



South Asia

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Gold Standard for Global Goals Validation Report for Renewal of Crediting Period

GS PROJECT NO. GS6999

**“21 MW WIND ENERGY PROJECT BY SHREE CEMENT
LIMITED**

Report No. ET-006400

18 July 2024

TÜV SÜD South Asia Pvt. Ltd.
Solitaire, I.T.I. Road, Aundh
Pune- 411007
INDIA

Title of the project activity	21 MW Wind Energy Project by Shree Cement Limited
GS Reference number of the project activity	GS 6999
Version number of the validation report	3.0
Completion date of the validation report	18/07/2024
Version number of PDD to which this report applies	0.1
Project participant(s)	Shree Cement Limited
Host Party	India
Sectoral scope(s)	1: Energy (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	44,528 tCO ₂ e
Name of VVB	TUV SUD South Asia Pvt Ltd
Name, position and signature of the approver of the validation report	Milind Shende, Manager, Certification Body, TÜV SÜD South Asia

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1 METHODOLOGY

1.1 Objective

TÜV SÜD has been commissioned by the aforementioned client “21 MW Wind Energy Project by Shree Cement Limited” to perform an independent validation assessment for the renewal of second crediting period of Gold Standard Project 6999.

The objective of the Validation is to have an independent evaluation of the update PDD's compliance with relevant UNFCCC and GS4GG requirements and host Party criteria to confirm that the original project baseline is still valid or has been updated taking into account of new data where applicable. In particular, the project's baseline, monitoring plan and the project's compliance with relevant GS and UNFCCC requirements and host Party criteria are validated in order 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 PDD against the CDM VVS PA v3.0. The validation scope also involves to review the updated GS-PDD against the Gold Standard, GS4GG requirements.

1.2 Scope

The scope of any assessment is defined by the underlying legislation, regulation and guidance given by relevant entities or authorities. In the case of GS4GG project activities, the scope is set by:

- GS4GG requirements
- Clean Development Mechanism Validation And Validation Standard (VVS) for Project Activities v3.0
- Baselines and monitoring methodologies (including GHG inventories)
- Environmental issues relevant to the applicable sectoral scope
- Applicable environmental and social impacts and aspects of GS project activity
- Current technical and operational knowledge of the specific sectoral scope and information on best practice
- Stakeholder consultation and feedback

The validation process is not meant to provide any form of consulting for the project participant (PP). However, stated requests for clarifications, corrective actions, and/or forward actions may provide input for improvement of the project design.

Once TÜV SÜD receives the PD, it is made available on the GS Registry through a dedicated interface on the Gold standard website. The Validation shall commence only after the project documents are listed on the registry.

1.3 Validation Process

The information provided by the project participants is assessed by applying the means of validation specified in the GS4GG, Toolkit and the VVS.

A competent assessment team is selected prior to the start of the validation. The team is selected to cover the technical area(s), sectoral scope(s) and relevant host country experience for evaluating the GS project activity. Additionally, a competent Technical Reviewer or Technical Reviewer Team is appointed to conduct checks on quality and completeness.

The validation team performs first a desk review, followed by a remote-site visit, which results in the formation of a draft report and a list of findings. The next step involves the evaluation of the findings through direct communication with the PPs and then finally the preparation of the validation report. This validation report and other supporting documents then undergo an internal quality control by the CB “Environment and energy” before submission to the GS.

1.4 Appointment of the Team

According to the technical scopes and experiences in the sectoral or national business environment, TÜV SÜD has composed an assessment team in accordance with the appointment rules of the TÜV SÜD Certification Body “Environment and Energy”.

The composition of an assessment team has to be approved by the Certification Body (CB) to assure that the required skills are covered by the team. The CB of TÜV SÜD operates the following qualification levels for team members that are assigned by formal appointment rules:

- Assessment Team Leader (ATL)
- Validator (V)
- Technical Experts (TE)
- Country expert (CE)
- Technical reviewer (TR)

It is required that the sectoral scope(s) and the technical area(s) (TA) linked to the methodology/ies and project has to be covered by the assessment team. Appointment certificates of the selected team members are attached to this report as Annex.

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 review	On-site inspection	Interview(s)	Validation findings
1.	Team Leader Validator/Technical Expert/ Host country Expert	IR	Murty	Eswar	TÜV SÜD South Asia Private Limited (TÜV SÜD)	√	-	√	√

Technical reviewer and approver of the validation and certification report

No.	Role	Type of re-source	Last name	First name	Affiliation (e.g. name of central or other office of VVB or outsourced entity)
1.	Technical reviewer	EI	Meesa	Srikanth	TÜV SÜD South Asia Private Limited (TÜV SÜD)
2	Approver	IR	Shende	Milind	TÜV SÜD South Asia Private Limited (TÜV SÜD)

1.5 Review of Documents

Based on the initial submitted GS-PDD, the assessment team performed a desk review to:

- verify the completeness of the data and the information presented in the GS4GG -PDD.
- check the validity of the baseline with respect to the current national /sectoral policies , ongoing financial additionality , applicability of the methodology and sustainable development indicators.
- evaluate the data management and the quality assurance and quality control system in the context of their influence on the generation and reporting of emission reductions.

A complete list of all documents reviewed is available in the Information Reference List attached as Annex 2 to this report.

1.6 On-site Assessment and follow-up Interviews

The VVB Team has performed on-site assessment on 17/03/2023 fulfilling all the criteria of Validation Verification Standard Version 1.0 as per guidance of Validation and Verification Manual following stepwise standard auditing techniques as below:

- Assessed Implementation and operation of 21 MW Wind Energy Project in Koppal, Karnataka ('the Project') in accordance with the registered GS4GG PDD and confirmed during on-site assessment. The project activity is located at Koppal, Karnataka consist of total 10 WEGs, each capacity is 2.1 MW. The geographical coordinates and location specification are given below

Project Developer	WTG Location No	Latitude (D° M' Sec")	Longitude (D° M' Sec")
Shree Cement Limited	KST 091	15°52'49.43"	76°12'00.23"
	KST 092	15°52'49.43"	76°12'00.23"
	KST 127	15°52'58.59"	76°13'46.49"
	KST 129	15°53'15.44"	76°13'12.72"
	KST 132	15°53'05.95"	76°12'01.57"
	KST 133	15°53'34.38"	76°10'35.56"
	KST 134	15°52'28.57"	76°12'12.61"
	KST 145	15°53'05.62"	76°13'06.86"
	KST 146	15°53'21.05"	76°13'40.58"
	KST 179	15°52'49.83"	76°13'02.40"

Reviewed information flows for generating, aggregating and reporting monitoring parameters and confirmed during on-site assessment.

- Interviewed with relevant personnel to determine whether operational and data collection procedures are implemented in accordance with registered monitoring plan/validated permanent changes to monitoring plan during on-site assessment.
- Cross checked between information provided in monitoring report and data from consolidated in ER (Emission Reductions) sheets sourced from plant logbooks, inventories, purchase records and confirmed during on-site assessment.
- Checked monitoring equipment including calibration performance and observations of monitoring practices against the requirements of the PD, the applied methodologies and the other applied methodological regulatory documents and confirmed during on-site assessment.
- Reviewed calculations and assumptions made in determining the GHG data and GHG emission reductions or net anthropogenic GHG removals
- Identified quality control and quality assurance procedures in place to prevent, or identify and correct, any errors or omissions in the reported monitoring parameters.

Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Maheshwari	Manjoj Kr	Site in charge - Shree Cement Ltd	17/03/2023	PDD description, applicability of methodology, base-line validity, OFN and monitoring plan, ER calculations	Eswar Murty
2	Ranjan	Pratak	Site in charge - Shree Cement Ltd	17/03/2023	PDD description, applicability of methodology, base-line validity, OFN and monitoring plan, ER calculations	Eswar Murty
3	Ganesh	J	Local Villager	17/03/2023	Stakeholder issues	Eswar Murty
4	Hedge	Narayana	Local Villager	17/03/2023	Stakeholder issues	Eswar Murty

The audit team had interacted with stakeholders of the project. The implementation of the project, working condition, benefits from the project activity and any other issues/problems faced by them were discussed through remote interviews.

As a part of on-going communication with local stakeholders, end users were informed about grievance register. Thus, ongoing communication of stakeholders was followed through grievance mechanism. If any concerns received during operation of project activity, same were to be addressed if relevant to project activity.

The grievance register is maintained at office by the project participant.

There has been no grievance received for the current monitoring period.

During validation, project activity is registered in GS only further project developer has submitted a declaration that there will not be double accounting of emission reduction or any environmental attributes associated with the project activity

1.7 Resolution of Clarification and Corrective and Forward Action Requests

The objective of this phase of the validation was to resolve the requests for corrective actions, clarifications, and any other outstanding issues which need to be clarified for TÜV SÜD SOUTH Asia's conclusion on the achieved emission reductions or GS Impact certifications. 1 CARs were raised during the course of validation. No CL/ FAR has been raised. All the CARs raised by TÜV SÜD are were resolved successfully during communication between the project developer and TÜV SÜD. To guarantee the transparency of the validation process, the concerns raised and responses that have been given are documented in detail in the List of Findings that is attached as Annex 1 to this report.

1.8 Internal Quality Control

Internal quality control within the team is assured by means of a technical review process that takes place after the remote-site assessment and after closure of findings. The internal quality control in the validation process is given by the final decision (Validation and Certification Conclusion) made by the CB "Environment and Energy".

2 CARBON VALIDATION AND REPORTING

The purpose of the project activity is to generate power using renewable energy source (wind energy) and sell the power generated to the state grid. The project activity generates electricity using wind energy. The generated electricity is exported to the regional grid system which is under the purview of the INDIAN electricity grid of India

The total installed capacity of the current project activity is 21 MW; which involves operation of WTGs in the state of Karnataka in India. The power generated from the project activity will be sold to the State Electricity Board. The project is promoted by Shree Cement Limited.

The project activity located

WTG Details	Date of Commissioning (DOC)
KST 091	28-March-2018
KST 129	28-March-2018
KST 134	28-March-2018
KST 145	31-March-2018

KST 146	31-March-2018
KST 127	31-March-2018
KST 179	31-March-2018
KST 132	28-June-2018
KST 133	28-June-2018
KST 092	28-June-2018

The project will replace anthropogenic emissions of greenhouse gases (GHG's) estimated to be approximately 44,528 tCO₂e per year, thereon displaces 47,829 MWh/year amount of electricity from the generation-mix of power plants connected to the Indian electricity grid and also contributes towards minimum 3 SDG Contributions as per GS requirements.

In the following sections, the results of the validation are stated. The validation results relate to the project performance as documented and described in the final revalidation GS4GG PDD. The validation findings for each validation subject are presented below.

2.1 FARs from Validation / Previous Validation

No FARs have been raised.

2.2 CLs, CARs and FARs raised

Area of validation findings	No. of CL	No. of CAR	No. of FAR
Compliance with PDD form			
Application and selection of methodologies and standardized baselines			
Validity of original baseline or its update		1	
Financial check			
Estimated emission reductions or net anthropogenic removals			
Validity of monitoring plan			
Crediting period			
Project participants			
Sustainability opinion			
Others (please specify)			
Total	0	1	0

2.3 Compliance with PDD form

PD applies the latest applicable Gold Standard for the global goals, key project information and project design document, version 6 of 19/03/2023. The validation team verified that for the renewal crediting period, information transferred to the latestGS4GG version of the PDD form is materially the same as that in the registered PDD and the sections of the PDD relating to the baseline, estimated GHG emission reductions, monitoring plan and crediting period and GS4GG requirements have been updated in accordance to the Gold Standard for the global goals principles & requirements, version 1.2

Assessment team checked the technical parameters of the project equipment through wind power plant technical specifications^{/9/} shared by PD which was also observed during the audit procedure. PD confirms that the details as mentioned in the latest version of GS4GG PDD/1/ are correct.

The project aims to harness wind energy through installation of 21 MW wind project, further details presented in the below table were confirmed during audit and from registered GS4GG PDD.

There is no change in the specification of turbine mentioned in section A.3 of the PDD and the same has been confirmed by validation team with technical specification of the turbine.

2.4 Application and selection of methodologies and standardized baselines

Means of validation	of	VVB has verified whether the baseline and monitoring methodology applied in the project activity in accordance with the applicable requirements in the Project standard for project activities. The Project developer has applied the latest methodology version ACM0002 Version 21.0 in the updated GS4GG PDD.	
		The applicability condition of the ACM0002 Version 21.0 in context of project activity is demonstrated in GS4GG PDD. The summary of the project compliance with applicability criteria is listed below:	
		ACM0002 (Version 21.0) applicability conditions	Conclusion made by validation team
		This methodology is applicable to grid-connected renewable energy power generation project activities that: (a) Install a Greenfield power plant; (b) Involve a capacity addition to (an) existing plant(s); (c) Involve a retrofit of (an) existing operating plants/units; (d) Involve a rehabilitation of (an) existing plant(s)/unit(s); or (e) Involve a replacement of (an) existing plant(s)/unit(s).	The design certified GS4GG project activity involves the installation of 21 MW (10 units of 2.1 MW each) is a wind power project. The electricity generated from the project activity is being exported to the Indian grid. Based on the above assessment the validation team confirms that the registered GS project activity is a Greenfield grid connected wind power project. Hence, this applicability condition is fulfilled.
		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: (Refer different paras as per methodology ACM0002, ver 21)	Project activity is not integrated with BESS, hence, this applicability condition is not relevant to the registered GS project activity
		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, wind 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,	From the commissioning certificate and other legal documents, it is confirmed that the project activity is a greenfield project and not a retrofit or replacement. Based on the documentary evidence, the validation team is able to confirm that the project activity is a Greenfield project and not a capacity addition. Hence, this

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	(a) The project activity is implemented in existing single or multiple reservoirs, with no change in the volume of any of the reservoirs; or (b) The project activity is implemented in existing single or multiple reservoirs, where the volume of the reservoir(s) is increased and the power density, calculated using equation (7), is greater than 4 W/m^2; or (c) The project activity results in new single or multiple reservoirs and the power density, calculated using equation (7), is greater than 4 W/m^2; or (d) The project activity is an integrated hydro power project involving multiple reservoirs, where the power density for any of the reservoirs, calculated using equation (7), is lower than or equal to 4 W/m^2, all of the following conditions shall apply: (i) The power density calculated using the total installed capacity of the integrated project, as per equation (8), is greater than 4 W/m^2; 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/m^2 shall be: a. Lower than or equal to 15 MW; and b. Less than 10 per cent of the total installed capacity of integrated hydro power project.	
	In the case of integrated hydro power projects, project proponent shall: (a) Demonstrate that water flow from upstream power plants/units spill directly to the downstream reservoir and that collectively constitute to the generation capacity	The project is a wind power project. Hence, this applicability condition is not relevant to the project activity.

	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.	
	The methodology is not applicable to: (a) Project activities that involve switching from fossil fuels to renewable energy sources at the site of the project activity, since in this case the baseline may be the continued use of fossil fuels at the site; (b) Biomass fired power plants/units.	The project is a wind power project. Hence, this applicability condition is not relevant to the project activity.
	In the case of retrofits, rehabilitations, replacements, or capacity additions, this methodology is only applicable if the most plausible baseline scenario, as a result of the identification of baseline scenario, is "the continuation of the current situation, that is to use the power generation equipment that was already in use prior to the implementation of the project activity and undertaking business as usual maintenance".	The project activity involves construction and operation of greenfield grid-connected wind power projects for generation of electricity hence the applicability condition is not relevant as the same pertains to retrofits, rehabilitations, replacements, or capacity additions. Hence, this applicability condition is not relevant to the project activity.
Findings	No CAR/CL has been raised.	
Conclusion	TÜV SÜD confirms that the chosen baseline and monitoring methodology is applicable to the project activity.	

2.5 Validity of Original baseline and updates

Means of validation	VVB has assessed the validity of the baseline of the project activity as per below as per the latest version of tool “Assessment of the validity of the original/current baseline and update of the baseline’ at the renewal of the crediting period. According to the Methodological tool of “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)¹”, the stepwise procedure to assess the continued validity of the baseline and to update the baseline at the renewal of a crediting period are as follows: Step 1: Assess the validity of the current baseline for the next crediting period According to the procedures approved by the CDM Executive Board, updated PDD is required to incorporate the impact of national and/or sectoral policies and circumstances existing at the time of requesting for renewal of the crediting period on the current baseline emissions, except for the case where the project activity applies the valid version of an applicable standardized baseline that standardizes baseline scenario. The validity of the current baseline is assessed using the following Sub-steps: Step 1.1: Assess compliance of the current baseline with relevant mandatory national and/or sectoral policies The baseline scenario remains unchanged and is in compliance with all the relevant mandatory national and/or sectoral policies. Step 1.2: Assess the impact of circumstances The baseline scenario identified at the validation of the project activity was the 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 into the grid. Thus, this project activity was a voluntary investment which intends to replace equivalent amount of electricity at grid from renewable source. Project developer was not bound to incur this investment; hence absence of project activity (i.e. the investment) does not lead to any continued baseline practice for project developer within their scope whereas the continued operation of the project activity would continue to replace equivalent amount of electricity at grid. Hence, the same baseline as identified in the previous crediting period is still valid for the project. Therefore, the assessment of the changes in market characteristics is not required for the renewal of the project's crediting period under
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¹ <https://cdm.unfccc.int/methodologies/PAMethodologies/tools/am-tool-11-v3.0.1.pdf>



South Asia

GS4GG.

Nevertheless, there is an impressive growth attained by the Indian Power Sector within the recent years, the installed capacity has grown from mere 1,713 MW in 1950 to 399,496.61 MW as on 31.03.2022, consisting of 236,108.72 MW Thermal, 46,722.52 MW hydro, 109,885.38 MW REC's and 6,780 MW Nuclear. Sector-wise details of installed capacity are shown in Table 1. However, it is evident from Table 1² that the installed capacity is predominantly coal based and therefore, is a major source of carbon dioxide emissions in India. Hence, there exists scope for reducing the CO₂ emissions in the country by increased use of renewable energy sources. Furthermore, project developer has considered the latest available CO₂ Baseline Database (CEA database, version 18.0) at the time of requesting renewal of the crediting period for establishing the baseline emission factor, which itself considered all the new circumstances. Hence, the new circumstances do not have an impact on the baseline emission.

Table 1: Sector- wise installed capacity (MW) as on 31.01.2023 (CEA Database version 18)

ALL INDIA INSTALLED CAPACITY (IN MW) OF POWER STATIONS
(As on 31.01.2023)
(UTILITIES)

Region	Ownership/ Sector	Mode wise breakup									Grand Total
		Thermal					Nuclear	Renewable		Total	
		Coal	Lignite	Gas	Diesel	Total		Hydro	RES (MWRE)		
Northern Region	State	17085.00	254.00	2814.50	0.00	20153.50	0.00	6008.25	237.00	8165.25	28318.75
	Private	22324.33	1080.00	558.00	0.00	23962.33	0.00	3241.00	30570.15	33811.15	57773.48
	Central	15637.04	254.00	2344.06	0.00	18235.10	1021.00	11502.51	349.00	11851.51	30086.61
	Sub Total	55446.37	1588.00	5716.56	0.00	62700.93	1621.00	20751.76	31695.15	52437.91	116766.04
Western Region	State	21280.00	400.00	2849.02	0.00	24529.02	0.00	5445.00	549.48	6004.48	30533.50
	Private	31947.17	500.00	4676.00	0.00	37123.17	0.00	481.00	36530.25	37011.25	74134.42
	Central	21325.92	0.00	3210.07	0.00	24535.99	1041.00	1625.00	605.00	2201.00	26736.99
	Sub Total	74553.09	1400.00	10866.49	0.00	86719.58	1842.00	7562.50	37845.53	45409.03	134028.61
Southern Region	State	20592.50	0.00	731.50	159.56	21483.56	0.00	11927.40	621.30	12548.70	33932.26
	Private	13379.50	250.00	9340.24	273.70	19233.45	0.00	0.00	48504.70	48504.70	67742.15
	Central	12239.34	0.00	0.00	0.00	12239.34	0.00	0.00	541.80	541.80	12781.14
	Sub Total	46211.34	250.00	9491.80	433.56	56977.81	0.00	11827.40	49058.48	61495.98	121586.29
Eastern Region	State	6870.00	0.00	0.00	0.00	6870.00	0.00	3530.22	210.11	3740.33	10610.33
	Private	5593.00	0.00	0.00	0.00	5593.00	0.00	209.00	1523.22	1732.22	7325.22
	Central	15176.70	0.00	0.00	0.00	15176.70	0.00	1005.20	10.00	1015.20	16191.90
	Sub Total	27669.70	0.00	0.00	0.00	27679.70	0.00	4764.42	1743.33	6507.75	34355.45
North Eastern Region	State	0.00	0.00	411.36	36.00	447.36	0.00	422.00	245.25	667.25	1114.61
	Private	0.00	0.00	0.00	0.00	0.00	0.00	0.00	243.35	243.35	243.35
	Central	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub Total	0.00	0.00	411.36	36.00	447.36	0.00	422.00	488.60	911.60	1358.96
Islands	State	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Private	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Central	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
	Sub Total	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
ALL INDIA	State	86737.00	1160.00	7012.06	280.31	94149.37	0.00	27204.36	2437.56	29641.92	123791.29
	Private	73198.00	1530.00	10574.24	308.89	85111.14	0.00	3931.00	117420.75	121351.75	206462.88
	Central	64000.00	3640.00	7237.01	0.00	75007.01	1621.00	16884.72	16322.00	17512.02	93519.73
	Total	224835.00	6170.00	24613.31	589.20	236027.51	1621.00	46019.17	121549.57	126170.74	419548.00

Figures at decimal may not tally due to rounding off

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

² https://cea.nic.in/wp-content/uploads/baseline/2023/01/Approved_report_emission_2021_22.pdf



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	As explained in step 1.2, the baseline scenario is the electricity import/generation from the power plants connected to the Indian electricity grid. Therefore, this condition is not applicable to the project activity. Step 1.4: Assessment of the validity of the data and parameters 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 context of the present project activity the emission factor has been updated along with the approach used to calculate the emission factor. Step 2: Update the current baseline and the data and parameters As evident from the explanation provided above the baseline scenario remains unchanged. Only the approach used to calculate the baseline emission factor is updated as per the latest version available at the time of PDD submission for renewal. In line with the paragraph 13.9.1 of the CDM project standard version 9, the impact of new relevant national and/or sectoral policies and circumstances on the baseline taking into account relevant EB guidance with regard to renewal of the crediting period at the time of requesting renewal of crediting period; and 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. The Government of India enacted the Electricity Act in the year 2003 to harmonize and rationalize the provisions in the then existing laws. The Act consolidated the laws relating to generation, transmission, distribution, trading and use of electricity. With the Enactment of the act, the then existing laws viz, The Indian Electricity Act 1910, The Electricity Supply Act, 1948 and The Electricity Regulatory Commissions Act, 1998 were repealed. The Electricity Act 2003 was in force at the time of the completion of the baseline study for the registered PDD. Section 3 of the said act required the Central Government to prepare the national electricity policy and tariff policy, in consultation with the State Governments and the Authority for development of the power system based on optimal utilization of resources such as coal, natural gas, nuclear substances or materials, hydro and renewable sources of energy. In accordance with the section 3 of the Electricity Act 2003, the
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	Central Government notified the National Electricity Policy on 12th February 2005 which was in force at the time of completion of the baseline study as stated in the registered PDD of the project activity. This policy has not been revised since then and is currently in force as well. In addition to the above policies, State Electricity Regulatory Commissions (SERCs) have announced preferential tariffs and Indian Renewable Energy Development Agency (IREDA) provides term loan assistance towards establishing biomass power projects. All these fiscal and financial incentives were in force at the time of completion of the baseline study for the registered PDD of the project activity and still continue to exist. However, in spite of the financial incentives given by the government to renewable power projects in India the generation from the low cost must run resources connected to the Indian Grid has not increased to such an extent that this would lead to more than 50% contribution from the low cost must run resources towards the total generation from the Indian Grid. The approved consolidated baseline methodology, ACM 0002 (Version 21.0), has been used to determine the baseline and the estimation of emission reductions for the applicable crediting period. As referred in the methodology “Tool to calculate the emission factor for an electricity system” (version 07.0) has been used to determine continued validity of the baseline based on combined margin (CM) calculations. In light of the above discussion, it is to be concluded that in accordance with relevant guidelines stipulated in the Project Standard para 13.9.1, national and/or sectoral policies and circumstances had been considered towards formulating the OM & BM baseline scenario. Hence the baseline scenario as applied for the present project activity remains justified. As per the approved consolidated methodology ACM 0002, If the project activity is the installation of a new grid-connected renewable power plant/unit, the baseline scenario is the following: 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 “Tool to calculate the emission factor for an electricity system” The project activity involved setting up of WTGs to harness the power of wind to produce electricity and supply to the grid. In the absence of the project activity, the equivalent amount of power would have been supplied by the Indian grid which is fed mainly by fossil fuel fired plants. In the absence of the project activity, the equivalent amount of power would have been drawn from the Indian grid. Hence,
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the baseline for the project activity is the equivalent amount of power from the Indian grid.

The combined margin ($EF_{grid,CM,y}$) is the result of a weighted average of two emission factor pertaining to the electricity system: the operating margin (OM) and build margin (BM). Calculations for this combined margin must be based on data from an official source (where available) and made publicly available. The combined margin of the Indian grid used for the project activity is as follows:

Parameter	Value	Nomenclature	Sources
$EF_{grid,CM,y}$	0.9310 tCO ₂ /MWh	Combined margin CO ₂ emission factor for the project electricity system in year y	Calculated as the weighted average of the operating margin (0.75) & build margin (0.25) values, sourced from Baseline CO ₂ Emission Database, Version 18.0, September 2022 published by Central Electricity Authority (CEA), Government of India
$EF_{grid,OM,y}$	0.9518 tCO ₂ /MWh	Operating margin CO ₂ emission factor for the project electricity system in year y	Calculated as the last 3 years (2019-20 and 2020-21 and 2021-22) generation-weighted average, sourced from Baseline CO ₂ Emission Database, Version 18.0, September 2022 published by Central Electricity Authority (CEA), Government of India
$EF_{grid,BM,y}$	0.8687 tCO ₂ /MWh	Build margin CO ₂ emission factor for the project electricity system in year y	Baseline CO ₂ Emission Database, Version 18.0 published by Central Electricity Authority (CEA), Government of India

The project developer has used the latest available Grid emission factors as per CEA database version 18.0 at the time of requesting renewal of the crediting period for establishing the baseline emission factor. There are no new national and/or sectoral policies that could affect the baseline scenario during the renewal of the crediting period. Hence the current baseline remains same and there is no impact if circumstances, existing at the time of requesting renewal of crediting period.



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Findings	CAR 1 has been raised since validity of the baseline and data/parameters is not demonstrated in the PDD for the second crediting period.
Conclusion	The assessment team has assessed the validity of baseline as per tool and confirms to be in line with the tool. TUV SUD confirms that the validity of the baseline has been assessed as per the requirements of the methodological Tool and CDM VVS PA v3.0.

2.6 Financial check

Means of validation	The additionality of the project activity has been demonstrated in-line with “Tool for the demonstration and assessment of additionality”, Version 07.0. All steps of the additionality tool have been demonstrated in the CDM PDD and validation report. The project activity is already registered with the GS and additionality of project already demonstrated in design certified GS4GG PDD (https://registry.goldstandard.org/projects/details/1454) And found the same to be correct and appropriate. At the time of registration, the project has demonstrated the additionality for 25 years of life of the project at the time of project Design certification in GS4GG. The project is justifying the ongoing financial need from the carbon revenue and carbon finance plays a crucial role in project survival due to low financial returns as anticipated in the GS-PDD submitted during design review of the project. Also since the project activity is undergoing regular Performance Review under GS4GG as well as the project has got a good volume of GS Impact certifications being issued and retired by Gold Standard further substantiates the statement that carbon finance is playing a crucial role in terms of project survival considering low return on investment. Since the commissioning of project activity, many problems arised because of many reasons such as actual O&M cost is higher than the expected values of escalation in O&M charges including salaries of employees & training costs borne by the revenues generated by the project as well as lower power generation from the project as well. Also, the cost of Performance review, transition review and Issuance including consultant expenses, the finance derived from carbon finance to some extent has helped the project developer to meet their ongoing expenses to some extent as well as is committed to further excel infrastructure as well as other facilities. The project is claiming carbon finance since 28/03/2018 regularly and has been sustaining itself from the carbon revenue generated by the project. Hence, the carbon revenue derived from project activity have been playing an important role in helping project owner in operating the project and contributing to SDGs, e.g providing renewable electricity, employment and decent work and integrating to climate change measures which is found appropriate. All mentioned
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	expenses are higher than the revenue generated by the project activity therefore carbon revenue is required to fulfil ongoing financial need. The PLF at the time of Design Certification of the project activity was 26% whereas the actual PLF achieved for 1st crediting period was lower than the estimated values which justifies that the return on investment was far lower than the anticipated values being considered at the time of decision making by the project developer and thus it further substantiates the statement that carbon finance plays a pivotal role in project survival. As the expected revenue from the project activity is far lower than the revenues achieved by the project activity due to lower PLF achieved, the carbon finance derived from GS certification provides additional source of funding for the project developer and thus crucial for the project survival. This clearly demonstrates that there is still ongoing financial need. This clearly demonstrates that; project still needs carbon revenue to sustain. Thus, acceptable to VVB team.
Findings	No CAR/CL has been raised.
Conclusion	The OFN has been demonstrated by the project owner in accordance with latest GS4GG requirements.

2.7 Estimated emission reductions or net anthropogenic removals

Means of Validation	The purpose of the validation to ensure that calculation of GHG emission of the project activity complies with the applied methodology. TÜV SÜD has assessed the calculations of project emissions, baseline emissions and leakage and emission reductions presented in the spread sheet and compared it the values provided in the PDD. the baseline emissions are to be calculated as follows: $BE_y = EG_{PJ,y} \times EF_{grid,CM,y}$ Where: BE_y = Baseline emissions in year y (tCO₂/yr) $EG_{PJ,y}$ = Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year y (MWh/yr) $EF_{grid,CM,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the latest version of "TOOL07: Tool to calculate the emission factor for an electricity system" (tCO₂/MWh) The parameters and formulae presented in the spread sheet and the PDD were cross checked and verified with approved methodology and the respective tools.
Findings	No CAR/CL has been raised
Conclusion	The GHG emission calculations of the project activity are as per the applied methodology ACM0002 Version 21.0.

2.8 Validity of monitoring plan

Means of validation	The project activity has applied approved monitoring methodology ACM0002 Version 21.0. The PDD has described the monitoring plan in a clear and transparent manner, which is in compliance with applied approved monitoring methodology. The validation team has validated each parameter required to be monitored as per applied monitoring methodology and is of the opinion that the proposed monitoring plan in PDD is feasible to implement and will result credible emission reductions resulted due to the project activity. Parameters fixed ex ante <table border="1" data-bbox="507 611 1473 801"> <tr> <td>EF_{grid,CM,y}</td><td>Combined margin CO₂ emission factor for the project electricity system in year y</td></tr> <tr> <td>EF_{grid,OM,y}</td><td>Simple Operating Margin CO₂ emission factor in year y</td></tr> <tr> <td>EF_{grid,BM,y}</td><td>Combined Margin CO₂ emission factor in year y</td></tr> </table> The parameters fixed ex ante have been checked by the audit team and are in line with the methodology as well as the registered PDD. The values are in line with methodology and confirmed by the audit team. Parameters monitored ex-post The following parameters will be monitored ex-post: <table border="1" data-bbox="507 1070 1428 1211"> <tr> <td><u>SDG 13</u></td><td>Emission reductions achieved per year</td></tr> <tr> <td><u>SDG 8</u></td><td>Quality of Employment</td></tr> <tr> <td><u>SDG 7</u></td><td>Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh</td></tr> </table> The monitoring plan presented in the GS4GG PDD complies with the requirements of the applicable methodology. The assessment team has verified all parameters in the monitoring plan against the requirements of the methodology and no deviations have been found. Project developer has appropriately mentioned the maintenance and frequency of monitoring equipment and monitoring frequency against each monitoring parameter. The procedures have been reviewed by the assessment team through document review and/or interviews with the relevant 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 Project developer. Specifically, these points include the location of meters, data management, and the quality assurance and quality control procedures to be implemented in the context of the project activity.	EF _{grid,CM,y}	Combined margin CO ₂ emission factor for the project electricity system in year y	EF _{grid,OM,y}	Simple Operating Margin CO ₂ emission factor in year y	EF _{grid,BM,y}	Combined Margin CO ₂ emission factor in year y	<u>SDG 13</u>	Emission reductions achieved per year	<u>SDG 8</u>	Quality of Employment	<u>SDG 7</u>	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh
EF _{grid,CM,y}	Combined margin CO ₂ emission factor for the project electricity system in year y												
EF _{grid,OM,y}	Simple Operating Margin CO ₂ emission factor in year y												
EF _{grid,BM,y}	Combined Margin CO ₂ emission factor in year y												
<u>SDG 13</u>	Emission reductions achieved per year												
<u>SDG 8</u>	Quality of Employment												
<u>SDG 7</u>	Quantity of net electricity generation supplied by the project plant/unit to the grid in year y in MWh												
Findings	No CAR/CL has been raised.												

Conclusion	It is TUV SUD's opinion that the monitoring plan is in accordance with the monitoring methodology; the monitoring plan will give opportunity for real measurement of achieved emission reductions. TUV SUD has checked all the parameters presented in the monitoring plan against the requirements of the methodology and methodological tools; no deviations relevant to the project activity have been found in the plan. TUV SUD confirms that the monitoring arrangements described in the monitoring plan, including the data management and quality assurance and quality control procedures, are feasible within the project design, and the means of implementation of the monitoring plan are sufficient to ensure the emission reductions achieved by/resulting from the registered CDM project activity can be reported ex post and verified.
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2.9 Crediting period

Means of validation	The second crediting period starts from 28/03/2023 to 27/03/2028. This is noted to be in line with the end of the first crediting period.
Findings	No CAR/CL has been raised.
Conclusion	TUV SUD confirms that as per the section 5.1.46 of GS principle and requirements version 1.2, it is confirmed that the Project developer will not claim the emission reductions for the period, when there was a delay and the monitoring will start only from the day the project is deemed renewed. Thesame is accepted as per GS4GG requirements.

2.10 Project participants

Means of validation	The project owner has described in the revalidation PDD of GS 6999 of Shree Cement Limited Ltd. Hence accepted.
Findings	No CAR/CL has been raised.
Conclusion	TUV SUD verified that the project participants included in the PDD are consistent with the names of the project participants in the project view page. The validation team confirms that the same is as per GS4GG requirements.

3 SUSTAINABILITY VALIDATION

3.1 Assessment of SDG outcomes

Assessment of SDG outcomes are discussed in section 2.8 above.

3.2 Assessment of Safeguard Principles

The Safeguarding principles assessment is as below:

Annex 04: Assessment of Safeguarding Principles

Safeguarding Principle	Assessment Questions/ Requirements	How Project will achieve Requirements through design, management or risk mitigation.	VVB Assessment
Principle 1. Human Rights	1.The Project Developer and the Project shall respect internationally proclaimed human rights and shall not be complicit in violence or human rights abuses of any kind as defined in the Universal Declaration of Human Rights 2.The Project shall not discriminate with regards to participation and inclusion	- The Project is not in conflict with the economic livelihood of the local community. - The Project does not cause any human rights abuse and respects internationally proclaimed human rights issue - Further, the Project meets the Indian labor law requirements thus does not cause any human rights abuse - The Project is not in conflict with the economic livelihood of the local community. - The Project does not cause any human rights abuse and respects internationally proclaimed human rights issue. Further, the Project meets the local labor law requirements thus does not cause any human rights abuse. The India has ratified the United Nations Human Rights Rules and regulations. The India ratified the same as per web link²⁸ given below. The project adheres to the host country's commitment to: Universal Declaration of Human Rights (UDHR) International Covenant on Economic, Social and Cultural Rights, India Accession 10/04/79²⁹. International Covenant on Civil and Political Rights India Accession 10.04.79³⁰ The project does not involve any conflict with livelihood of local people and respect all human rights. Stakeholder consultation had been carried out to take their opinion. The host country prohibits discrimination on the	The project is small scale renewable energy project, the project is voluntary project had no risk and harm to the livelihood of the local community. The projects meet the local and national law, the project developer confirms that there no harm to human rights and no violence of human right.

		basis of a person's race, sex, religion, place of birth, or social status.	The validation team confirms that the project activity meets the para 3.1.1. of GS4GG safeguarding principal requirements version 1.2.
Principle 2. Gender Equality	1. The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women 2. Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work 3. The Project shall refer to the country's national gender strategy or equivalent national commitment to aid in assessing gender risks 4. (where required) Summary of opinions and recommendations of an Expert	There is no any likelihood that the proposed Project would expose women and girls to further risks or hazards The Project shall not directly or indirectly lead to/contribute to adverse impacts on gender equality and/or the situation of women. For project, every employee is treated with respect and afforded equitable treatment. The grievance register has maintained at site to take stakeholder feedback. There is no any sexual harassment and/or any forms of violence against women. The project does not involve any slavery, imprisonment, physical and mental drudgery, punishment or coercion of women and girls. The project does not restrict of women's rights or access to resources. The project Recognise women's ownership rights regardless of marital status Projects shall apply the principles of non-discrimination, equal treatment, and equal pay for equal work. The project has equal opportunity for both men and women. The project has HR policy and same is followed equally. The project ensures participation of both men and women and they are benefitted based on pregnancy, maternity/paternity leave, or marital status. There is no limit to the access of women or men to Project participation and benefits.	This is not relevant for this project activity.

	Stakeholder(s)	India ratified the International Convention on the Elimination of All Forms of Racial Discrimination ³¹ on 03/12/1968 with certain reservation. The project activity is in line with strategy of elimination of discrimination.	
Principle 3. Community Health, Safety and Working Conditions	1.The Project shall avoid community exposure to increased health risks and shall not adversely affect the health of the workers and the community	The project is renewable energy technology and does not have exposure to increased health risks and shall not adversely affect the health of the workers and the community. Necessary health and safety measures will be taken during construction and operation phase, relevant staff will be trained to be able to work with safety. The project is in compliance with all relevant local and national laws	Validation team confirmed that the project developer ensure the health and safety
Principle 4.1 Sites of Cultural and Historical Heritage	Does the Project Area include sites, structures, or objects with historical, cultural, artistic, traditional or religious values or intangible forms of culture?	No cultural heritage is observed on the project site, thus no harm observed. Compliance with India's commitment to International Covenant on Economic, Social and Cultural Rights 10.04.79 will ensure no damage to critical cultural heritage. As per the list of cultural heritage sites in India by UNESCO, it is clear that the project site is not a cultural heritage site.	Validation team confirmed that the project developer ensure the project does not cause any harm to the sites of cultural and historical heritage.
Principle 4.2 Forced Eviction and Displacement	Does the Project require or cause the physical or economic relocation of peoples (temporary or permanent, full or partial)?	The project has received the necessary approvals from the local authorities and does not lead to any resettlement. India (the Ministry of Rural development have the "Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act", 2013	Validation team confirmed that the project developer ensure that project has not done any forced eviction and displacement.
Principle 4.3 Land Tenure and Other Rights	a.Does the Project require any change, or have any uncertainties related to land tenure arrangements and/or access rights, usage	The land used for project is mix of revenue land and private land. The revenue land is taken on sub-lease basis for lifetime of project from revenue department and private land is purchased/ leased from land owners. Land has been utilized by PP directly from the owner of the land through direct negotiation of commercial terms. The land is acquired on mutual consent between private land owner and PP, thus there are no any issues of dissatisfaction of private land owner. The Project	Validation team has checked from the land sublease document that the right and land tenure

	rights or land ownership? b. For Projects involving land use tenure, are there any uncertainties with regards to land tenure, access rights, usage rights or land ownership?	Developer holds land rights for lifetime and there are no any uncertainties for land tenure.	rights remain with PP.
Principle 4.4 - Indigenous people	Are indigenous peoples present in or within the area of influence of the Project and/or is the Project located on land/territory claimed by indigenous peoples?	The project activity is located in a peaceful area and free from terrorist activity or threat from indigenous people. Not applicable	Not applicable
Principle 5. Corruption	1. The Project shall not involve, be complicit in or inadvertently contribute to or reinforce corruption or corrupt Projects	The project is renewable energy technology and does not contribute to or reinforce corruption of any kind.	Not Applicable
Principle 6.1 Labour Rights	1. The Project Developer shall ensure that all employment is in compliance with national labour occupational health and safety laws and with the principles and standards embodied in the ILO fundamental conventions 2. Workers shall be able to establish and join labour organisations 3. Working agreements with all individual	Forced labour is an illegal activity in the host country and the local labour compliance takes into account of the same. Further, India is a party to ILO and forced labour is illegal in India. The project does not employ any form of forced or compulsory labour. Employees can quit their Services at any time. The project complies with the Factories Act in India that prohibits forced or compulsory labour . The project activity does not involve any child labour. There are number of trainings (soft and technical skills) planned for the employees. The agreements are in place for permanent employees. The project prefers the local employment and culture is maintained at project site.	Not Applicable

	workers shall be documented and implemented and include: a) Working hours (must not exceed 48 hours per week on a regular basis), AND b) Duties and tasks, AND c) Remuneration (must include provision for payment of overtime), AND d) Modalities on health insurance, AND e) Modalities on termination of the contract with provision for voluntary resignation by employee, AND f) Provision for annual leave of not less than 10 days per year, not including sick and casual leave. 4. No child labour is allowed (Exceptions for children working on their families' property requires an Expert Stakeholder opinion) 5. The Project Developer shall	The country have strict prohibition for child labour . Thus project does not involve child labour during construction and operation of project activity	
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	ensure the use of appropriate equipment, training of workers, documentation and reporting of accidents and incidents, and emergency preparedness and response measures		
Principle 6.2 Negative Economic Consequences	1.Does the project cause negative economic consequences during and after project implementation	No potential risks to the local economy. The financial sustainability of the Projects implemented, also including those that will occur beyond the Project Certification period. The financial sustainability is demonstrated in registered PDD and these calculations are for entire lifetime of project activity. The project does not involve any negative impacts and no any potential risk to local economy.	Not Applicable
Principle 7.1 Emissions	Will the Project increase greenhouse gas emissions over the Baseline Scenario?	The project is renewable energy technology and does not lead any increase in greenhouse gas emissions over the Baseline Scenario.	Validation Team has checked Emission reduction sheet and confirm that the project doesnot lead any increase in greenhouse gas emission over baseline scenario.
Principle 7.2 Energy Supply	Will the Project use energy from a local grid or power supply (i.e., not connected to a national or regional grid) or fuel resource (such as wood, biomass) that provides for other local users?	The project activity supplies energy to national grid and project activity displaces equivalent quantity of electricity which would have been generated by fossil fuel dominated grid connected power plants. In case of emergency, electricity will be imported from the grid. The net electricity supplied to grid will be the difference of export and import of project activity.	Validation team confirms the same during the site visit by checking the metering arrangement.
Principle	Will the Project	The project is renewable energy technology and	Not

8.1 Impact on Natural Water Patterns/Flo ws	affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s) such as high seasonal flow variability, flooding potential, lack of aquatic connectivity or water scarcity?	does not affect the natural or pre-existing pattern of watercourses, ground-water and/or the watershed(s).	Applicable
Principle 8.2 Erosion and/or Water Body Instability	a. Could the Project directly or indirectly cause additional erosion and/or water body instability or disrupt the natural pattern of erosion? b. Is the Project's area of influence susceptible to excessive erosion and/or water body instability?	The project is renewable energy technology and does not affect Erosion and/or water body stability.	Not Applicable
Principle 9.1 Landscape Modification and Soil	Does the Project involve the use of land and soil for production of crops or other products?	The project proponent has implemented Environment Health Safety and Social guideline which takes into account the same. The project activity involves barren land and does not involve use of land and soil for production of crops or other products	Not applicable
Principle 9.2 Vulnerability to Natural Disaster	Will the Project be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions?	The project is renewable energy technology. The Project will not be susceptible to or lead to increased vulnerability to wind, earthquakes, subsidence, landslides, erosion, flooding, drought or other extreme climatic conditions. Thus, this section is Not Applicable.	Not Applicable
Principle 9.3 Genetic Resources	Could the Project be negatively	The project is renewable energy technology. The Project not be negatively impacted by the use of genetically modified organisms or GMOs. Thus this	Not Applicable

	impacted by or involve genetically modified organisms or GMOs (e.g., contamination, collection and/or harvesting, commercial development, or take place in facilities or farms that include GMOs in their processes and production)?	section is Not Applicable	
Principle 9.4 Release of pollutants	Could the Project potentially result in the release of pollutants to the environment?	Electricity generation using wind energy resources is considered in white category that doesnot need any consent from the Pollution Control Board or any such authority³⁷, as it having zero pollutant release to environment. Further the EHSS guidelines takes into account the same. The project does not lead to release of any hazardous substances that pose threat to the environment. Rather it aims at reducing the air pollution that is prevalent due to use of fossil fuel power plants. The project promotes environmental protection through the use of cleaner technology. The project abides by the stipulations of the Indian Environment Protection Act 1986³⁸.	Not Applicable
Principle 9.5 Hazardous and Non-hazardous Waste	Will the Project involve the manufacture, trade, release, and/ or use of hazardous and non-hazardous chemicals and/or materials?	The project is renewable energy technology. The project does not involve generation of Hazardous and Non-hazardous Waste. Standard procedure (i.e. in accordance with local regulations pertaining to hazardous waste disposal) is followed at site during operation and maintenance.	Not applicable
Principle 9.6 Pesticides & Fertilisers	Will the Project involve the application of pesticides and/or fertilisers?	The project is renewable energy technology. Thus this principle is Not Applicable.	Not Applicable
Principle 9.7 Harvesting of Forests	Will the Project involve the harvesting of	The project is renewable energy technology. Thus this principle is Not Applicable.	Not Applicable

	forests?		
Principle 9.8 Food	Does the Project modify the quantity or nutritional quality of food available such as through crop regime alteration or export or economic incentives?	The project is renewable energy technology. Thus this principle is Not Applicable	Not Applicable
Principle 9.9 Animal husbandry	Will the Project involve animal husbandry?	The Project does not involve animal husbandry. Thus Not Applicable.	Not Applicable
Principle 9.10 High Conservation Value Areas and Critical Habitats	Does the Project physically affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified?	The Project does not affect or alter largely intact or High Conservation Value (HCV) ecosystems, critical habitats, landscapes, key biodiversity areas or sites identified. The project is not located in any HCV areas as per the list of approved HCV areas of India. ⁴¹	Not Applicable
Principle 9.11 Endangered Species	a. Are there any endangered species identified as potentially being present within the Project boundary (including those that may route through the area)? b. Does the Project potentially impact other areas where endangered species may be present through transboundary affects?	a) <i>There are no endangered species identified as potentially being present within the project boundary and there are no species migrating through the area.</i> b) The project does not affect other areas where endangered species may be present through transboundary affects. The project site is not on the migration route of migratory birds also. It is evident from themaps showing migratory bird route for India. Further, migratory birds fly on very high altitude while height of WTGs are not more than 125 meters. Moreover, the area does not fall under any reserved forest and does not have rare or endangered species. Below is the link for scientific paper justifying the same- https://wgbis.ces.iisc.ac.in/energy/water/paper/TR123/se ction6.htm	Validation team has confirmed the same during the site visit.

⁴¹ https://wiienvs.nic.in/WriteReadData/UserFiles/image/PAs_Map_Database/images/karn_envis_2017.jpg

The safeguarding principles relevant to the project activity has been justified by project developer based on supporting web links, references as well reference of the registered GS4GG Design Certified PDD/FVR as well as GS Registry webpage wherever applicable.

4 VALIDATION OPINION

TUV SUD has performed a re-validation of the updated GS4GG PDD for the project activity “21 MW Wind Energy Project by Shree Cement Limited” GS registration No. 6999. The validation of the updated GS PDD has been performed for second renewal crediting period (from 28/03/2023 to 27/03/2028) and is based on the information made available to us.

TUV SUD has performed this validation in accordance with GS 4GG principles and requirements, version 1.2 of 23/10/2019, which included an assessment of:

- An 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:
- The correctness of the application of an approved baseline methodology and determination of the continued validity of the baseline or its update, and the estimation of emission reductions for the applicable crediting period.
- Ongoing financial need.
- SDG outcomes.

During the validation, there are not proposed post-registration changes for the next crediting period that is submitted together with the request for renewal of crediting period of the registered CDM project activity.

The review of the updated project design documentation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews have provided TUV SUD with sufficient evidence to validate the fulfillment of the stated criteria applicable for renewal of Crediting Period under GS4GG. The review of the GS4GG PDD and the subsequent follow-up interviews and onsite audit has provided TUV SUD with sufficient evidence to determine the fulfillment of stated criteria.

The review of design certified GS4GG PDD and the subsequent follow-up interviews has provided TUV SUD with sufficient evidence to determine the validity of the original baseline scenario. The project correctly applies the baseline and monitoring methodologies and needs GS Impact certifications for its survival considering ongoing financial need is justified by the project developer in line with GS4GG Principles and Requirements, para 4.1.52. The total emission reductions from the project activity “21 MW Wind Energy Project by Shree Cement Limited” are estimated to be on an average 44,528 tCO₂e per year over the selected 5 years renewable crediting period. The emission reduction forecast has been checked and it is deemed likely that the stated amount is achieved given that the underlying assumptions do not change.



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It is TUV SUD's opinion that the project " 21 MW Wind Energy Project by Shree Cement Limited "GS 6999 in India meets all the relevant requirements for the renewal of the crediting period. Hence TUV SUD requests the renewal of the crediting period for the project activity.

The project meets all relevant UNFCCC requirements for the CDM and requirement of Gold Standard for Global Goals. Therefore, TUV SUD team recommends the project for Re-validation by the GS Registry as GS VERs project.

Annex 1: Clarification requests, corrective action requests and forward action requests

Table 1. Remaining FAR from validation and/or previous verifications

NA.

Table 2. CL from this validation

NA

Table 3. CAR from this validation

CAR ID	01	Section no.	B.4	Date: 17/03/2023
Description of CAR				
The validity of the baseline and data/parameters is not demonstrated in the PDD for the second crediting period. PP shall revise accordingly.				
Project participant response				Date: 18/03/2023
The section B.4 has been amended in accordance with 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, EB 66, Annex 47) and detailed step-by -step explanation provided in the revised PDD.				
Documentation provided by project participant				
PDD has been revised.				
DOE assessment				Date: 19/03/2023
PP has revised the section B.4 to include the validity of baseline and update at the renewal of crediting period. Hence the issue is closed.				

Table 4. FAR from this validation

NA

Table 2.

Annex 2

Information Reference List

No.	Author	Title	References to the document	Provider
1	Shree Cement Limited	Design certified GS4GG-PDD for the project activity titled “21 MW Wind Energy Project by Shree Cement Limited”	https://registry.goldstandard.org/projects/details/1454	Gold Standard
2	Shree Cement Limited	GS4GG PDD for the 2 nd CP titled “21 MW Wind Energy Project by Shree Cement Limited”	Version 6 19/03/2023	Project Developer
2	Shree Cement Limited	GS4GG PDD for the 2 nd CP titled “21 MW Wind Energy Project by Shree Cement Limited”	Version 06.1 dated 01/06/2024	Project Developer
2	UNFCCC	Methodology ACM0002 Version 21.0	https://cdm.unfccc.int/methodologies/DB/XB1TX7TAZ6SLWM9B7BC67THHVD16JV	UNFCCC
3	Gold Standard	The Gold Standard global goals principles & requirements	Version 1.2 of 23/10/2019	Gold Standard
4	Shree Cement Limited	ER calculation sheet		
5	Shree Cement Limited	Joint Metering Statement		
6	Shree Cement Limited	Plant commissioning certificate		
7	Shree Cement Limited	Calibration certificate		
8	Shree Cement Limited	Wind turbine specifications		
9	Shree Cement Limited	Grievance register	-	PP
10	Shree Cement Limited	Payrolls and list of employees	-	PP
11	Shree Cement Limited	Training certificates		PP
13	Central Electricity Authority	CEA database version 18		
15	Google Earth	Location of the plant		
16	Shree Cement Limited	ODA Declaration		PP



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Appointment Certificate



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