between Baseline emission and Project emission & Leakage emission. As per the applied methodology, leakage emissions are excluded for solar projects and hence the same is not used. The emission reduction is calculated in line with para 62 of ACM0002, Version 21, using equation below: $ER_y = BE_y - PE_y$ Where, ER_y = Emission Reduction in tCO_2/year BE_y = Baseline emission in tCO_2/year PE_y = Project emissions in tCO_2/year **Ex-ante Calculation:** **Baseline Emission** $BE_y = EG_{facility,y} * EF_{grid,CM,y}$

Project	**Grid**	**EGPJ,y***	**EFgrid,CM,y**	**BEy = $EG_{facility,y}$ * $EF_{grid,CM,y}$**
ITA	Lombok	10,265 MWh	1.11 tCO2/MWh	11,395 tCO2
ITB	Lombok	10,774 MWh	1.11 tCO2/MWh	11,959 tCO2
ITC	Lombok	10,745 MWh	1.11 tCO2/MWh	11,927 tCO2
ITL	Sulutgo	31,755 MWh	0.72 tCO2/MWh	22,864 tCO2
Total	-	63,539 MWh	-	58,144 tCO2

*0.5% annual degradation is considered from the value provided in the third party PV syst report for the 1st 5 years which is found to be appropriate and inline with the DPR.

	Project Emission: As explained above, the project emission is zero. $PE_y = 0\ tCO_2$ **Leakage:** As explained above, the no leakage emission is considered.

	$LE_y = 0\ tCO_2$ **Emission Reduction:** $ER_y = BE_y - PE_y$ $ER_y = BE_y$ (since project emission is zero) **Project** / **ERy (year 1 of 2nd crediting period)** ITA — 11,395 tCO_2 ITB — 11,959 tCO_2 ITC — 11,927 tCO_2 ITL — 22,864 tCO_2 Total — 58,144 tCO_2 Considering the degradation factor of 0.5%, the emission reduction for the next 5 years is estimated by PD and the same checked and found to be correct. The estimated annual average ex-ante value for the SDGs are given below **SDG** / **Parameter** / **Net Benefit** SDG 13 — Amount of GHGs emissions avoided — 57,565 tCO_2/year SDG 7 — Total electricity produced: Renewable — 62,907 MWh SDG 8 — Total Number of Jobs — 70 Nos
Findings	CAR-01 & CAR-02 are raised and closed satisfactorily
Conclusion	The approach provided for estimation of SDG outcome provided in the PDD is verified and found to be appropriate for the project activity and selected indicator. For the estimation of SDG 13, validation team confirm that the algorithms and formulae proposed to calculate project emissions, baseline emissions, leakage and emission reductions in the PDD is in line with the requirements of the selected methodology ACM002, version 21. For ex-ante calculation, the assessment team confirms that • All assumptions and data used by the project participants are listed in the PDD, including their references and sources; • All documentation used by project participants as the basis for assumptions and source of data is correctly quoted and interpreted in the PDD; • All values used in the PDD are considered reasonable in the context of the project. • The applied formula and methods for calculating ER are in accordance with the applied methodology and • All calculations are complete and without any omissions. As per the GS4GG requirements, the emission reduction estimated in the PDD is in line the applied methodological requirement.

D.7. Validity of monitoring plan

Means of validation	The sustainability monitoring plan in the revised GS PDD is compared with the GS4GG transition document and found that there is no change in the sustainability plan of the PDD and hence, the monitoring plan already followed by PP is still valid. As per the revised PDD the following parameters are to be monitored: **SDG/** / **Monitoring Parameter** / **Assessment of monitoring plan** SDG 7 & SDG 13 — EGy - Net quantity of electricity exported to the grid by the project activity during the year y — This will be monitored continuously though energy meters of accuracy clause 0.2s. This will be recorded monthly in the Joint meter readings statement by PLN. The monitoring plan is found to be appropriate for the selected parameter and SDG. SDG 8 — Total Number of Jobs — This will be monitored annually and reported in the employment records. The monitoring

		plan is found to be appropriate for the selected parameter and SDG.

SDG 13 Monitoring plan:
Validation team checked whether existing monitoring plan followed during the 1st crediting period monitoring the plan is still valid for the 2nd crediting period or not. Validation team checked the monitoring plan provided in the revised PDD and compared with the monitoring plan provided in the PDD of 1st crediting period.

Validation team also checked whether the monitoring plan provided in the revised PDD is in consistent with requirements of the applied methodology.

The information provided in the PDD has been found in compliance with the information evaluated during the site visit, while interviewing with the concerned people and the same was re-affirmed through the documentary evidence.

The monitoring plan described in the PDD is in compliance with the applied methodology. The assessment team has reviewed all the parameters in the monitoring plan against the requirements of the applied methodology and confirmed that monitoring parameters are applied in line with the requirement of the methodology and relevant in the context of the project. The procedures have been reviewed by the assessment team through document review and interviews with the respective department's personnel. The information provided has allowed the assessment team to confirm that the proposed monitoring plan is feasible within the project design. The relevant points of monitoring plan have been discussed with the PP. Specifically, these points include the monitoring methodology, data management, and the quality assurance and quality control procedures to be implemented in the context of the project. Therefore, the PP will be able to implement the monitoring plan and the achieved emission reductions can be reported ex-post and verified.

The parameters that are fixed ex-ante are:

Parameter	Value	Source & Assessment
EF_{CM}	Lombok grid – 1.11 tCO2/MWh Sulutgo grid – 0.72 tCO2/MWh	The OM was calculated based on the 3 year weighted average and BM is based on the latest year (2019) BM calculated as per 'Tool to calculate the emission factor for an electricity system', version 7 as per the data provided in Emission Factors for Electricity Interconnection Systems, 2019 published by the Director General of Electricity, Government of Indonesia. The value is verified and found to be correct. This has been calculated based on the OM & BM calculated considering weights of 0.75 & 0.25 respectively which is applicable for 2nd crediting period of solar power project

The parameters that are to be monitored ex-post are:

Parameter	Monitoring Details
EGy - Net quantity of electricity exported to the grid by the project activity during the year y	This will be monitored continuously though energy meters of accuracy clause 0.2s. This will be recorded monthly in the Joint meter readings statement by PLN. The monitoring plan is found to be appropriate for the selected parameter and SDG.
Total Number of Jobs	This will be monitored annually and reported in the employment records. The monitoring plan is found to be appropriate for the selected parameter and SDG.

	The monitoring plan content has been checked in the PDD and compared against the requirements of the monitoring methodology All means of implementing the monitoring plan are in line with the applied and monitoring methodology. The validation team has no doubts that the monitoring arrangements as it is already implemented during the first crediting period itself as described in the PDD. **Sampling plan:** No sampling plan involved in this project.
Findings	No finding
Conclusion	The sustainability monitoring plan is unambiguous & has clearly stated who will monitor each of the parameter & the monitoring frequency requirements. Validation team checked monitoring procedure given for each parameter and found that the monitoring plan is feasible during the crediting period For SDG13, the validation team confirms that the monitoring plan based on the approved monitoring methodology is included in the PDD and is correctly applied to the project. The monitoring plan has been found to be in compliance with the requirements of the applied methodology. The monitoring plan will give opportunity for real measurements of achieved emission reductions. The validation team considers that monitoring arrangements described in the monitoring plan in line with the existing monitoring plan already implemented in the site. As per the GS4GG requirements, the monitoring requirements provided in the PDD is in line the applied methodological requirement

D.8. Crediting period

Means of validation	The validation team checked whether the PP specified the Start date & duration of the 2nd crediting period which is in accordance with the applicable requirements in the GS requirements. The details provided in the PDD are: • Start date of crediting period: 02/07/2024 • Length of crediting period: 5 years The end date of the 1st crediting period is 01/07/2024 and the renewal of crediting period is submitted within 1 year from the end of 1st crediting period. Hence, considering the start date of 2nd crediting period for the project is appropriate.
Findings	No finding.
Conclusion	The start date and the crediting period type & length have been validated and found to be in accordance with GS4GG Principles and Requirements, version 1.2. FAR-01 shall be addressed during the 1st verification.

D.9. Gold Standard Requirement on Design Certification Renewal

Means of validation	(a) Changes in the Project as related to the General Eligibility Criteria: The Project is already transited to the GS4GG standard. No specific changes in the project related to general eligibility criteria is observed. The assessment of general eligibility criteria is provided in section D.2 above. (b) Incorporation of any relevant updates to the Gold Standard Requirements The project is already registered under the GS4GG standard. There are no any relevant updates to the Gold Standard Requirements has been included in the PDD. (c) Re-definition of Baseline Scenario and any impact of change on the Eligibility Principles, Criteria and Requirements The assessment of re-definition of Baseline scenario as per the UNFCCC requirement has been provided in the section D.4 above. Validation team checked the revised baseline and found that the revised baseline does not have impact on change on the Eligibility Principles, Criteria and Requirements.

	(d) Any Gold Standard activity, product and methodology-specific Requirements The project is already transited to the GS4GG standard. There is no change in Gold Standard activity or product requirement after the transition. (e) Demonstration of Ongoing Financial Need The ongoing financial Need is demonstrated in section B.5.2 of the GS PDD.
Findings	No finding
Conclusion	The revised GS PDD is in compliance with Gold Standard Design Certification Renewal requirements specified in section 5.1.47 of GS4GG Principles Requirements v1.2.

D.10. Assessment of safeguarding principles

Means of validation	PP has provided the assessment of safeguarding principles in the Appendix 1 of GS PDD. As the safeguarding principles are assessed during validation, the same is not reassessed. The validation approach didn't reveal any situation that could lead to the violation of safeguarding principles and VVB has confirmed that the project activity fulfil GS Safeguarding Principles Requirements, version 2.1
Findings	CAR-03 is raised and closed satisfactorily
Conclusion	All supporting information & reference sources stated in the GS4GG PDD in order to support the assessment have been verified by the validation team & confirmed the assessment has been carried out based on accurate information. All of the Safeguarding Principles were evaluated and assessed as no risk. Hence no mitigation measure is proposed.

D.11. Stakeholder consultation

Means of validation	This is the renewal of crediting period. Hence, the stakeholder consultation is not applicable. Stakeholder consultation was conducted during the registration of the project activity. The same has been validated during the registration of the project activity. As per the GS requirements, a continuous input and grievance mechanism is in place for the PDD. Validation team checked the grievance registers and discussed with the PP regarding the grievance reporting mechanisms. Validation team also interviewed the end users during the site visit and confirmed the end users are aware of the grievances mechanism in place. Validation team finds that the grievance mechanisms in place are adequate and the stakeholders are aware of the grievance mechanisms.
Findings	No findings
Conclusion	The stakeholder requirements are validated during the registration of project activity. The Continuous input and grievance mechanism in place is found be adequate and in line with the GS requirements.

D.12. Post-registration changes

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

SECTION E. Internal quality control

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The validation report prepared by team leader is reviewed by an independent technical reviewer (having competence of relevant technical area himself/herself or through an independent technical area expert) to confirm the internal procedures established by 4KES are duly followed and the validation report/opinion is reached in an objective manner and complies with the applicable CDM and Gold Standard requirements.

The technical review team is collectively required to possess the technical expertise of all the technical area/sectoral scope the project activity relates to. All team members of technical review team are independent of the validation team. The independent technical reviewer(s) may approve or reject the draft validation report. The findings may be identified even at this stage, which needs to be satisfactorily resolved, before submit final report to UNFCCC. The final approval decision is taken by the Head of the VVB/Director.

The final decision is authorized by the Managing Director, 4KES, once the report is finalized by the Head of DOE/DOE Manager.

SECTION F. Validation opinion

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4K Earth Science Private Limited has been contracted by ‘‘Kosher Climate India Pvt. Ltd’’ to undertake validation of renewal of crediting period of the Gold Standard CDM registered project ‘42 MWp Bundled Solar Photovoltaic Power project in Indonesia’ (GS Ref# GS7553) in Indonesia for renewal of project activities period.

The validation was performed in accordance with the latest version of GS4GG Principles & Requirements, and related Standards/Guidance and host country criteria, UNFCCC criteria for the Clean Development Mechanism, latest version of Validation and Verification Standard, as well as criteria given to provide for consistent project operations, monitoring and reporting.

The assessment included:

- Any impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant guidance from the Board with regard to renewal of the crediting period at the time of requesting renewal of crediting period;

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

- The correctness of the application of an approved baseline methodology for the determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period.
- Sustainability assessment as per GS4GG guidelines including stakeholder consultation, the Safeguard Assessment and SDG outcome assessment

In our opinion, the project meets all relevant GS4GG criteria, and all relevant host country criteria.

The review of the final PDD and the subsequently performed follow-up interviews with representatives of the project participant has provided the validation team with sufficient evidence to determine the validity of the original baseline and/or its update of the project. The PDD correctly applies the methodology ACM0002 "Grid-connected electricity generation from renewable sources" (Version 21). It is demonstrated that the project baseline scenario is not changed and also all necessary parameters are updated correctly for the 2nd crediting period.

The monitoring plan provides for the monitoring of the SDG outcomes including project emission reductions. The monitoring arrangements described in the monitoring plan are feasible within the project design, and it is the validation team's opinion that the project participates are able to implement the monitoring plan.

The ex-ante estimated SDG outcomes for the 2nd Crediting period are as below:

SDGs	Estimated SDG Impact
SDG 13	57,565 tCO_2/annum emission reduction
SDG 7	62,907 MWh renewable electricity generation
SDG 8	70 no of jobs generation

In summary, it is validation team's opinion that the GS VER project '42 MWp Bundled Solar Photovoltaic Power project in Indonesia' (GS Ref# GS7553) in Indonesia meets all relevant GS requirements for the renewal of crediting period. Hence 4KES requests the renewal of the crediting period of the project.

Appendix 1. Abbreviations

Abbreviations	Full texts
4KES	4K Earth Science Private Limited
BE	Baseline Emissions
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction
CL	Clarification request
COP	Conference of Parties
DNA	Designated National Authority
DR	Document Review
EB	Executive Board
EF	Emission Factor
ERs	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GS	Gold Standard
HCA	Host Country Approval
IPCC	Intergovernmental Panel on Climate Change
ISO	International Organization for Standardization
KP	Kyoto Protocol
LSC	Local Stakeholder Consultation
LE	Leakage Emissions
LoA	Letter of Approval/Authorization
MNRE	Ministry of New & Renewable Energy
MOP	Meeting of Parties
MoC	Modalities of Communication
MoV	Means of Verification
MP	Monitoring Plan
NCV	Net Calorific Value
NRB	Non-Renewable Biomass
ODA	Official Development Assistance
PA	Project Activity
PDD	Project Design Document
PE	Project Emissions
PP	Project Participant
PS	Project Standard
PCP	Project Cycle Procedure
QA/QC	Quality Assurance/Quality Control
RCP	Renewal of Crediting period
SDG	Sustainable Development Goal
SSC	Small Scale
T&C	Technical & Certification
UNFCCC	United Nations Framework Convention on Climate Change
VVB	Validation and verification body
VVS	Validation & Verification Standard

Appendix 2. Competence of team members and technical reviewers

Certificate of Competence								
Name	☐ Mr. ☒ Ms.	**Swati S Acharya**						
Qualification Procedure		*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.*						
Appointed to work as:								
		Validator/ Verifier	**Team Leader**	**Trainee**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**	**Approver**
Appointed		Yes	Yes	No	Yes	No	No	No
Appointed Date		05-12-2023						
Authorized to work as Technical Expert for:								
Authorized Technical Area		**Sectoral Scope**			**TA Code**		**Technical Area within the scope**	
		Energy industries (renewable - / non-renewable sources)			1.2		Renewables	
		Transportation			7.1		Transport	
Authorized to work as Local Expert for:								
Country/Countries		India						
Compliance check by:		Anand S R						

Certificate of Competence								
Name	☒ Mr. ☐ Ms.	**Ragul B R**						
Qualification Procedure		*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.*						
Appointed to work as:								
		Validator/ Verifier	**Team Leader**	**Trainee**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**	**Approver**
Appointed		No	No	Yes	Yes	No	No	No
Appointed Date		05-12-2023						
Authorized to work as Technical Expert for:								
Authorized Technical Area		**Sectoral Scope**			**TA Code**		**Technical Area within the scope**	
		Transportation			7.1		Transport	
Authorized to work as Local Expert for:								

Country/Countries	-
Compliance check by:	Anand S R

Certificate of Competence

Name	☒ Mr. ☐ Ms.	**Stalin S**
Qualification Procedure		*Fulfils the requirement as per the appointment of personnel procedure of 4KES for Validation and Verification of CDM/VCS/GS/GCC/GHG Projects.*

Appointed to work as:

	Validator/ Verifier	**Team Leader**	**Trainee**	**Technical Expert**	**Technical Reviewer**	**Financial Expert**	**Approver**
Appointed	Yes	Yes	No	Yes	Yes	Yes	Yes
Appointed Date	15-07-2023						

Authorized to work as Technical Expert for:

Authorized Technical Area	**Sectoral Scope**	**TA Code**	**Technical Area within the scope**
	Energy industries (renewable - / non-renewable sources)	1.1	Thermal energy generation
	Energy industries (renewable - / non-renewable sources)	1.2	Renewables
	Energy distribution	2.1	Energy distribution
	Energy demand	3.1	Energy demand
	Waste handling and disposal	13.1	Solid waste and wastewater
	Waste handling and disposal	13.2	Manure

Authorized to work as Local Expert for:

Country/Countries	India
Compliance check by:	Anand S. R.

Appendix 3. Documents reviewed or referenced

No.	Author	Title	References to the document	Provider
1	Kosher	GS Project Design Document	Version 04, dated 25/04/2024	Kosher
	Kosher	Revised GS Project Design Document	Version 04.1, dated 20/06/2024	Kosher
2	Kosher	ER Estimation sheet	Version 04	Kosher
	Kosher	Revised ER Estimation Sheet	Version 04.1	Kosher
3	UNFCCC	ACM0002: Grid-connected electricity generation from renewable sources	Version 21	Publicly available
4	Gold Standard	GS4GG Principles and Requirement	Version 1.2	Publicly available
5	Gold Standard	GS4GG Renewable Energy Activity	Version 1.4	Publicly available

		Requirement		
6	IPCC	1. 1996 IPCC Guidelines for National Greenhouse Gas Inventories: work book 2. 2006 IPCC Guidelines for National Greenhouse Gas Inventories: work book	Web Link	Publicly available
7	UNFCCC	Kyoto Protocol (1997)	Web Link	Publicly available
8	UNFCCC	GS Project design document form	Version 1.5	Publicly available
9	Kosher	ODA declaration	-	Kosher
10	UNFCCC	Tool 11: Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period	Version 3.0.1	Publicly available
11	UNFCCC	Tool 07: Tool to Calculate the Emission Factor for an Electricity System	Version 07	Publicly available
12	UNFCCC	Tool 3 Tool to calculate project or leakage CO_2 emissions from fossil fuel combustion	Version 3.0	Publicly available
13	PT Energi Bayu	Power Purchase agreement between PP & PLN	-	PD
14	PT Energi Bayu	Commissioning Certificate	-	PD
15	Director General of Electricit	Greenhouse Gas (GHG) Emission Factors for Electricity Interconnection Systems, 2019	Year 2019	Publicly available
16	PT Energi Bayu	Technical specification of the power plants	-	PD
17	Govt. of Indonesia	Presidential Regulation No.4/2010 concerning the assignment to PT PLN to conduct electric power development acceleration using renewable, coal and gas.	-	Publicly available
18	Govt. of Indonesia	Minister Energy and Mineral Resources Regulation No 15 / 2010 on the List of Electric Power Development Acceleration Projects Using Renewable, Coal and Gas which has been amended by Minister Energy and Mineral Resources Regulation No 1/2012 and Minister Energy and Mineral Resources Regulation No 21 / 2013.	-	Publicly available
19	Govt. of Indonesia	Presidential Regulation No.61/2011 on National Action Plan in Reducing GHG Emission (RAN-GRK).	-	Publicly available
20	Govt. of Indonesia	Presidential Regulation No 62/2014 on the Ratification of the Statute of the International Renewable Energy Agency. Minister Energy and Mineral Resources Regulation No. 17/2014 on Purchase of Electricity and Steam From Geothermal by PLN.	-	Publicly available
21	Govt. of Indonesia	Minister Energy and Mineral Resources Regulation No. 50/2017 on the use of Renewable Energy for Electricity Supply	-	Publicly available
22	PLN	Sample BA-I	-	PD

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

Table 1. CL from this Validation

CL ID	01	**Section no.**		**Date:** 11/06/2024
Description of CL				
PD shall clarify why 2019 data is used for the grid emission factor calculation. PD shall use the latest data if available.				
Project participant response				**Date:** 20/06/2024
As per the website of director general of electricity[2], the 2019 data is the latest one available. Hence the same is used for the grid emission factor calculation				
Documentation provided by project participant				
-				
DOE assessment				**Date:** 22/06/2024
Validation team checked the director general of electricity website and found there is no latest data available. Hence, the 2019 data is found to be acceptable. CL is closed.				

Table 2. CAR from this validation

CAR ID	01	**Section no.**		**Date:** 11/06/2024
Description of CAR				
PD shall clarify why 2019 data is used for the grid emission factor calculation. PD shall use the latest data if available.				
Project participant response				**Date:** 20/06/2024
As per the website of director general of electricity[3], the 2019 data is the latest one available. Hence the same is used for the grid emission factor calculation				
Documentation provided by project participant				
NA				
DOE assessment				**Date:** 22/06/2024
Validation team checked the director general of electricity website and found there is no latest data available. Hence, the 2019 data is found to be acceptable. CL is closed.				

CAR ID	02	**Section no.**		**Date:** 11/06/2024
Description of CAR				
PD shall provide completed SDG tool for this project				
Project participant response				**Date:** 20/06/2024
The SDG tool is submitted now.				
Documentation provided by project participant				
SDG Tool.				
DOE assessment				**Date:** 22/06/2024
PD provided the SDG tool. CAR is closed.				

CAR ID	03	**Section no.**		**Date:** 11/06/2024
Description of CAR				
In Appendix A.1 (Safeguarding principles assessment), no negative or potential impact was envisaged. However, in section D.1 there are some safeguarding parameters are monitored. Corrective action requested.				
Project participant response				**Date:** 20/06/2024
Appendix A.1 assessment is corrected now and included the appropriate assessment.				
Documentation provided by project participant				
Revised PDD				
DOE assessment				**Date:** 22/06/2024
PD incorporated appropriate assessment in Appendix 1. CAR is closed.				

[2] https://gatrik.esdm.go.id/frontend/download_index/?kode_category=emisi_pl
[3] https://gatrik.esdm.go.id/frontend/download_index/?kode_category=emisi_pl

CAR ID	04	Section no.		Date: 11/06/2024
Description of CAR				
In the PDD, PP did not explant how the grid emission factor is calculated in line with the Tool:07-'Tool to calculate the emission factor for an electricity system'. Corrective action is requested.				
Project participant response				**Date:** 20/06/2024
The explanation about how the grid emission factor is calculated based on the latest version of Tool:07-'Tool to calculate the emission factor for an electricity system' is included now.				
Documentation provided by project participant				
Revised PDD				
DOE assessment				**Date:** 22/06/2024
PP included justification on how the grid EF is calculated as per Tool 07. CAR is closed.				

Table 3. FAR from this validation

~~FAR ID~~		~~Section no.~~		~~Date:~~
~~**Description of FAR**~~				
~~NA~~				
~~**Project participant response**~~				~~**Date:** DD/MM/YYYY~~
~~-~~				
~~**Documentation provided by project participant**~~				
~~-~~				
~~**DOE assessment**~~				~~**Date:** DD/MM/YYYY~~
~~-~~				

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