

Gold Standard for Global Goals (GS4GG)

Validation Report Renewal of 2nd Crediting Period

GS-CDM

“50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA”

PROJECT ID: GS7139



Report No.: ET-006673

13 February 2025

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INDIA

Title of the project activity	50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA
GS Reference number of the project activity	GS7139
Version number of the validation report	2.0
Completion date of the validation report	13/02/2025
Version number of PDD to which this report applies	3.0
Project participant(s)	Adani Green Energy limited
Host Party	India
Sectoral scope(s)	01: Energy industries (renewable - / non-renewable sources)
Methodology (ies)	ACM0002: Grid-connected electricity generation from renewable sources (Version 21.0)
Estimated amount of annual average GHG emission reductions or GHG removals by sinks in the next crediting period	2 nd Crediting Period: 86,404 tCO ₂ e
Name of VVB	TÜV SÜD SOUTH ASIA PVT. LTD.
Name, position and signature of the approver of the validation report	Deepankar Chowdhury Head - Quality Assurance Certification Body, (Environment & Energy) TÜV SÜD South Asia Pvt. Ltd.

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1 METHODOLOGY

1.1 Objective

TÜV SÜD had been commissioned by the aforementioned client 'Adani Green Energy limited' to conduct an independent renewal of design certification for 2nd crediting period of CDM-GS Project with GS ID 7139 titled as "50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA".

The objective of design certification renewal is to conduct an independent evaluation of the updated Project Design Document (PDD) against the compliance requirements as per GS4GG standard guideline to confirm whether original project baseline is still valid or has been updated by Project Developer taking into account of new criteria in host country. In particular, the project's baseline, monitoring plan, additionality and the project's compliance with relevant GS and UNFCCC requirements to confirm the correctness of the application of the approved baseline methodologies for the determination of the continued validity of the baseline/or its update, and estimation of the emission reductions for the applicable crediting period. The validation scope is to review the updated Project Design Document (PDD) against the GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0) where applicable.

1.2 Scope

The scope of any validation process is defined by the underlying legislation, regulation and guidance provided by relevant entities or authorities for the purpose of assessment GS project activity by VVB for which stepwise procedure is laid out below:

- ✚ Validation of Renewal of Crediting period in accordance with the GS4GG requirements
- ✚ Validation of Renewal of Crediting period in accordance with Clean Development Mechanism Validation and Validation Standard (VVS) for Project Activities v3.0 if project is transitioned from CDM to GS.
- ✚ Validity of Baselines scenario, applied methodology, Monitoring Plan and Estimation of GHG emission reductions/removals
- ✚ Identification and Mitigation of Environmental or/and social risk which may arise as a result of Environmental Impact Assessment as per GS rules
- ✚ Evaluation of Stakeholder consultation and feedback
- ✚ Evaluation of alignment with Safeguarding principle requirements as per GS rules

The validation process is not meant to provide any form of consultancy to the Project Developer (PD). As per standard guideline for VVB clarifications, corrective actions, and/or forward actions are generated raised as per of validation or/and verification process. The Validation shall

commence only after the project documents are listed on the GSF registry. Once, VVB receives the listed documents i.e., Approved Transition Request Form (only of CDM-GS projects) and status of renewal of previous crediting period made available on the GSF Registry, a dedicated interface on the Gold standard website only then, the audit process for renewal of crediting period is initiated as per GS rules.

1.3 Validation Process

The information provided by the Project Developer is assessed by applying the means of validation specified in GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0) wherever applicable.

A competent assessment team for purpose of validation is selected prior to the start audit process. The qualified Validation Team is compassed for specific technical area(s), sectoral scope(s) and relevant host country experience in order to successfully carrying out the validation of this GS project activity. Additionally, a competent Technical Reviewer or Technical Reviewer Team is appointed to ensure quality of technical reporting by Validation Team and a Quality Management Team is selected as per quality control procedure.

The Validation Team conducts the desk review, followed by on-site/remote assessment as per standard auditing techniques which results into formation of Draft Validation Report. The next step involves the resolution of the findings through direct communication with the PPs and then finally the preparation of Final Validation Report. Final Validation Report, PDD and other documents are submitted for technical review following the quality control by the Quality Manger of Certification Body (“Environment and energy”) at VVB before final submission to the GS for review.

1.4 Appointment of the Team

VVB has composed the Validation Team in accordance with the appointment rules of the TÜV SÜD Certification Body “Environment and Energy” where competency of selected team members is evaluated based their expertise in relevant Sectoral Scope/Technical Area and familiarity as well as working/audit experience in the host county.

The composition of a Validation Team has to be approved by the Certification Body (CB) to assure that the required skills are obtained by respective team. The Certification Body (CB) of TÜV SÜD has selected qualification level given below for selected team members which are assigned by formal appointment rules:

- Team Leader (TL)
- Validator
- Technical Experts (TE)
- Host Country expert (CE)

- Trainee Validator
- Technical Reviewer (TR)
- Approver

Team Leader is qualified in the sectoral scope(s) and the technical area(s) (TA) linked to the applied methodology (s) this project activity as per GS requirement for VVB. Appointment certificates of the selected team members are attached provided in APPENDIX [3] for the reference.

Validation Team members selected by Certification Body of VVB

S.N.	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 review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader Technical Expert/Host Country Expert	IR	Kudtarkar	Shruti ¹	TÜV SÜD South Asia Private Limited (TÜV SÜD)	√	x	√	√
2.	Validator	IR	Vyas	Arjun ²	TÜV SÜD South Asia Private Limited (TÜV SÜD)	√	x	√	√
3.	Trainee Validator	IR	Chauhan	Ankita ³	TÜV SÜD South Asia Private Limited (TÜV SÜD)	√	x	√	√
4.	Team Leader Technical Expert/Host Country Expert	IR	Raychoudhury	Rishi	TÜV SÜD South Asia Private Limited (TÜV SÜD)	x	x	x	√
5.	Validator	IR	Rizwan	Sumbul	TÜV SÜD South Asia Private Limited (TÜV SÜD)	x	x	x	√

Technical Reviewer and Approver selected by Certification Body of VVB

S. N.	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	EI	SURESH PATANKAR	SANJAY	TÜV SÜD South Asia Private Limited (TÜV SÜD)

¹ Worked till 30/6/2024

² Worked till 30/10/2024

³ Worked till 30/02/2024

2	Approver	IR	Chowdhury	Deepankar	TÜV SÜD South Asia Private Limited (TÜV SÜD)
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1.5 Review of Documents

Based on the initial submitted GS-PDD, the Validation Team has performed a desk review to:

- Verify the completeness of the data and the information presented in the GS-PDD.
- Review the validity of the baseline with respect to the current national /sectoral policies, ongoing financial additionality, applicability of the methodology and contribution toward sustainable development goal, as per selection.
- Evaluate the validity of monitoring plan as well its elements for data monitoring, archiving and aggregation as per quality assurance and quality control system/procedures in the context of their influence on the generation and reporting of emission reductions.

A complete list is provided in APPENDIX [2] for reference purpose of all documents reviewed by Validation Team.

1.6 On-site Assessment and follow-up Interviews

Validation Team has conducted the remote assessment as per the standard auditing technique of GS guideline. Also, representative personals were interviewed as per part of validation process on 05/10/2023. Validation Team had interacted has also interacted with stakeholders which might be impacted by the project activity implementation and operation. The project implementation, operation, occupation safety status, advantages or/and disadvantages as result of project activity implementation and operation, any problems faced by stakeholders were discussed during remote assessment.

Interviews

S.N.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Pathak	Deepak	Deputy Manager at Adani Green Energy limited	05/10/2023	Updated PDD, applied methodology , validity Baseline, and Additionality, OFN status, Monitoring	Shruti Kudtarkar, Arjun Vyas, Ankita Chauhan
2	P	Elavarasan	Associate manager at Adani Green Energy	05/10/2023		Shruti Kudtarkar, Arjun Vyas,

			limited		plan, Estimated ER calculations, Feedback from stakeholders , Environment	Ankita Chauhan
3	Sai Prakash	K	Local Stakeholder at Adani Green Energy limited	05/10/2023		Shruti Kudtarkar, Arjun Vyas, Ankita Chauhan
4	Naresh Kumar	D	Local Stakeholder at Adani Green Energy limited	05/10/2023	al Impact and mitigation plan	Shruti Kudtarkar, Arjun Vyas, Ankita Chauhan

1.7 Resolution of Clarification, Corrective Action and Forward Action Requests

Validation Team has generated Clarification Request (CL), Corrective Action Request (CAR) and Forward Action Request (FAR) in accordance with the validation and verification standard. Total 10 CLs, 14 CARs and 00 FAR were identified during the validation process same were successfully addressed and resolved hence, all the findings are “closed out” by Validation Team. To ensure the transparency of resolution of findings, detailed description is provided in APPENDIX [1] for reference purpose.

1.8 Internal Quality Control

Validation Team submits Draft Validation Report Technical Review Team following Quality Management Team at Certification Body at TÜV SÜD for the purpose of review as part of internal quality control/assurance procedure.

Technical Reviewer(s) provide its conclusion upon Updated PDD and Draft Validation Report once it is closed successfully then only final submission to the GSF registry is to be initiated. Technical Reviewer Team’s competency to conduct the technical quality checking is provided in APPENDIX [3] for reference purpose. Once Technical Review process is successfully completed, final set of documentation may undergo through the final quality review of reporting by Validation Team, to be performed by the TÜV SÜD’s Quality Manger/Approver.

After successfully completion of technical and administrative quality control as well as assurance process, the final set of documents are prepared, reviewed and approved by the relevant authority by Certification Body’s in accordance with the GS rules and requirements. Once the final set of documents associated with validation of project activity are approved, a request for issuance is submitted to the Gold Standard along with, the relevant Forms/Letters.

2 CARBON VALIDATION AND REPORTING

The project activity implemented by Adani Green Energy limited. Which involves the installation of solar power plant at Village: O. Kakkireni, District: Nalgonda, State: Telangana, India having total capacity of 50 MWAC cumulatively. The power plant is supplying electricity to NTPC Ltd. (to regional grid in India). The estimated net annual power supply to the grid is 92,808 MWh during the 2nd crediting period (16/11/2023 to 15/11/2028).

As communicated by Project Developer (s), aim of the project activity is to this project activity is to generate clean form of electricity through renewable solar energy source for sale of electricity to the grid. Adani Green Energy limited is the promoter of the proposed project activity. Project Activity is expected to reduce GHG emission reductions of 86,404 tCO₂e (annually) therefore achieving the estimated GHG emission reduction of 4,32,023 tCO₂e during the total length of 2nd crediting period (16/11/2023 to 15/11/2028).

Validation Team has assessed the updates in PDD with respect calculation and estimation of GHG emission reduction as per the requirement of latest version of applied methodology ACM0002, Version 21.0, same is crosschecked with relevant source of information while identifying the valid objective evidence in accordance with Validation and Verification Standard (CDM or/and GS, as applicable). Validation Team has incorporated means of validation in its audit process to review and evaluate the updated PDD. In order to assessed results in PDD and furthermore, to conclude the assessment process Validation Team has performed the audit in accordance with the GS rules and regulation for design certification renewal of 2nd crediting period for GS project activity titled as “Adani Green Energy limited”.

2.1 FARs from Validation / Previous Validation

Previously FAR 01 exist for this project which is registered under CDM with reference ID 10593 to be addressed during first verification and FAR 01 as result of performance review for monitoring period 16/11/2023 to 15/11/2028 same are addressed by Validation Team. Also, Validation Team has not identified any FAR during desk review which is to be addressed during design certification of 2nd crediting period as per GS rules.

2.2 CLs, CARs and FARs raised

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form	01	01	00
Application and selection of methodologies and standardized baselines	00	00	00
Validity of original baseline or its update	00	00	00
Financial check	00	00	00
Estimated emission reductions or net anthropogenic	00	01	00

removals			
Validity of monitoring plan	02	02	00
Crediting period	00	00	00
Project participants	00	00	00
Sustainability opinion	02	02	00
Others (Emission Trading, Stakeholder engagement, photos of equipment, start date, PDD version, Focal point name, location, eligibility in GS, project boundary, commissioning and operation date)	05	08	00
Total	10	14	00

2.3 Compliance with PDD form

Means of validation	Assessment of updated PDD completeness against the latest and valid version of the applicable PDD form as per GS requirement, following the instructions therein. Assessment of material consistency of information transferred to the later version of the PDD form with respect to registered PDD.
Findings	Validation Team has assessed the completeness of information in each section of PDD and has reviewed the appropriateness, relevance and accuracy of information against the required version latest applicable PDD forms with respect to materialistic information transfer from latest validated PDD Version 6 (dated on 06/01/2021). Validation team assessed that there is an irregularity in the version number of PDD which is PDD version was 04 during the design certification; version 02 of submitted for crediting period renewal.
Conclusion	Validation Team confirms that updated PDD contain all the information from previously registered PDD without any material misstatement using the latest available PDD template on GS official webpage. Also, validation team confirmed that the version number of the PDD was 04 during the design certification, which was submitted during the validation. Version 02 was submitted for the crediting period renewal, which is correct as it marks the beginning of a fresh new start for the crediting period.

2.4 Application and selection of methodologies and standardized baselines

Means of validation	Assessment of methodologies and, where applicable, the standardized baselines and the other methodological regulatory documents against the applicable requirements of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0).							
Findings	Validation Team has assessed the applicability of methodology, tools and other methodological regulatory documents, it has assessed whether the latest version of applicable methodology, tools are used, and all the additional/previously existing requirements are addressed, and criteria are met. Details of selected latest of applied methodology for project activity titled as “50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA” for 2nd crediting period is below: Methodology: ACM0002, Grid-connected electricity generation from renewable sources (Version 21.0) Type I: Renewable Energy Projects (Large) Methodological Tools: ▪ Tool to calculate the emission factor for an electricity system (TOOL 07, Version 07) ▪ Tool for the demonstration and assessment of additionality (TOOL 01, Version 07) ▪ Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period (TOOL 11, Version 03)							
	<table><tr><th>S. N.</th><th>Applicability Conditions as per ACM0002, Version 21</th><th>Assessment of Project Verification Team</th></tr><tr><td>1</td><td>This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant.</td><td>Validation has assessed that proposed project activity falls under category (a) as there was not project activity existed operating before that start</td></tr></table>	S. N.	Applicability Conditions as per ACM0002, Version 21	Assessment of Project Verification Team	1	This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant.	Validation has assessed that proposed project activity falls under category (a) as there was not project activity existed operating before that start	
S. N.	Applicability Conditions as per ACM0002, Version 21	Assessment of Project Verification Team						
1	This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant.	Validation has assessed that proposed project activity falls under category (a) as there was not project activity existed operating before that start						

		(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).	of this project activity. Hence, it concludes that applicability condition is met by proposed project activity.
	2	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 photovoltaic 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).	Validation has assessed that proposed project activity does not involve any battery storage system. Hence, it concludes that applicability condition is met by proposed project activity.
	3	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	(a) Validation Team has assessed that proposed project activity is not including hydropower technology hence it concluded that the applicability condition is not applicable

		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.	(b) Validation Team has assessed that proposed project activity involves installation of greenfield power plant utilizes solar power technology. Hence, it concludes that applicability condition is not applicable to proposed project activity.
	4	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 of the project activity, as per definitions given in the Project	Validation Team has assessed that proposed project activity does not involve hydropower. Hence, it concludes that applicability condition is not relevant to proposed project activity as it consist of solar power generation technology.

		Emissions section, is greater than 4 W/m² ; or (c) The project activity results in new single or multiple reservoirs and the power density of the project activity, as per definitions given in the Project Emissions section, 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, as per definitions given in the Project Emissions section, 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 definitions given in the Project Emissions section, 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.	
	5	In the case of integrated hydro power projects, project owner shall:	Validation Team has assessed that the project activity is not a hydropower

		(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 of five years prior to the implementation of the CDM project activity.	project activity. Hence, it concludes that applicability condition is not relevant to proposed project activity.
	6	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	Validation Team has assessed that proposed project activity neither switching of fossil fuel to renewable energy nor it involves Biomass fired power plant. Hence, it

		baseline may be the continued use of fossil fuels at the site. (b) Biomass fired power plants/units	concludes that applicability condition is not applicable to proposed project activity.
	7	In the case of retrofits, 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, i.e., 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”.	Project Verification has assessed that proposed project activity does not involve retrofits, replacements or capacity additions Hence, it concludes that applicability condition is not applicable to proposed project activity.
	8.	In addition, the applicability conditions included in the tools referred to below apply.	Tools are listed by Project Developer which are validated by Validation team refer to above list of tools for the same.
Conclusion	Validation Team concludes that Project Developer has applied latest version of methodology, methodological tools, applicability criteria and other methodological regulatory documents against the applicable requirements of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0).		

2.5 Validity of Original baseline and updates

Means of validation	Assessment of any change of baseline with respect to baseline provide in registered PDD, against the requirement of applicable methodology. If an updated version of methodology has any additional criteria for baseline selection, then to assess whether the project activity complies with requirement of all additional criteria of applicable methodology as per requirements of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0). Conclusion of stepwise assessment in accordance with the applicability of TOOL 11 Version 03.0.1, "Assessment of the validity of the original/current baseline and update of the baseline at the renewal of the crediting period" is provided below Step 1: Assess the validity of the current baseline for the next crediting period ▪ Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies- Validation Team has assessed that project activity complies with the with all relevant mandatory national and/or sectoral policies as per examination of current practice in the Tamil Nadu region (India) which includes the relevant national laws and regulations pertaining to generation of energy in India are: • Electricity Act 2003 • National Electricity Policy 2005 • Tariff Policy 2006 • TGERC Regulations: (https://tgerc.telangana.gov.in) The Project activity conforms to all the applicable laws and regulations in India. Also, PD has explained Project activity conforms to all the applicable laws and regulations in India in Section B.4 step 1 Along with primary host country data. The same has been assessed by Validation team. ▪ Step 1.2: Assess the impact of circumstances- Validation team has not identified any cause of change in investment or/and market characteristics which could affect the validity of baseline scenario in current circumstance for this project hence, the previous baseline scenario is still valid.
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	▪ Step 1.3: Step 1.3: Assess whether the continuation of use of current baseline equipment(s) or an investment is the most likely scenario for the crediting period for which renewal is requested- Validation Team has identified that this sub-step is not applicable as proposed one is a greenfield project activity and it had no continuation of any pre-installed equipment or any equipment which is having end of technical lifetime before or/and on expiration of first crediting period. ▪ Step 1.4: Assessment of the validity of the data and parameters- Validation Team has assessed that default IPCC values are still valid for this project activity also no change is identified in the data and parameters which were listed at registration stage. Step 2: Update the current baseline and the data and parameters ▪ Step 2.1: Update the current baseline- Validation Team has assessed that Project Developer has updated the current baseline emission in accordance with the latest applied methodology ACM0002, Version 21 while complying with procedural requirement of sectoral policies and circumstances that are applicable for this request for renewal of the 2nd crediting period. ▪ Step 2.2: Update the data and parameters- Validation Team has assessed that Project Developer has updated the combined margin Emission Factor in accordance with the applied methodology ACM0002 Version 21 following Tool 07, Version 07 (as per applicability of CO2 Emission Database, Version 18.0, September 2022 published by Central Electricity Authority (CEA), Government of India). Conclusion of the calculation for combined margin Emission Factor is provided in section 2.7 of this document, kindly refer to the same.
Findings	Validation Team has not raised any findings.
Conclusion	Validation Team ensures that there on no changes found in baseline and all the applicability criteria of methodology, methodological tools (TOOL 11, Version 03) as per requirements of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0).

2.6 Financial check

Means of validation	Assessment of Carbon Revenue investment in particular project activity against the requirement of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0).
Findings	Validation Team has not raised any finding.
Conclusion	Validation Team has assessed and concludes that proposed project activity contributes economic growth through employment creation, improvement working conditions and emission reduction. Project activity has resulted in employment generation of 10 personnels which are paid/ higher than annual average per capita income as "Minimum Wages Act, 1948". Validation Team has assessed the carbon revenue generation information by Project Developer which does not have any significant influence on financial figure as declared by Project Developer it remains approximately 1.18% same is validated by evaluating the project cash flow in OFN sheet where the revenue from carbon credits and cost of project validation and verification costs are considered. Also, Project Developer has already demonstrated in additionality assessment thus proved to be additional in CDM/GS in order to seek carbon credit revenue for financial viability to sustain throughout the project lifetime. Validation team noticed that the project received a comment from GS which is of FAR raised during the previous assessment/transition review: As per TRF para 6.1, the transitioning project will be required to demonstrate Ongoing Financial Need as per the relevant GS rules and requirements available at the time of renewal of the crediting period. PD has provided the OFN sheet and demonstrated in the section B.5.2 of PDD v1.5. hence the FAR is closed by validation team. Also, PD clearly demonstrated in the OFN Sheet that the project still needs or require carbon revenue for the operation of project activity which has been verified by validation team.

2.7 Estimated emission reductions or net anthropogenic removals

Means of Validation	Assessment of calculation process for Estimated emission reductions or net anthropogenic removals following source of information and applied values for respective parameters are against the requirement of applied methodological, tools and methodological regulatory
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	documents.																
Findings	Validation Team has assessed Project calculations of baseline, project and leakage emissions as well as GHG emission reductions resulting from the proposed Project Activity for each year of the 2 nd crediting period, to evaluate if data and parameters are calculated in accordance with the applied methodology. Validation Team has assessed PP's justification for selection of scenarios, options or default values for various parameters while estimating the emission reductions of the project.																
	<table><tr><th>Parameter Fixed</th><th>Description of Parameter</th><th>Unit</th><th>Value Applied</th></tr><tr><td>EF_{grid, OM,y}</td><td>Operating Margin CO₂ emission factor in year y</td><td>tCO₂e/MWh</td><td>0.9518</td></tr><tr><td>EF_{grid, BM,y}</td><td>Build Margin CO₂ emission factor in year y</td><td>tCO₂e/MWh</td><td>0.8687</td></tr><tr><td>EF_{grid, CM,y}</td><td>Combined Margin CO₂ emission factor in year y</td><td>tCO₂e/MWh</td><td>0.9310</td></tr></table>	Parameter Fixed	Description of Parameter	Unit	Value Applied	EF _{grid, OM,y}	Operating Margin CO ₂ emission factor in year y	tCO ₂ e/MWh	0.9518	EF _{grid, BM,y}	Build Margin CO ₂ emission factor in year y	tCO ₂ e/MWh	0.8687	EF _{grid, CM,y}	Combined Margin CO ₂ emission factor in year y	tCO ₂ e/MWh	0.9310
	Parameter Fixed	Description of Parameter	Unit	Value Applied													
	EF _{grid, OM,y}	Operating Margin CO ₂ emission factor in year y	tCO ₂ e/MWh	0.9518													
	EF _{grid, BM,y}	Build Margin CO ₂ emission factor in year y	tCO ₂ e/MWh	0.8687													
	EF _{grid, CM,y}	Combined Margin CO ₂ emission factor in year y	tCO ₂ e/MWh	0.9310													
	Baseline Emissions are calculated by Project Developer as below:																
	As per ACM002, Version 21-																
	$BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$																
	Where,																
BE _y : Baseline emissions in year y (t CO ₂)																	
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 project year (MWh)																	
EF _{grid,CM,y} : Combined margin CO ₂ emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO ₂ /MWh)																	
EG _{facility,y} : Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)																	

$$EF_y = EF_{\text{grid,CM},y} = EF_{\text{grid,OM},y} * W_{\text{OM}} + EF_{\text{grid,BM},y} * W_{\text{BM}}$$

$$= 0.9518 * 0.75 + 0.8687 * 0.25$$

$$= 0.9310 \text{ tCO}_2/\text{MWh}$$

$EG_{\text{facility},y} = EG_{\text{PJ},y} = 92,808 \text{ MWh}$ (estimated at renewal of 2nd crediting period stage)

$$BE_y = 92,808 \text{ MWh} * 0.9310 \text{ tCO}_2/\text{MWh}$$

$$= 86,404 \text{ tCO}_2$$

Project Emissions are calculated by Project Developer as below:

As per ACM002, Version 21

$PE_y = 0$ (Project activity does not involve fossil fuel consumption, energy generation from geothermal power plants/ water reservoirs of hydro power plants/ charging of a BESS using electricity from the grid or from fossil fuel electricity generators)

PE_y : Project emissions in year y (t CO₂e/yr)

Leakage Emissions calculated by Project Developer:

Validation Team has assessed that as per the requirement of ACM002 Version 21, no emissions arising due to absence of activities such as power plant construction and upstream emissions from fossil fuel use (e.g. extraction, processing, and transport). Since the emissions sources are small, hence, leakage emissions are neglected.

Validation Team has assessed and conforms that Project Developer has followed for approach for quantification of GHG emission reductions and removal in line with applied methodology ACM002 Version 21.

$$ER_y = BE_y - PE_y - LE_y$$

Where,

ER_y : Emission reductions in year y (t CO₂/y)

BE_y : Baseline Emissions in year y (t CO₂/y)

PE_y : Project emissions in year y (t CO₂/y)

LE_y : Leakage emissions in year y (t CO₂/y)

$$ER_y = BE_y - PE_y - LE_y$$

$$= 86,404 \text{ tCO}_2 - 0 - 0$$

$$= 86,404 \text{ tCO}_2\text{e}$$

Conclusion	Validation Team ensures that Estimated emission reductions or net anthropogenic removals are calculated as per the calculation approach of applied methodology ACM0002, Version 21.0 and methodological tools. Validation Team ensures that summary of estimated GHG emission reductions or net anthropogenic GHG removals using the applied methodology as per requirement of project standard for this project activity titled as “50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA” where annual GHG emission reductions are 4,32,023 tCO₂e for the 2nd crediting period from 16/11/2023 to 15/11/2028 is materially accurate. <table border="1" data-bbox="549 748 1374 1178"> <tr> <td>Baseline Emissions</td><td>86,404 tCO₂e</td></tr> <tr> <td>Project Emissions</td><td>0</td></tr> <tr> <td>Leakage Emissions</td><td>0 tCO₂e</td></tr> <tr> <td>Annual Estimated Emission Reductions</td><td>86,404 tCO₂e</td></tr> <tr> <td>Total Estimated Emission Reductions (16/11/2023 to 15/11/2028)</td><td>4,32,023 tCO₂e</td></tr> </table>	Baseline Emissions	86,404 tCO ₂ e	Project Emissions	0	Leakage Emissions	0 tCO ₂ e	Annual Estimated Emission Reductions	86,404 tCO ₂ e	Total Estimated Emission Reductions (16/11/2023 to 15/11/2028)	4,32,023 tCO ₂ e
Baseline Emissions	86,404 tCO ₂ e										
Project Emissions	0										
Leakage Emissions	0 tCO ₂ e										
Annual Estimated Emission Reductions	86,404 tCO ₂ e										
Total Estimated Emission Reductions (16/11/2023 to 15/11/2028)	4,32,023 tCO ₂ e										

2.8 Validity of monitoring plan

Means of validation	Assessment of Monitoring System as per the requirement of applied methodology ACM002, Version 21 in accordance with the GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0).
Findings	To evaluate the any change, development, description of monitoring plan, containing all of the monitoring parameters for the GS project activity. Validation Team has assessed the monitoring plan developed and implemented by Project Developer with respect to responsible personnel monitoring and measurement, quality assurance, quality control procedures Validation Team has assessed each parameter required to be monitored as per applied monitoring methodology as if PDD is feasible to implement and will result credible emission reductions resulted due to the project activity.

	Function	Reporting Tasks	Recording	Conclusion of VVB	
	Data Measurement	Electricity Import/Export to grid	Meter reading,	Joint Meter reading system is found in well-functioning manner	
	Data collection and archiving	Manual and electronic recording of import and export to grid	Logbook is maintained	Logbook is maintained, TSSPDCL invoices for electricity import/export archived	
	QA/QC Procedures	Calibration of meters at decided intervals	Performed by TSSPDCL	Calibration frequency validated	
	Personnel training	Operation and Maintenance Training on regular interval	Training schedule and certificates if available	Validation Team has assessed the frequent trainings conducted	
	Parameter Fixed	Description of Parameter	Unit	Value Applied	Conclusion of VVB
	EF _{grid, OM,y}	Operating Margin CO ₂ emission factor in year y	tCO ₂ e/MWh	0.9518	Determined by CEA database, Version 18.0 (09/2022) in accordance with CDM TOOL07
EF _{grid, BM,y}	Build	tCO ₂ e/MWh	0.8687	Determined	

	Margin CO ₂ emission factor in year y			by CEA database, Version 18.0 (09/2022) in accordance with CDM TOOL07
	EF _{grid, CM,y}	Combined Margin CO ₂ emission factor in year y	tCO ₂ e/MWh 0.9310	Calculated in accordance with CDM TOOL07
	Parameter to be monitored	Description of Parameter	Unit	Value Applied
				Conclusion of VVB
	EG _{PJ,grid,y} (or EG _{facility,y}) - Access to affordable and clean energy services (SDG 7)	Quantity of net electricity supplied to the grid	MWh/y	92,808
	ER _y - Annual emission reduction (SDG13)	Emission reductions achieved per year	tCO ₂	86,404
	Headcount of employees (SDG8)	Headcount of total number of employees	NOs.	10
				this net energy is to be monitored on monthly basis at verification stage in accordance with ACM0002, Version 21
				Annual Estimated Emission Reductions are calculated as per ACM0002 Version 21.
				Employment's salary records and salary slips are

	by assessed are employment assessed. contract (permanent and temporary), by gender. And Headcount of total number of employees by employment type (full- time and part-time), by gender.
Conclusion	Validation Team conforms that monitoring plan is consistent and materially the same with respect to latest renewed PDD. Validation Teams has not identified any changes to the monitoring plan also, it assessed the fulfillment of all criteria of applicable and project standard for monitoring and found feasible GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0).

2.9 Crediting period

Means of validation	Assessment of remaining operation lifetime of project activity, review of start date, type (renewable or fixed), duration of 1st crediting period (including end and start date) and expiration timeline of 2nd crediting period with respect to latest validated PDD against the requirement of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0)
Findings	Validation Team has not raised any finding.

Conclusion	Validation Team ensures that project titled as “50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA” is eligible for renewal of 2 nd crediting period from 16/11/2023 to 15/11/2028 against the criteria of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0).
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2.10 Project participants

Means of validation	Assessment of Project Developer (s) details in latest validated PDD with respect to registered PDD as per the requirement of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0).
Findings	Validation Team has not raised any finding.
Conclusion	Validation Team concludes that those details of Project Developer (s) in updated PDD are consistent with respect to registered PDD, legal or/and project ownership requirement as GS rules for project titled as “50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA” with project reference ID 7139 in GS.

3 SUSTAINABILITY VALIDATION

3.1 Assessment of SDG outcomes

Validation Team has provided the outcome of assessment upon contribution toward SDG as specified by Project Developer which are discussed in above section 2.8 hence, requesting to refer to the same.

4 VALIDATION OPINION

TÜV SÜD ensures that project titled as “50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA” (‘the Project’) which is listed under GSF registry with reference number 7139, complies with the criteria of ACM0002, Version 21 for monitoring and measurement requirements.

Adani Green Energy limited is responsible for the preparation of the GHG emission reductions data and the reported GHG emissions reductions against the requirements of Monitoring Plan in the updated PDD version 02 dated on 30/10/2023 as per monitoring plan against the criteria of the applied methodology ACM0002, Version 21.

TÜV SÜD's validation approach for renewal of crediting period was based upon criteria set out by the GS program. TÜV SÜD's validation process for validation of 2nd crediting period considers the risks associated with reporting GHG emissions data and the controls in place to mitigate risk occurred from identified causes of uncertainty. Validation Process for 2nd crediting period ensures the followings:

- Updated PDD has all the section relating to relating to the baseline, estimated GHG emission reductions or net anthropogenic GHG removals, the monitoring plan and the crediting period using the valid version of the approved methodologies and, where applicable, the approved standardized baselines and the other methodological regulatory documents that are applicable to the project activity.
- Applied methodology and methodological tools are of valid version as per the criteria of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0)
- Updated PDD uses valid version for latest PDD form and information from the registered PDD is transferred in latest version without any material inconsistency
- The original baseline is found valid with respect to registered PDD against the requirement of project standard
- Information of Project Participants are consistent with respect to approval and MOC objective evidence against the requirement of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0)
- No deviation from applied valid version of methodology or/and methodological tool against the criteria of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0)
- No deviation from the registered monitoring plan is found against the requirement of GS VVS V1 (Gold Standard, Validation and Verification Standard, Version 1) as well as CDM VVS PA V3.0 (Clean Development Mechanism, Validation and Verification Standard for Project Activity, Version 3.0)
- Request of validation for 2nd crediting period is valid as the next crediting period of the project activity commences on the day immediately after the expiration of the current crediting period
- PD has now added the important milestone for project implementation and registration under the carbon market mechanism which includes the registration ID of CDM (10593) which was registered in 27/08/2020 and transitioned to GS4GG on 23/03/2022 with ID 7139 along with relevant weblink in section A.1 of the PDD. Same has been assessed by VVB.

- PD has provided the declaration to demonstrate that project is not registered with any other carbon market or any other domestic/international registry that could hold renewable energy certificates which has been assessed by VVB team.
- PD claims that they invested a total amount of ₹16,930,000 in Corporate Social Responsibility (CSR) activities during the 1st crediting period (16/11/2018 to 15/11/2023) and These contributions made towards the sustainable development and welfare initiatives associated with the project. Same has been verified by VVB.
- Pd demonstrate that as this is a solar energy project, no additional Environmental and Social Impact Assessment (ESIA) is required for the renewal crediting period. Validation team assessed that since the ESIA is completed in validation time it is not necessary at the time of renewal.

TÜV SÜD concludes that 50 MW (DCR) NALGONDA SOLAR PV POWER PROJECT BY PARAMPUJYA SOLAR ENERGY AT TELANGANA ('the Project') which is listed under GSF registry with reference number 7139, is eligible for request for validation of 2nd crediting period where estimated GHG Emission Reductions value is 4,32,023 tCO₂e during 2nd crediting period from 16/11/2018 to 15/11/2023 including first and last day.

APPENDIX [1]: Clarification Requests, Corrective Action Requests and Forward Action Requests

Table 1. Remaining FAR from previous CDM validation/verifications or/and GS transition/design certification/design certification renewal/performance review

FAR ID	01	Section no.	NA	Date: 20/10/2023
Description of FAR				
Crediting Period: 2nd, Duration: 16/11/2023 to 15/11/2028 In result of Performance Review under Gold Standard for the Global Goals for the monitoring period 16/11/2018 to 31/12/2020 FAR#1 is raised stating “VVB Is requested to check the actual ER in the next monitoring period, if it increases more that 10% again, the impact and justification of increase shall be verified with evidence supporting”. Project Developer needs to provide the supporting evidence if: Achieved GHG Emission Reductions > 10% + Estimated GHG Emission Reductions in next verification i.e., after vintage 2020.				
Project participant response				Date: 30/10/2023
Verification for post 2020 period (from 01/01/2021 till 15/11/2023) has not been done yet. However, during the verification of the same period if ERs increases more than 10 % the impact and justification of increase shall be verified with evidence supporting”.				
Documentation provided by project participant				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the justification provided by Project Developer with respect to assurance of “impact and justification” in next verification if actual ER increases more than 10% than estimate ER same is found appropriate (Not closed-out).				

FAR ID	02	Section no.	NA	Date:
Description of FAR				
Project developer is requested to demonstrate the double counting of VERs during the first verification after the renewal of crediting period to the appointed validation and verification body.				
Project participant response				Date:
Documentation provided by project participant				
VVB assessment				Date:

Table 2. CL from this Validation

CL ID	01	Section no.	KEY PROJECT INFORMATION	Date: 20/10/2023
Description of CL				
Crediting Period: 2nd, Duration: 16/11/2023 to 15/11/2028 In section KEY PROJECT INFORMATION, Project Developer has estimated SDG impact for SDG 8 where it states “Employment generated due to project activity per year” are “10”. Hence, Project Developer needs to provide the relevant objective evidence in support to SDG Impact estimation against the requirement of Principles & Requirements, Version 1.2.				
Project participant response				Date: 30/10/2023
Sample log book for number of employees employed due to this project activity has been provide SDG impact estimation.				
Documentation provided by project participant				
Annex1 - Attendance registers for employee log book				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the objective evidence provide Project Developer where sample pays lips are reviewed and employment generation information is found in compliance with the national law and legislation in accordance with the minimum wage requirement act 1948 hence, Validation Team accepts the response.				

CL ID	02	Section no.	A.1	Date: 20/10/2023
Description of CL				
Crediting Period: 2nd, Duration: 16/11/2023 to 15/11/2028 In section A.1, Project Developer has provided the start date of project activity however, objective evidence i.e., purchase order balance order by Project Developer to determine the same is not shared. Also, Project Developer has not provided the proof against the requirement of Validation and Verification Standard, Version 1.				
Project participant response				Date: 30/10/2023
Purchase order has now been provided as a proof against the start date of project activity as per GS principles activity and requirements.				
Documentation provided by project participant				
Annex 2- Purchase order (supply contract for modules)				

VVB assessment	Date: 03/11/2023
Validation Team has assessed the justification provided by Project Developer with respect to specifications of project activity in CDM registry same is found accurate hence, Validation Team accepts the response.	

CL ID	03	Section no.	A.1.1	Date: 20/10/2023
Description of CL				
Crediting Period: 2nd, Duration: 16/11/2023 to 15/11/2028 In section A.1.1, Project Developer has stated that “Hence, no emission reduction cap enforced as well as no emission trading system implemented in the host country”, “The Project is not claiming carbon credits in any other mechanism. Also, self-declaration for no double counting has been provided by the Project Developer” so it is clear that till 2023 it is highly unlikely that there would be a risk of double accounting as Bureau of Energy Efficiency, Ministry of Power, along with Ministry of Environment, Forest & Climate Change is still having Indian Carbon Market (ICM) in development phase. However, how Project Developer plans propose to hold the validity of response if ICM get launched during the project cycle (determined in section c.1.2) against the requirement of Principles & Requirements, Version 1.2?				
Project participant response				Date: 30/10/2023
Self-declaration for no double accounting is being provided in this submission for this crediting period. Also, Project Developer proposal to hold validity will come in force after the launched of ICM. Since, it is not launched yet, so there is no need of it.				
Documentation provided by project participant				
Annex 3 -Self declaration for avoidance of double accounting.				
VVB assessment				Date: 03/11/2023
Validation Team has assessed justification provided by Project Developer with respect to no double accounting declaration and compliance with the host country approval requirement at registration in CDM or/and GS which found appropriate as ICM is not yet implemented hence, Validation Team accepts the response.				

CL ID	04	Section no.	A.1.1	Date: 20/10/2023
Description of CL				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section A.1.1, Project Developer has stated that “Grievance mechanism has been put in place to ensure continuous stakeholder engagement” however, Project Developer has not provided the grievance mechanism in local language against the requirement of section 3, Stakeholder consultation and engagement requirements, Version 2.1.				
Project participant response				Date: 30/10/2023
Grievance register is now being provided to ensure continuous stakeholder engagement.				
Documentation provided by project participant				
Annex 4 - Grievance register.				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the objective evidence provided by Project Developer with respect to grievance mechanism which is found appropriate hence, Validation Team accepts the response.				

CL ID	05	Section no.	A.3	Date: 20/10/2023
Description of CL				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section A.3, Project Developer has provided the details of Solar PV modules, Inverters, Transformers and meters however, Project Developer has not provided suppliers contract for installed equipment also, Project Developer needs to provide the Photos of installed technology/measures against the requirement of Validation and Verification Standard, Version 1.				
Project participant response				Date: 30/10/2023
Supplier contract for Solar pv modules, inverters etc. has been included in this submission.				
Documentation provided by project participant				
Annex 5 -Technical specification/ supplier contract				
VVB assessment				Date: 03/11/2023

Validation Team has assessed the objective evidence provided by Project Developer with respect to technical specifications of Solar PV modules, Inverters, Transformers and meters same are crosschecked during remote audit and desk review and found appropriate hence, Validation Team accepts the response.

CL ID	06	Section no.	B.7.1	Date: 20/10/2023
Description of CL				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section B.7.1, Project Developer has stated for EG _{PJ,y} "Calibration of all the meters will be undertaken once every five year and faulty meters will be duly replaced immediately" however, Project Developer has not provided the status on calibration which expired on 03/07/2022 along with relevant CEA reference report/notification for determination of calibration frequency against the requirement of Project Design Document Template, Version 1.5.				
Project participant response				Date: 30/10/2023
All the meters are well calibrated once every five year and if any fault in meter is found in any meters they will be replaced immediately. Evidence to ensure proper functioning of meters are being submitted however, Project Developer will submit meter calibration reports during verification.				
Documentation provided by project participant				
Annex 6- Meter and tech equipment photos				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the objective evidence provided by Project Developer with respect to status on calibration and same is found as per the calibration procedure hence, Validation Team accepts the response.				

CL ID	07	Section no.	B.7.1	Date: 20/10/2023
Description of CL				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section B.7.1, Project Developer has stated for Headcount of employees that “The total number of persons working in the plant would be calculated based on the daily log available at site. This parameter also monitors number of men/women employed by the project activity.” corresponding to “Measurement methods and procedures” however, Project Developer has not provided the sample logbook mechanism against the requirement of Project Design Document Template, Version 1.5.				
Project participant response				Date: 30/10/2023
Sample book mechanism has been provided to demonstrate the total number of employees available at the site				
Documentation provided by project participant				
Annex 1-Register				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the objective evidence provided by Project Developer with respect to employees working during daily shift at the plant same is found appropriate hence, Validation Team accepts the response.				

CL ID	08	Section no.	B.7.3	Date: 20/10/2023
Description of CL				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section B.7.3, Project Developer has stated “In order to ensure the proper functioning of the project activity and a proper monitoring of emission reductions, the staff (CDM team) will be trained” corresponding to “Personnel training” however, Project Developer has not provided the training schedule requirement of Principles & Requirements, Version 1.2.				
Project participant response				Date: 30/10/2023
Training conducted by Project Developer has now been provided as per principles & Requirements v1.2				
Documentation provided by project participant				
Annex 7 – Training records				

VVB assessment	Date: 03/11/2023
Validation Team has assessed the objective evidence provided by Project Developer with respect to employees frequent training secessions, same is found appropriate hence, Validation Team accepts the response.	

CL ID	09	Section no.	APPENDIX 1	Date: 20/10/2023
Description of CL				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In APPENDIX 1, Project Developer has stated “Standard procedure is followed at site during operation and maintenance” corresponding to P.9.5, “All employees will attend health & safety training” corresponding to P.3, “The project is designed to minimize adverse impacts on local ecosystems, preserving ecosystem services vital to community health. All of these has been conformed in the ESIA report of the Plant” however, Project Developer has not provided SOP for waste management, training record on health and safety, ESIA report against the requirement of Safeguarding Principles and Requirements, Version 2.1.				
Project participant response				Date: 30/10/2023
Project Developer has already provided health & safety training and supporting for the same is being included in this submission along with the submission of SOP for waste management, training record on health and safety, ESIA report against the requirements of Safeguarding Principles and Requirements, Version 2.1.				
Documentation provided by project participant				
Annex 8- Training on health and safety, SOP for waste management, ESIA report				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the objective evidence provided by Project Developer with respect to environmental clearance, SOP for waste management and health/safety training to employee, same are found appropriate hence, Validation Team accepts the response.				

Table 3. CAR from this Validation

CAR ID	01	Section no.	KEY PROJECT INFORMATION	Date: 20/10/2023
Description of CAR				
Crediting Period: 2nd, Duration: 16/11/2023 to 15/11/2028 In section KEY PROJECT INFORMATION, following PDD versions are already published on GS official project webpage: version 06 (registered PDD on 06/01/2021) however, Project Developer has specified the PDD version as “1.0” which is going to be dated later than that of latest certified PDD (i.e., version 06). Hence, Project Developer needs to incorporate sequential version of subsequent PDD in order to avoid ambiguity while distinguishing between “updated DD” and “registered DD” against the requirement of Validation and Verification Standard, Version 1.0.				
Project participant response				Date: 30/10/2023
As per GS Validation and Verification Standard, Version 1.0, there is no such clause. So, for first submission during renewal of crediting period, the GS4GG PDD version number was being kept as 1.0.				
Documentation provided by project participant				
GS PDD V2.0				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the response provided by Project Developer with respect to version details which is found valid hence, Validation Team accepts the response.				

CAR ID	02	Section no.	KEY PROJECT INFORMATION	Date: 20/10/2023
Description of CAR				
Crediting Period: 2nd, Duration: 16/11/2023 to 15/11/2028 In section KEY PROJECT INFORMATION, Project Developer has stated Project Representative as “Infinite Solutions” however, name of legal entity as official focal point is not found consistent with respect to relevant key detail on official project page of GSF registry hence, Project Developer needs to incorporate accurate information against the requirement of Principles & Requirements, Version 1.2.				
Project participant response				Date: 30/10/2023
The name “Infinite Solutions” is as per registered PDD. All the entity names are consistent with the GS cover letter. And, we will also request GS board for the correction.				
Documentation provided by project participant				
Annex 9 – Cover letter				

VVB assessment	Date: 03/11/2023

CAR ID	03	Section no.	A.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section A.1, Project Developer has stated that “The Project is located at Village: Kakarani, District: Nalgonda State: Telangana.” However, geographical information is not entirely consistent with the commissioning certificate hence, Project Developer needs to incorporate accurate information against the requirement of Principles & Requirements, Version 1.2.				
Project participant response				Date: 30/10/2023
The project is located in kakarani village of Nalgonda district in Telangana and the same has been verified by geographical details incorporated in GS4GG PDD in this submission.				
Documentation provided by project participant				
Annex 5-Commissioning certificate, GS4GG PDD V2.0				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the objective evidence provided by Project Developer with respect to accurate information of project location same is found appropriate hence, Validation Team accepts the response.				

CAR ID	04	Section no.	A.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section A.1, Project Developer has stated that “The scenario existing prior to the implementation of project activity 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 the TOOL07 “Tool to calculate the emission factor for an electricity system” (Version 07.0)” However, baseline scenario demonstration has no reference to the TOOL 07 as per applied methodology. Hence, Project Developer needs to incorporate relevant reference to justify the fact against the requirement of applied methodology for baseline scenario identification.				
Project participant response				Date: 30/10/2023
Reference to tool 07 has been removed.				
Documentation provided by project participant				

GSGG PDD V2.0	
VVB assessment	Date: 03/11/2023
Validation Team has assessed the correction proposed by Project Developer with respect to irrelevant information for justifying Scenario existing prior to the implementation of the project activity same is found appropriate hence, Validation Team accepts the response.	

CAR ID	05	Section no.	A.1.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section A.1.1, Project Developer has stated that “The Power purchase agreement between Parampujya Solar Energy Private Limited and NTPC Ltd.” corresponding to objective evidence for location However, Project Developer needs to incorporate information upon more valid objective evidence for project location against the requirements of Principles & Requirements, Version 1.2.				
Project participant response				Date: 30/10/2023
Since, this is a Renewal of crediting period and the project has no design change therefore the location of the project activity is still the same which has already been verified during design certification. As such location is based on registered PDD. Commissioning certificate, geographical details has now been provided as evidence for location of this project activity.				
Documentation provided by project participant				
Annex 11- Google maps				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the objective evidence and justification provided by Project Developer corresponding to project location same is found appropriate hence, Validation Team accepts the response.				

CAR ID	06	Section no.	A.1.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section A.1.1, Project Developer has stated that “The project is not a new project, rather it is already registered in GS4GG. Therefore, this parameter is not applicable.” corresponding to applicability criteria of Renewable Energy Activity Requirements (section 2.1) However, Project Developer needs to provide the relevant and sufficient justification against the requirements of Renewable Energy Activity Requirements, Version 1.4.				

Project participant response	Date: 30/10/2023
The response has been corrected in section A.1.1 of the PDD.	
Documentation provided by project participant	
GS4GG PDD V2.0	
VVB assessment	Date: 03/11/2023
Validation Team has assessed the correction proposed by Project Developer with respect to fulfillment of eligibility criteria of Renewable Energy Activity Requirements by project activity same is found appropriate hence, Validation Team accepts the response.	

CAR ID	07	Section no.	A.1.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section A.1.1, Project Developer has stated that “Not applicable since the project activity is not a PoA.” corresponding to applicability criteria of Renewable Energy Activity Requirements (section 2.1) However, Project Developer needs to provide the accurate and valid justification against the requirements of Renewable Energy Activity Requirements, Version 1.4.				
Project participant response				Date: 30/10/2023
The response has been corrected in section A.1.1 of the PDD.				
Documentation provided by project participant				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the correction proposed by Project Developer with respect to fulfillment of eligibility criteria of Renewable Energy Activity Requirements by project activity same is found appropriate hence, Validation Team accepts the response.				

CAR ID	08	Section no.	A.4	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section A.4, Project Developer has stated that “All Projects exceeding the small-scale thresholds are defined as large scale”, “As per GHG EMISSIONS REDUCTION & SEQUESTRATION PRODUCT REQUIREMENTS version 2.1” However, Project Developer has not provided the referencing against the requirement of Project Design Document Template, Version 1.5.				
Project participant response				Date: 30/10/2023
Response has been changed using the reference of “Activity requirements”.				

Documentation provided by project participant	
VVB assessment	Date: 03/11/2023
Validation Team has assessed the correction proposed by Project Developer with respect to scale threshold identification as per guideline of Renewable Energy Activity Requirements is same found appropriate hence, Validation Team accepts the response.	

CAR ID	09	Section no.	B.3	Date:	20/10/2023
Description of CAR					
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028					
In section B.3, Project Developer has provided the schematic for project boundary however, same is not provided in specified manner against the requirement of Project Design Document Template, Version 1.5.					
Project participant response					Date: 30/10/2023
The project boundary diagram has been revised in this submission.					
Documentation provided by project participant					
VVB assessment					Date: 03/11/2023
Validation Team has assessed the correction proposed by Project Developer with respect to project boundary specification same are found appropriate hence, Validation Team accepts the response.					

CAR ID	10	Section no.	B.6	Date:	20/10/2023
Description of CAR					
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028					
In section B.6, Project Developer has not provided the response against SDG Impact hence, Project Developer needs to incorporate accurate information against the requirement of Project Design Document Template, Version 1.5.					
Project participant response					Date: 30/10/2023
Indicator has been made consistent with SDG impact tool and SDG indicator has been also been added in this submission in GS4GG PDD					
Documentation provided by project participant					
VVB assessment					Date: 03/11/2023

Validation Team has assessed the correction proposed by Project Developer with respect to SDG impact same is found appropriate hence, Validation Team accepts the response.

CAR ID	11	Section no.	B.6.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section B.6.1, Project Developer has not provided choice/approach for methodology regrading SDG quantification hence, Project Developer needs to incorporate accurate information against the requirement of Principles & Requirements, Version 1.2.				
Project participant response				Date: 30/10/2023
Accurate information regarding SDG quantification is now being incorporated against the requirement of Principles & Requirements, Version 1.2.				
Documentation provided by project participant				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the correction proposed by Project Developer with respect to choice/approach for methodology regrading SDG quantification same is found appropriate hence, Validation Team accepts the response.				

CAR ID	12	Section no.	B.7.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section B.7.1, Project Developer has stated that “Measurement Method: - Headcount of total number of employees by employment contract (permanent and temporary), by gender. And Headcount of total number of employees by employment type (full-time and part-time), by gender” however, the data/parameter value applied is not consistent throughout the document also, list of employees, sample employment contracts and payment slips are not provided to demonstrate decent “economic growth, employment and decent work for all” against the requirement of Project Design Document Template, Version 1.5.				
Project participant response				Date: 30/10/2023
Since the project is registered in GS4GG as per the SDG tool, Project Developer has also provided employee headcount along with attendance sheet.				
Documentation provided by project participant				
Annex 1: Employment record and employee attendance sheet				
VVB assessment				Date: 03/11/2023

Validation Team has assessed the objective evidence provided by Project Developer with respect to employment generation which is found in compliance with the minimum wage act 1948 hence, Validation Team accepts the response.

CAR ID	13	Section no.	B.7.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section B.7.1, Project Developer has provided value of monitoring parameter ER _y which is not consistent with Emission Reduction inventory (ER Sheet) unit of parameter is inconsistent also, same is to be made consistent throughout the document hence, Project Developer needs to incorporate the accurate value and unit against the requirement of applied methodology.				
Project participant response				Date: 30/10/2023
Value of emissions reductions has been checked and now it is consistent with PDD and ER sheet.				
Documentation provided by project participant				
GS4GG PDD V2.0, ER sheet V2.0				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the correction proposed by Project Developer with respect to value of monitoring parameter ER _y same is found accurate hence, Validation Team accepts the response.				

CAR ID	14	Section no.	B.7.3	Date: 20/10/2023
Description of CAR				
Crediting Period: 2 nd , Duration: 16/11/2023 to 15/11/2028				
In section B.7.3, Project Developer has not specified the numeric specifications of meters, same was discussed during the remote assessment as discrepancy int information was identified hence, Project Developer needs to incorporate the information against the requirement of Project Design Document Template, Version 1.5.				
Project participant response				Date: 30/10/2023
The observed discrepancy has now been rectified in section B.7.3 of this submission.				
Documentation provided by project participant				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the correction Project Developer and the same is found accurate hence, Validation Team accepts the response.				

CAR ID	15	Section no.	C.1	Date: 20/10/2023
Description of CAR				
Crediting Period: 2nd, Duration: 16/11/2023 to 15/11/2028 In section C.1, Project Developer has stated start date for which objective evidence is not shared hence, Project Developer needs to incorporate accurate information against the requirement of Principles & Requirements, Version 1.2.				
Project participant response				Date: 26/10/2023
As per GS4GG principles and requirements v1.2, The Project start date is the earliest date on which the Project Developer has committed to expenditures related to the implementation of the Project. So, as per the clause, 29/10/2016 has been chosen as project start date because first contract for supply of modules was signed on said date and Purchase order (contract of supply of modules) has been provided as a supporting.				
Documentation provided by project participant				
Contract of supply of modules.				
VVB assessment				Date: 03/11/2023
Validation Team has assessed the objective evidence provided by Project Developer with respect to start date where proof is the found appropriate hence, Validation Team accepts the response.				

APPENDIX [2]: List of Documents Reviewed

No.	Provider	Title	References to the document
1	Adani Green Energy limited	GSRCP_50MW_TELANGANA_PDD_V2_Clean mode	Version 02, completion date: 30/10/2023
2	Adani Green Energy limited	CER Sheet	31/08/2023
3	Adani Green Energy limited	Commissioning Certificate	17/11/2017
4	Adani Green Energy limited	Supplier contract for equipment	29/10/2016
5	Adani Green Energy limited	Grievance mechanism	09/2023
6	Adani Green Energy limited	Employment salary slips	31/10/2023
7	Adani Green Energy limited	OFN	31/08/2023
8	Adani Green Energy limited	Power Purchase Agreement	04/08/2016
9	Adani Green Energy limited	Employee workbook	09/2023
10	Adani Green Energy limited	Employee training records	26/06/2023
11	Adani Green Energy limited	Technical specification (photos)	31/10/2022
12	CEA	CEA Database version 18	-

APPENDIX [3]: Appointment Certificates and Brief CVs of Team Members

S.N.	Name	Role	Experience Brief
1	Shruti Kudtarkar	Assessment Team Leader/Auditor/Technical Expert	Shruti Kudtarkar is an experienced ATL/Verifier/Technical Expert and has around 10 years of CDM/GHG auditing experience. Shruti Kudtarkar do not have any Col with the PPs or PA.
2	Arjun Vyas	Validator	Arjun Vyas is a qualified ATL/Verifier/Technical Expert/Country Expert for India and has experience in CDM/GHG auditing experience. Arjun Vyas do not have any Col with the PPs or PA.
3	Ankita Chauhan	Trainee Auditor	Ankita Chauhan is a Trainee Verifier for CDM/GHG auditing. Ankita Chauhan do not have any Col with the PPs or PA.
4	Sanjay Suresh Patankar	Technical Reviewer	GHG & CDM Verifier Educational qualifications: B.E. (Mech.) M.E. (Mech.) He has over 30 years of experience in various fields such as engineering manufacturing industry covering various functions like enterprise management, product design, engineering, tool & die design, improvements in the production shop, quality assurance & control and systems planning and implementation, including ISO 9001 based quality management systems. He has conducted numerous verification assignments in carbon accounting, CDM and Sustainability and certification. He has worked for 15 years in Bureau Veritas Certification (India) Pvt. Ltd. in various functions such as Lead Auditor for ISO 9001, ISO 50001, ISO 14064-1 standards and is presently responsible for technical reviews, accreditation and quality management of sustainability schemes such as ISO 50001, GHG and CDM.



South Asia

CERTIFICATE OF APPOINTMENT

Mr. Arijun Vyas, fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14064-1, 2	Other GCC
	☒	☒	☒	☒	☒

Qualification as						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	☒	☒	☒	☐	☐	☒
TA (s)	1.2					

Country Expertise						
Region	1	2	3	4	5	Other
Further countries	India					

Technical Area/ Scopes
1.2_Renewables

This appointment is valid until 12.07.2024 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0023/002.

Date	Signature
12/07/2023	 Shruti Kudtarkar

IS-CMS-CB-POG-01/05, version 03

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SustainCERT Academy: Exam Result



SustainCERT Academy <academy@sustain-cert.com>

To  Kudtarkar, Shruti

 Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Hello SHRUTI KUDTARKAR,

Congratulations! You have passed the Exam VVB exam in the SustainCERT Academy.

Your score is: 95%

The Exam covers the following scope:

- GS4GG
- Energy and Waste

Re-certification is available from: 22-Oct-24

Thank you,
SustainCERT Academy

CERTIFICATE OF APPOINTMENT

Mr. Sanjay Patankar, fulfills the requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd to participate in audits.

Qualification applicable to					
Standard	CDM	GS	VCS	ISO-14064-1, 2	Other GCC
	☒	☐	☒	☒	☒

Qualification as						
Status	Validator	Verifier	ATL	Technical Reviewer	Financial Expert	Technical Expert
	☒	☒	☒	☒	☐	☐
TA (s)	1.1, 1.2, 2.1, 3.1					

Country Expertise						
Region	1	2	3	4	5	Other
Further countries	India					

Technical Area/ Scopes
1.1_Thermal, 1.2_Renewable, 2.1_Energy distribution, 3.1_Energy demand

This appointment is valid until 02.08.2024 and is bound by internal requirements of the Certification Body 'Environment and Energy' of TÜV SÜD South Asia Pvt Ltd.

In case of loss of validity of this certificate as per result of an assessment according to internal procedures or due to any other reason, it will be properly communicated to you.

Your Certificate has the internal reference no. CB-IND-CCP-0025/001.

Date	Signature
02/08/2023	 Shruti Kudtarkar

IS-CMS-CB-POG-01/05, version 03

TÜV SÜD South Asia ♦ Solitaire, 4th Floor ♦ ITI Road, Aundh ♦ Pune - 411007 ♦ Tel.: +91 20 6684 1200 ♦ Fax: +91 20 6684 1261

APPENDIX [4]: List of auditing techniques used and the assessment

Remote Assessment requirements.	VVB Assessment.
Mode of site visit	Validation Team has conducted the remote assessment
List of auditing techniques used in audit of the project	Validation team has used the following audit techniques as per ISO 14064 -2 • Observation • Inquiry • analytical testing • confirmation • recalculation • examination • retracing • tracing • control testing • sampling • estimate testing • cross-checking • reconciliation
The assessment of the appropriateness of the selected auditing techniques	Validation team confirms that applied techniques were sufficient to close the assessment
If the applied techniques were sufficient to close the assessment (or not)	Validation team confirms that applied techniques were sufficient to close the assessment
If the site visit conducted solely by local expert(s) who do not have the 'auditor' status	Validation team confirm that since the project is happening in India, the validator/verifier itself has the expertise hence no local expert was there. The competency of the team has given in Appendix 3
Any identifies risk and mitigation measures implemented to eliminate or reduce risks pertaining to selected auditing technique(s)	Validation team confirm that there was no risk and mitigation measures taken.
Any aspects of the project that need to be further audited during the subsequent audit (Forward Action Requests)	Validation team has raised FARs in the section.2.1