Hydroelectric Project in Kinnaur District in Himachal Pradesh

Document Prepared by

LGAI Technological Center, S.A. (Applus+ Certification)

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Project ID	1742[1]
Verification period	01-August-2022 to 31-December-2022
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Version	02
***VCS Standard* Version**	V4.7
Client	JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd)
Prepared by	LGAI Technological Center, S.A. (Applus+ Certification)

[1] https://registry.verra.org/app/projectDetail/VCS/1742

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Summary:

LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed by "JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd)" to perform the verification of the "Hydroelectric Project in Kinnaur District in Himachal Pradesh" (VCS ID 1742).

Verification purpose: This project activity generates clean form of electricity through hydro power source. JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd) has set up a 1045 MW hydro power project in Kinnaur district of state Himachal Pradesh, India. The electricity generated from the project activity is supplied to the Indian electricity grid as per long term signed Power Purchase Agreement's /9/.

The objective of this verification activity is to have an independent third-party assessment of the monitoring report and Emission Reductions calculation to ensure a thorough assessment of the project activity implementation against the applicable VCS requirements. In particular:

- the project's baseline is assessed against "ACM0002. - Version 12.1.0"
- the project's monitoring plan is assessed against "ACM0002. - Version 12.1.0"
- CDM validation and verification standard for project activities, Version 03.0/16/
- VCS program guide v.4.4/10/
- VCS standard version v.4.7/10/

The scope of the verification is the independent and objective review of the Monitoring Report (MR)/6/. The MR/6/is reviewed against the rules and requirements for verification of projects under the VCS Program/10/ and decisions by the CDM Executive Board. The verification was based on the guidance given in the CDM validation and verification standard for project activities, version 03.0, review against registered VCS PD/4/and final VCS validation report, VCS program guide v.4.4/10/ and VCS standard v.4.7/10/.

The monitoring period for this VCS verification is 01-August-2022 to 31-December-2022(including both days) and the project activity achieved 1,361,528 tCO_2e emission reductions during this monitoring period thereon displaced 1,695,340.87 MWh amount of electricity from the generation-mix of power plants connected to the Indian Grid, which is mainly dominated by thermal/fossil fuel-based power plant.

A risk-based approach has been followed to perform this verification activity. In the course of verification, 02 Corrective Action request (CARs) and 04 Clarification Requests (CLs) were raised during

the verification. No FAR was raised during this verification. The review of the Monitoring report, Emission Reduction Calculation and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and Project Proponent have provided LGAI Technological Center S.A. (Applus+ Certification) (hereafter may be referred to as the VVB) with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

The assessment team has employed a risk-based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the MR/6/. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VCUs. The verification is not meant to provide any consulting towards the project Proponent. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring report.

The only purpose of the verification is its usage during the issuance process as part of the VCS project cycle. Therefore, LGAI Technological Center S.A. (Applus+ Certification) can't be held liable by any party for decisions made or not made based on the verification opinion, which will go beyond that purpose.

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for document verifications. Verification is based on the information made available to VVB. VVB's team did not identify any restriction or uncertainties related to verification of the project activity. The entire verification documents checked conducted to arrive at positive verification conclusions.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification or VVB) has been appointed by "JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd)" to perform verification of the "Hydroelectric Project in Kinnaur District in Himachal Pradesh." under VCS guide V4.4 and VCS standard version 4.7. The objective of this verification activity is to have an independent third party for the assessment of the project design, Monitoring Report and Final Verification report and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular;

- the project's baseline is assessed against "ACM0002. – Version 12.1.0" /17/
- the project's monitoring plan is assessed against "ACM0002 – Version 12.1.0" /17/
- CDM validation and verification standard for project activities, Version 03.0/16/
- VCS Program Guide v.4.4/10/
- VCS Standard Version v.4.7/10/
- VCS Program Definitions v4.5 /10/
- VCS Registration & Issuance Process v4.5 /10/
- VCS Validation and Verification Manual v3.2 /10/

LGAI Technological Center, S.A. (Applus+ Certification) as the Validation/Verification Body (VVB) for the project activity is accredited as a VVB by UNFCCC and also meets the competence requirements as set out in the normative reference ISO 14065:2020.

Verification is a requirement for all VCS projects and is seen as necessary through the provision of objective evidence, provide assurance to stakeholders for the quality of the project and requirements for a specific intended future use or application have been fulfilled regarding its intended GHG claims (i.e. generation of verified & certified units (VCUs)).

1.2 Scope and Criteria

The scope is defined as an independent and objective review of the Monitoring report MR/6/prepared as per the registered VCS PD/4/and registered approved methodology ACM0002 – Version 12.1.0. The MR is reviewed against the criteria (See Section 1.1 above) including the approved applied methodology ACM0002., Version 12.1.0/17/. The verification has been conducted in accordance with the VCS

Standard version 4.7/10/, other valid and applicable VCS Regulatory Documents, template and ISO requirements (ISO 14064-3:2019 and ISO 14065:2020) (see Appendix 2 of this verification report below).

The verification is not meant to provide any consulting towards the project proponent. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the Monitoring report. In line with Guidelines for Application of materiality in verifications (Version 02.0), the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. It follows the paper trail back to the raw data such as meter reading records and invoices. There are no material errors, overestimation of Emission Reductions, omission or misstatement. Verification team conducted onsite audit & inspection to verify metering/monitoring arrangement based on the required of VCS Standard/10/, Version 4.7. The verification team has reviewed all the documents like commissioning certificates/1/, technical specification/3/, Daily Performance Report s/11/, grievance register/15/.

1.3 Level of Assurance

Applus+ Certification has planned and performed the verification by obtaining evidence and other information and explanations that assessment team considers necessary to give reasonable assurance that reported estimated GHG emission reductions are fairly stated. All documentary evidences like Technical details including metering/monitoring arrangement were verified during the on-site inspection and through photos & supportive evidences were shared by PP to arrive at a positive verification conclusion by the assessment team.

The level of assurance of the verification report falls under reasonable assurance engagements. Reasonable assurance is a high level of assurance regarding material misstatements, but not an absolute one.

Reasonable assurance includes the understanding that there is a likelihood that material misstatements will not be prevented or detected on a timely basis. To achieve reasonable assurance, the auditor needs to obtain sufficient appropriate audit evidence to reduce audit risk to an acceptably low level. This means that there is some uncertainty arising from the use of sampling, since it is possible that a material misstatement will be missed.

Through an exhaustive process of documentary review, interviews with the project proponents, onsite audit, assessment on GHG Emission Reductions calculations against applicable methodology and any other regulatory document and reporting of objective evidence, the VVB is able to reach a reasonable level of assurance on the conduction of the verification process. The achieved level of assurance for this verification is thus a reasonable level of assurance as per the requirements set out in the applied VCS Standard version 4.7 clause 4.1.10 (1) /10/.

VVB applied a materiality threshold of 1% with respect to omission or misstatements concerning reported quantities as per VCS Standard version 4.7, clause 4.1.10 (4) /10/.

Additionally, according to the VCS Validation and Verification Manual version 3.2 /10/, while all material errors, omissions and misrepresentations must be addressed for a project to receive a positive validation or verification opinion, when non-material errors have been found in the project documents, VVB requested the project proponent to correct them and ensured that such errors have been addressed where applicable. The evidence used to achieve a reasonable level of assurance is specified in section 2.3 and 2.4 of this report. Materiality for the project is 1% which is in accordance with para 4.1.10(4) of VCS Standard v4.7, however the assessment team has verified 100% data (no sampling plan is applied), hence it is sufficient to meet the materiality requirements of the project.

In our opinion, the estimated GHG emissions reductions were calculated correctly on the basis of the approved monitoring methodology "ACM0002, Version 12.1.0"/17/ and the VCS standard v.4.7 (paragraph 4.1.10) /10/.

1.4 Summary Description of the Project

The project activity is generation of electricity by using hydro-electricity generators. The energy generated is supplied to the Unified Indian Grid, which operates the national grid system. The project is environmentally benign as it results in the reduction of emissions from grid connected fossil fuel-based power plants. The project activity leads to reduction of greenhouse gas (GHG), as the energy is generated from renewable source. The emission reduction was real, measurable, and verifiable and plays a beneficial role in the mitigation of climate change.

The project activity is grid-connected hydro energy generation located in between Karcham and Wangtoo village of Kinnaur district in Himachal Pradesh state of India. JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd) are the Project Proponents of the project activity. The total capacity of the project activity when it got commissioned was 1045 MW. The 1st unit (250MW) of project was commissioned on 26-May-2011, The 2nd unit (250MW) of project was commissioned on 23-June-2011, The 3rd unit (250MW) of project was commissioned on 08-September-2011 and the 4th unit (250MW) of project was commissioned on 13-September-2011 and is functioning successfully since then and dates are verified against registered VCS Project Description/4/ version 02 dated 17-April-2018 & registered (CDM PD/4/ version 04) dated 28-March-2012 and commissioning certificates/01/.

The project activity is undergoing the seventh verification of fixed crediting period (01-January-2013 to 31-December-2022 (Including both dates) for a period of five months i.e., from 01-August-2022 to 31-December-2022 (Inclusive of both start and end dates).

During onsite visit/19/ assessment team confirmed that the project capacity is enhanced and thus the same is notified in the MR/6/. According to the minutes of the authority meeting that took place on 30-March-2021, the CEA has approved an increase in the capacity of the Karcham Wangtoo Hydro Electric Project from 1000 MW to 1091 MW in two stages. The first stage involves an upgrade to 1045 MW, which includes a 10% continuous overload and a capacity of 261.25 MW for each unit. The second stage will see the project upgraded to 1091 MW, also with a 10% continuous overload. However, the Authority has decided to observe the performance of the project and its operating parameters for at least two monsoon seasons, starting from 7-July-2021, after the initial upgrade to 1045 MW. As the project is currently in its first stage, the operational capacity of the plant is presently 1045 MW for current monitoring period from 01-August-2022 to 31-December-2022. Assessment team verified the capacity enhancement from the previous approved verification report/4/, further by interviewing site personnels/19/.

As per MR/6/, the electricity generated from the project is supplied to the state grid system which is under the purview of the Unified Indian Grid which is confirmed from registered VCS Project Description/4/ & registered (CDM PD version 04)/4/. The daily performance report prepared by plant team and issued by NRPC site to PTC India/11/. The plant team prepares the generation schedule on a daily basis. After deducting the transmission losses, auxiliary power consumption, and 12.12% free power to Government of Himachal Pradesh (home state), the remaining electricity is distributed based on the Power Sale Agreements/PPA/9/ (PSAs) of four Indian states - Punjab, Uttar Pradesh, Haryana, and Rajasthan, with PTC India/21/. Furthermore, the distribution is also carried out on a short-term basis at power exchanges, after fulfilling contractual commitments/33/. This information was verified during on site assessment/19/ and found to be in line with the details provided in the registered VCS Project Description & registered (CDM PD version 04)/4/.

Location of the project was verified through Google Maps (https://www.google.com/maps) during the desk review and GPS Map Camera/19/ during the site visit as well as through recorded live coordinates by onsite assessment team and found consistent with the data provided in the registered documents/4/ and MR/6/.

By document reviewed and on-site interview with PP representative's present onsite of the project activity, the verification team confirms that all the components of installed technology are fully functional and found to be in line with the details provided in the registered VCS PD/4/.

During the current monitoring period, it was observed that few unforeseen incidents/events evolved that can impact the operation of the project activity, which was verified from breakdown records/13/. The project undergone continuous operation and only scheduled maintenance is observed as per the manufacturer's specification as evident from generation. Please refer to the Appendix 6 of this report for more information about the plant breakdowns.

The organisational roles and responsibilities as mentioned in the registered PD/4/ are followed onsite. All the emergency preparedness as mentioned in the registered PD/4/ are followed onsite and no discrepancies were found regarding the same as confirmed during interviews with the PP representatives.

The project is not registered under any other GHG Program other than the VCS and can be found in the following link: https://registry.verra.org/app/projectDetail/VCS/1742.

The VVB has cross-checked the available registries of UNFCCC CDM/25/, Gold Standard (GS)/26/, International Carbon Registry (ICR)/26/ and the Global Carbon Council (GCC)/27/ and has not found this project activity registered in any of these schemes.

The project activity is a hydro power project, a renewable energy generation and the electricity generated by the project activity is exported to the Indian electricity grid. The project will therefore displace an equivalent amount of electricity which would have otherwise been generated by fossil fuel dominant electricity grid. The current monitoring period is covered from 01-August-2022 to 31-December-2022 (inclusive of both dates) and the project activity is exported 1,695,340.87 MWh of net electricity to Indian grid and achieved 1,361,528 tCO_2e emission reductions.

2 VERIFICATION PROCESS

The registered VCS project is undergoing 7th verification of fixed crediting period, the approach adopted to ensure the quality of emission reductions is described in the following sections.

2.1 Method and Criteria

Verification Process: The project assessment is based on the "CDM validation and verification standard for project activities, Version 03.0, "VCS program guide v.4.4 and VCS standard v.4.7" and is conducted using standard auditing techniques and pre-approved audit plan to assess the correctness of the information provided by the project proponent as per following verification schedule:

Scope of the assessment	Date
Initial meeting/Interview	13-November-2024
Project design and characteristics	13-November-2024
Interview with relevant personnel	13-November-2024
Desk review	13-November-2024
Audit team internal meeting	13-November-2024
Final meeting.	13-November-2024

The Verification process has been conducted following the regulatory documents and based on the ISO 14064-3:2019 and ISO 14065:2020 using standard auditing techniques as required by the VCS Standard v4.7.

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the Applus+ Certification's procedures and policies, that are in accordance with ISO 14065:2020 regulatory provisions.

Applus+ Certification has completed a strategic review and risk assessment of the project activities and processes in order to gain a full understanding of:

- Activities associated with all the sources contributing to project emissions and emission reductions, including leakage if relevant;
- Protocols used to estimate or measure GHG emissions from these sources;
- Collection and handling of data;
- Controls on the collection and handling of data;
- Means of verification; and
- Compilation of the information in the VCS MR.

Based on the above, the VVB prepared a Verification Plan and applied an evidence-gathering plan designed to collect sufficient and appropriate evidence upon which to base the conclusion and to consider the inherent risk for the verification under section 3.23.3. The evidence-gathering plan is based on analytical procedures & tests and considers thresholds for materiality as per the regulatory documents applied for this verification (five percent for projects and one percent for large projects as per the applied para 4.1.10 (4) of VCS Standard version 4.7).

The applied evidence-gathering plan is used by VVB to determine the conformity of the statements made by client against the principles and requirements of applied regulatory documents during current verification.

The evidence-gathering plan designed by the VVB takes into consideration, as a minimum:

- The selection and management of the data and information;
- The processes for collecting, processing, consolidating, aggregating and reporting the data & information;
- Systems and processes in place to ensure the validity and accuracy of the data and information;
- The design and maintenance of the system to control the data and information;
- Systems, processes and personnel that support system in place, including activities for ensuring data quality;
- The plans for instrument maintenance and calibration where appropriate;

Once the project's initial documentation is received by the assessment team, the members of the assessment team carried out:

- Applus+ Certification has verified the implementation of the monitoring plan and the data presented in the Monitoring Report for the monitoring period applicable to this verification process.

  The process of verification involved the following relevant milestones:

- The signature of the contract for verification between the PP and the VVB;
- A kick-off meeting/communication to require the documentary material to perform an initial desk review;
- An initial desk review of the documentary evidences prepared by the Project Proponent;
- The issuance of findings coming from this initial desk review (if any);
- The conduction of an onsite visit, including interviews with project proponent and project stakeholders (see Sections 2.3 and 2.4 below);
- The issuance of findings from the Site Visit/remote inspection and communication of such deviations (if any) to the Project Proponent;
- The assessment of their resolution and closure, when appropriate;
- Once all the findings have been closed, the elaboration of this Verification Report, in which such findings (if any) are described;
- The conduction of an independent Technical Review;
- Upon conclusion of the Technical Review, the VVB may perform a final quality check before the issuance of the Final Verification Report (FVR) and signature of the corresponding Verification Deed.

The process of this verification assessment has not implied any sampling plan.

Appointment of the assessment team

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the Applus+ Certification's procedures and policies, that are in accordance with the ISO 14065:2020 regulatory provisions.

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center S.A. (Applus+ Certification) has composed an assessment team in in accordance with the appointment rules in the internal Quality Management System of LGAI Technological Center S.A. (Applus+ Certification).

The composition of audit team is approved by the LGAI Technological Center S.A. (Applus+ Certification) Central site during its Contract Review stage, ensuring that the required skills are covered by the team.

The qualification levels for Assessment Team members that are assigned by aforementioned appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training).

The Sectoral Scopes / Technical Areas required knowledge linked to the applied methodology(ies) is covered by the Assessment Team as shown below:

Name	Role	SS/TA Coverage	Financial Aspect	Host country Experience
Mr. Amit Rai	LA/TE	YES (1.2)	NA	YES
Ms. Shruti Shrivastava	A/TEiT	NA	NA	YES
Mr. Denny Xue	TR/TE	YES (1.2)	NA	NA

The complete list of CVs is included as Appendix 3 of this report.

Document review

The Monitoring report (version 01) submitted by the PP was reviewed against the approved methodology, registered VCS PD/4/, final validation report and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information.

Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in this report below in Appendix 1.

On-site Audit

An on-site audit on 13-November-2024 is conducted by LGAI Technological Center S.A. (Applus+ Certification) assessment team who performed interviews and on-site inspection with project's stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report in below sections Resolution of Clarification and Corrective Action Request.

Resolution of Clarification and Corrective Action Request

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the Appendix 2.

The final Version of MR/6/ submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Internal quality control

As final step of a verification of the final documentation including the verification report and the checklist have to undergo an internal quality control by the technical review committee.

Details of the Technical Reviewer(s) are provided within the verification Report in Section 2.1 and Appendix 3 for further references of knowledge and capability to conduct the quality checking.

After the Technical Review process, the final documentation may undergo a final quality checking process called Administrative Review, done by the Applus+ Certification's Project Manager and/or Technical Support.

For final approval, the final set of documents are prepared by the VVB's Technical Manager or its deputy and signed by the authorized signatory of the VVB.

In case any of the persons performing this final internal quality control approval process has acted as a part of the Assessment Team or Technical Review team, the approval can only be given by VVB's personnel who are not part of those teams.

After confirmation of the PP the positive verification opinion and relevant documents are submitted to the VCS board through the VCS web-platform.

2.2 Document Review

The details of the documents observed during the verification process which included following:

- Compliance of the Monitoring Report with the current version of the template and its required contents;
- Monitored parameters and reporting requirements;

- Assessment of data and calculation of emission reductions or net removals (Conservativeness, use of calculation methods and assumptions, emission factors, reliability/reproducibility);
- Assessment on the differences from the estimated value of ERs in the registered VCS PD and the achieved ERs in the Monitoring Period;
- Remaining forward action requests from validation or previous verifications;
- Ongoing communication method with stakeholders;
- Sustainable development contributions.

The VCS Monitoring Report (MR) version 03, dated on 21-November-2024/6/ and the Emission Reductions (ER) Calculations/7/ were assessed as part of the verification. In addition, the registered Project Description (PD) /4/, in particular, the baseline estimations and the monitoring plan, and the VCS Validation-Verification Report and latest Verification Report, as well as relevant documents, were reviewed. A detailed list of the reviewed documents can be observed in the Appendix 2 of this Verification Report.

2.3 Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Dhar	Dr. Suman	General Manager – EHS Health (OHC) JSW Hydro Energy Limited	13-November-2024 (On-site visit)	Project Implementation, Daily Performance Report's & invoicing procedure,	Mr. Amit Rai (Lead Auditor/Technical Expert) & Ms. Shruti Shrivastava (Auditor/Technical Expert in Training)
2.	Dadhwal	Mr. Rajeeb Singh	Assistant General Manager JSW Hydro Energy Limited		Management practices, data storage, QA/QC, calibration, Grievance mechanism	
3.	Sharma	Mr. Vikas	Manager (Technical). JSW Hydro Energy Limited			
4.	Negi	Mr. Suresh Kumar	Local Stakeholder		Grievances, Issue related to local area development,	

5.	Negi	Ms. Shabnam	Local Stakeholder		Awareness about the project under GHGs reductions. SDGs	
6.	Negi	Mr. Mukesh	Local Stakeholder			

2.4 Site Visits

As a part of verification an onsite visit has been performed by VVB team. Physical site visit was conducted for the project activity on 13-November-2024. During the onsite visit representative of the project proponent, operation and maintenance staff; personal responsible for monitoring, collecting data & management and QA/QC procedure & local stakeholders were interviewed. The details of the activity performed during site visit are mentioned in table below.

Duration of on-site visit: 13-November-2024			
Activity performed during on-site audit	**Site location**	**Date**	**Team member**
Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring. Assessment team also checked that whether the monitoring plan as described in the VCS PD/4/ is actually practised onsite. Also, assessment team checked any change in host country criteria which may affect the baseline of the project activity.	Karcham & Wangtoo Village of district Kinnaur of Himachal Pradesh, India.	13-November-2024	Mr. Amit Rai (Lead Auditor/Technical Expert) & Ms. Shruti Shrivastava (Auditor/Technical Expert in Training)

2.5 Resolution of Findings

As an outcome of the verification process, the assessment team may raise different types of findings.

Where a non-conformance arises the assessment team shall raise a Corrective Action Request (CAR). A CAR is issued, where:

a) Non-compliance with the monitoring plan or methodology are found in monitoring and reporting and has not been sufficiently documented by the project proponents, or if the evidence provided to prove conformity is insufficient;

b) Modifications to the implementation, operation and monitoring of the project activity has not been sufficiently documented by the project proponents;

c) Mistakes have been made in applying assumptions, data or calculations of emission reductions that will impact the quantity of emission reductions;

d) Issues identified in a FAR during validation to be verified during verification or previous verification(s) have not been resolved by the project proponents.

The assessment team shall raise a Clarification Request (CL) if information is insufficient or not clear enough to determine whether the applicable requirements have been met.

A FAR (Forward Action Request) is raised during verification if the monitoring and reporting require attention and/or adjustment for the next verification period.

All CARs and CLs raised during verification shall be resolved prior to submitting a request for issuance.

Raised CARs and CLs for this project activity's verification process are listed in Appendix 3 of this Verification Report.

The total number of CARs for this Verification has been 02 and 04 CLs have been raised for this Verification.

2.5.1 Forward Action Requests

This is 7th periodic verification of the project activity and no FAR was raised from validation or previous verification as verified from the validation report and previous verification report.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification, as LGAI Technological Center, S.A. (Applus+ Certification) holds the necessary accreditation for the validation and verification for projects under Scope 1 / Technical Area 1.2.

3 VALIDATION FINDINGS

3.1 Methodology Deviations

PP has not sought any methodology deviations. Hence, this section is not applicable for present verification.

3.2 Project Description Deviations

The following deviation was reported during the monitoring period of 01-January-2018 to 31-October-2020, and will be considered in subsequent verifications:

Deviation 1: Since 01-September-2015, project activity ownership rests on the Himachal Baspa Power Company Ltd. The company name changed to JSW Hydro Energy Limited from 11-September-2018. The relevant document for change in company name and corresponding change in communication agreement has been provided to VCS. The following deviation had taken place in the 3rd periodic verification. The above deviation has been already approved.

The following deviation was reported during the monitoring period of Monitoring Period: 01-August-2021 to 31-July 2022, and will be considered in subsequent verifications:

Deviation 2: With the approval of the Central Electricity Authority (CEA), Ministry of Power, the Retrofit activities is approved for the project activity in two phases i.e., 1,045 MW and after reviewing the performance of the initial upgrade for at least two monsoon seasons, the second phase will lead to further upgradation to 1091 MW. The CEA letter is being submitted VVB. The first phase trail run started in July 2021 and the generation started accounting from August 2021 onward. From the current monitoring period onwards, electricity reports are produced on 1045 MW capacity i.e. 261.25 MW per Unit. Surplus power generated in plant due to uprating project capacity exported on a short-term basis to power exchanges. Since there is no addition of new unit, the retrofit activities are categorized as project design deviation. In order to assess additionality, sensitivity parameter as per registered PDD is considered.

	Registered	Actual New Capacity	Percentage Change
Capacity (MW)	1000	1045	4.50%
Generation as per PDD	4463880	4328244.9	-3.04%
As per registered PDD Version 04 dated 28-03-2012 page number 28.			
IRR Variation	-10%	0%	10%
Generation	10.81%	9.80%	8.80%

When compared to registered PDD, it is observed that with an increase of 4.50% capacity, the actual annual increased generation is still -3.04% lower than the estimated generation in registered PD. As per registered sensitivity analysis, an increase in generation is not likely to exceed 5% in the project context, which would result in an IRR of 10.29%, which remains lesser than the benchmark. With increased capacity, the actual generation is below the estimated values, therefore the registered additionality is not breached.

The project description deviation doesn't impact the applicability of the methodology, additionality and baseline scenario, emission reduction calculation of project. The nature of deviation is permanent.

Deviation 3: The Longitude (E) and Latitude (N) of the location of the Karcham & Wangtoo HEP has been updated in the monitoring report to ensure more accurate detection. The deviation doesn't impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario. The coordinates for the power house of the Karcham & Wangtoo HEP have been revised and are now recorded as.

Longitude (E) : $78^0$00'53.3''

Latitude (N) : $31^0$32'27.6'

The following deviation was reported during the current monitoring period of Monitoring Period: 01-August-2022 to 31-December- 2022

Deviation 4: There is a project deviation taken during the current verification period i.e., 01-August-2022 to 31-December-2022 (including both the dates). It has been identified under registered VCS PD and CDM PDD/4/, that calibration frequency installed energy meters of once in every two years which is in line with signed PPA. However, the calibration cycle not followed at site as meter is under control of grid company and calibration is of meters are managed by the same.

Further, As per Central Electricity Authority (CEA) Installation & Operation of Meters) Regulations 2006 and further amendments in year 2010, and year 2014 (https://cea.nic.in/regulations-category/metering-regulations/?lang=en) section 18 calibration and periodical testing of meters, Energy accounting and audit meters shall be tested at site at least in a five years. Thus, as calibration is not under the control of project proponent, calibration frequency once in five year chosen by PP along with Grid company found to be acceptable to verification team. Further, verification team confirmed that, in line with the Para 3.21.2 (2) of the VCS standard version 4.7, "the deviation does not impact the applicability of the methodology, additionality or the appropriateness of the baseline scenario, and the project remains in compliance with the applied methodology and found acceptable.

The above-mentioned deviations are of permanent nature and do not have any impact on the project applicability, baseline scenario and additionality.

3.3 New Project Activity Instances in Grouped Projects

The project is not a grouped project. Thus, this section is not applicable.

3.4 Baseline Reassessment

Did the project undergo baseline reassessment during the monitoring period?

☐ Yes ☒ No

4 VERIFICATION FINDINGS

4.1 Project Details

Item	Evidence gathering activities, evidence checked, and assessment conclusion:				
Audit history	**Audit type**	**Period**	**Program**	**Validation/verification body name**	**Number of years**
	Validation	01-January-2013--31-December-2022	CDM	TÜV NORD CERT GmbH JI	Ten year
	First Verification	01-January-2013--31-December-2013	VCS	Earthood Services Private Limited	0 Years 11 Months 30 Days
	Second Verification	01-January-2014--31-August-2015	VCS	TUV SUD SOUTH ASIA PVT LTD	01 Years 07 Months 28 Days
	Third Verification	01-September-2015--31-December-2017	VCS	LGAI TECHNOLOGICAL CENTER, S.A. (APPLUS+ CERTIFICATION)	02 Years 04 Months 00 Days
	Fourth Verification	01-January-2018--30-April-2020	VCS	LGAI TECHNOLOGICAL CENTER, S.A. (APPLUS+ CERTIFICATION)	02 Years 03 Months 29 Days

	Fifth Verification	01-May-2020--31-July-2021	VCS	LGAI TECHNOLOGICAL CENTER, S.A. (APPLUS+ CERTIFICATION)	01 Years 03 Months 00 Days
	Sixth Verification	01-August-2021--31-July-2022	VCS	VKU CERTIFICATION PVT. LTD	00 Years 11 Months 30 Days
	Seventh Verification	01-August-2022--31-December-2022	VCS	LGAI TECHNOLOGICAL CENTER, S.A. (APPLUS+ CERTIFICATION)	00 Years 05 Months 00 Days
	The above audit history of the project has been verified and confirmed to be correct by the assessment team from the VERRA project portal[2/24/], Validation-verification report, registered VCS PD, the previous monitoring reports & respective verification reports of previous monitoring periods [/4/].				
Double counting and participation under other GHG programs	The current project activity is not receiving or seeking credits for reductions and removals from a project activity under another GHG program other than VCS. Verification team checked independently other registries such as UNFCCC CDM [3], Gold Standard for the Global Goals (GS4GG[4]), Global Carbon Council (GCC[5]), International Carbon Registry (ICR[6]) [/25//26//27//26/] and confirmed that project is not participating in any other GHG programs other than VCS program. Also, International REC (I-REC) registry (https://www.irecstandard.org/) is cross-checked and found that this project is not under I-REC as well. Thus, double counting for the current monitoring period is ruled out.				

[2]https://registry.verra.org/app/projectDetail/VCS/1742

[3] https://cdm.unfccc.int

[4] https://www.goldstandard.org/

[5] https://projects.globalcarboncouncil.com/

[6] https://www.carbonregistry.com/

	Verification team further confirms that project activity is not rejected by any other GHG program. The project proponent has submitted a declaration dated 19-September-2024/12/ to the verification team declaring that the project is not registered under any other carbon standard other than VCS and is not rejected or under the process of registration in any other GHG program.
No double claiming with emissions trading programs or binding emission limits	The project activity is not participating in other emission trading programs or binding emission limits as confirmed in declaration submitted by the project proponent/12/. VVB confirms that project activity not included in ET program and not used for compliance with an emission trading program or to meet binding limits on GHG emissions. Project Proponent has submitted a declaration dated: 19-September-2024/12/ for no double counting with any other GHG program. PP also declared that that the credits claimed under VCS for the current monitoring period are not claimed under any other GHG mechanism and will not be claimed in the future either. This has also been confirmed by the assessment team by interview with the concerned person from the project proponent.
No double claiming with other forms of environmental credit	The project has not sought, received or planning to receive any other forms of environmental credit for reductions and removals from another GHG-related environmental credit system. The project proponent has submitted a declaration dated: 19-September-2024/12/ to VVB team declaring that the project is not claiming any other form of GHG related environmental credit under any other emissions trading programs or binding emission limits. The assessment team has also cross-checked the issuance records available on the Verra/24/ website and thus confirmed & ensured that the emission reductions generated from the project activity are not & will not be double counted, hence accepted by the assessment team. The GHG credits from 01-August-2022 to 31-December-2022 (both days included) will be claimed under VCS only. At any point of time during the crediting period, the project proponent will abide by the declaration of “No Double Counting”./12/

Supply chain (scope 3) emissions double claiming	The project activity is hydro power project developed by project proponent JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd). The basic objective of the project is to the generate electricity and supply to Indian grid. The project proponent is not involved in any other business activity where they can act as a buyer or seller of a product whose emission footprint is changed by the project activity. The project activity is not a part of any supply chain. Hence, there is no possibility for double claim. This has been confirmed by the assessment team by interview with the concerned person from the project proponent.
Sustainable development contributions	The Project activity is contributing to SDG 4, SDG 7, & SDG 13. The same is described in Section 1.12 of VCS MR. VVB confirmed that the project implementation has led in contribution to SDG 04, 07 and SDG 13. The project supplies clean, affordable and renewable energy 1,695,340.87 MWh net electricity under the monitoring period without reliance on fossil fuels for generation of electricity to meet the growing demands in the region. The generated electricity avoided release of 1,361,528 tCO_2 in to the atmosphere. PP has imparted total 63 training during the current project activity as verified from the training records/22/. Moreover, the project helped in generating employment opportunities during the construction & operation phases confirmed from the records/14/, submitted to PP and during the onsite visit inspection/19/.
Additional information relevant to the project	No commercially sensitive information has been mentioned in the monitoring report to have been excluded from the public version of the project documents. This has also been confirmed during interview with the concerned person from the project proponent.

4.2 Safeguards and Stakeholder Engagement

4.2.1 Stakeholder Identification

Item	Evidence gathering activities, evidence checked, and assessment conclusion

Stakeholder identification	The local stakeholder consultation was conducted for in year 2007 prior to CDM registration[7] of project activity as verified from validation report/4/ of the project activity. Project proponent has identified following stakeholders. 1. Local People / Local population 2. Gram Panchayat members of seven villages directly coming under the purview of the project 3. District and state level government officials 4. NGO representatives 5. Representatives of PP 6. Government officials 7. Ministry of Environment & Forests, Government of India 8. Central Electricity Authority, Government of India 9. Civil and construction work contractors 10. H.P State Environment Protection & Pollution Control Board, Government of Himachal Pradesh
Legal or customary tenure/access rights	Assessment team verified that, before commissioning of the project activity project proponent has acquired land from several local landowners, with the acquisition process completed after obtaining all the necessary consent. Further, no concerns/disputes raised during local stakeholder consultation which was checked with the local stakeholder records (feedback form). Thus, Not applicable
Stakeholder diversity and changes over time	During onsite inspection/19/ verification team confirmed that stakeholders identified for this project activity are diverse in nature – in terms of socio-economic status, age and gender wise and the diversity is unlikely to change over time.
Expected changes in well-being	The project facilitated the creation of employment opportunities during both the construction and operation phases. Additionally, it contributed to regional infrastructure development, including the

[7] https://cdm.unfccc.int/Projects/DB/RWTUV1310469729.49/view

	construction of roads. The VVB team confirms the same through onsite inspection and interviewing local stakeholders.
Location of stakeholders	Local stakeholders consist of residents within and surrounding the project area and same has been verified by assessment team through local stakeholder records and onsite interview.
Location of resources	The project is installation of a new hydro power plant. It does not involve resources owned by the stakeholders. Hence, not applicable

4.2.2 Stakeholder Consultation and Ongoing Communication

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Ongoing consultation	Project Proponent has submitted the feedback register kept at site for the ongoing communication with the local stakeholders. VVB confirmed that at the onsite audit and interviews/19/ & submitted grievance register/15/. In plant site office seeking complaints/grievances from local community as a part of ongoing communication with stakeholders in line with clause 3.18.3 of VCS Standard, v.4.7.
Date(s) of stakeholder consultation	Year 2007 (Initial LSC conducted at the time of registration). The stakeholder consultation details have been verified with the registered documents/4/ and interview with local stakeholders & project representatives during the onsite audit/19/.
Communication of monitored results	Verification team has checked the registered VCS – PD/4/ and pertaining stakeholder consultation information and confirmed that the stakeholder consultation meeting was focused towards making aware local stakeholders including local community, local administration representatives working for environmental cause etc., about the project activity that involves electricity generation produced by hydro plant with the primary objective of reducing emissions of GHGs in compared to pre-project or baseline scenario. The grievance logbook/15/ is always available at the site and office for stakeholders to write in or ask for assistance to write any inquiry. No any grievance received during current monitoring period. The verification team confirmed the same from the grievance register maintained by the PP.

Consultation records	Verification team checked Suggestion/ grievance register submitted by project proponent.
Stakeholder input	The project proponent has considered suggestions and opinions of stakeholders. Verification team checked the details pertaining to stakeholder consultation during registration/4/ and confirm the same during the onsite audit and interviews with stakeholders & employees.

4.2.3 Free, Prior, and Informed Consent

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Consent	No rehabilitation, relocation, or resettlement of local residents occurred as a result of the project activity during the current project activity. The project acquired small parcels of land and provided appropriate compensation to the local villages. Furthermore, no ongoing or unresolved conflicts arose due to the project activity. During onsite audit & inspection/19/. VVB team verified the clarity and stability of land tenure, access rights, usage rights, and ownership, eliminating any uncertainties in these aspects.
Outcome of FPIC discussion	The project activity is under 7th verification of fixed crediting period. These aspects have been covered under validation. Project proponent asserts that no land encroachment occurred, no individuals were relocated without consent, and no instances of forced physical or economic displacement were initiated by the project. VVB team verified the same by interview local stakeholder and during onsite audit & inspection/19/.

4.2.4 Grievance Redress Procedure

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Grievance received and steps taken to resolve the grievance including the outcomes of the resolution	Verification team has checked the feedback cum grievance register/15/ submitted by project proponent. Verification team found that no any grievances was received during the current monitoring period. Grievance register was verified by VVB by interviewing local stakeholders during the onsite audit & inspection/19/. Thus,

	verification team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.
Grievance redress procedure	Assessment team during the onsite audit & interview found that, Grievance redressal mechanism is established as per the company policy/28/. PP has maintained the grievance register at the project site for any kind of complaints if any. PP regularly review the grievance book and resolve the issue of local stakeholder and employee as well. Same has been confirmed during the onsite interview/19/ . During onsite audit, it was confirmed that Stakeholder's feedback is monitored continuously, and the stakeholders are well aware of the grievance redressal procedure. Thus, verification team concludes grievances redressal process is adequate and appropriate.

4.2.5 Public Comments

Comments received	Actions taken by the project proponent	Evidence gathering activities, evidence checked, and assessment conclusion
No comments received	No comments received. Thus, not applicable.	This is verification of the project. The expected comment is from the local stakeholders only. Verification team checked the feedback cum grievance register/15/ and confirmed that no any grievances have been received during current verification period. Thus, verification team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate

4.2.6 Risks to Local Stakeholders and the Environment

4.2.6.1 Management Experience

During the onsite audit, the assessment team has interviewed PP representatives and have confirmed that the management team is with the PP for a long time and having a vast experience of implementing such projects. Operation and maintenance team has years of experience on the renewable energy sector. In addition to the owner's engineer, the project proponent employed skilled employees who have relevant experience in managing the project construction, operation, and community engagement or its environmental and social aspects.

The project team operates within a defined organizational structure approved by the board members. The project management team consists of experienced professionals with diverse backgrounds in environmental management, data, and project management. Their combined expertise ensures the effective implementation and monitoring of the project, adhering to the Verra requirements.

Few carbon advisors/consultants were hired by the project proponent in previous verifications/24/ such as Jaiprakash power ventures limited, EKI Energy Services Limited, etc. for the consultancy purposes.

These details were confirmed by the assessment team by reviewing the registered project documentation, previous verifications/4/, by reviewing Employee register/14/ and through interviews with project proponent representatives/19/.

Thus, assessment team noted that the team has all the expertise or experience needed to support the current project activity.

4.2.6.2 Risk Assessment

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Natural and human induced risks to stakeholders' wellbeing	No Natural of human induced risks to stakeholder's wellbeing were identified for this project activity. Furthermore, assessment team through the documentary review, reviewed the project location and by onsite interviews confirmed that the project is located in a remote area. Therefore, the project operation did not pose any risks to the stakeholder's well-being. Regardless of the project location, the project proponent has a Community Health and Safety Plan to prevent risks from occurring. They appointed site HSE personnel who are responsible for ensuring community health and safety near the site and detecting any early signs of risks through regular meetings with the local stakeholders. This practice was confirmed by the assessment team through onsite interviews/19/ with local stakeholders and PP representatives. Proper safety protocols are followed in and around the project premises. Also, it was confirmed that the local community did not experience any adverse impacts from the project. No grievances were raised for the same issues. Assessment team confirmed the same through onsite interviews and by reviewing the grievance register./15//19/ Thus, assessment team confirms that there are no Natural and human induced risks identified pertaining to stakeholders' wellbeing.

Risks to stakeholder participation	Stakeholder meeting was conducted during the validation stage of the project activity. There is no separate stakeholder consultation for the current verification other than ongoing communication with the stakeholders. Verification team has checked feedback register and found that there is no risk to stakeholder for registering the grievances.
Working conditions	Assessment team during the onsite audit confirmed that all the safety provisions/measures are in place as per the Health and Safety regulations. The workforce is provided with appropriate safety equipment and PPE. Their consistent use at the project site is ensured by the HSE team and also confirmed from submitted safety trainings/22/ records, which are provided to the workers. This was confirmed by assessment team by checking the training records and onsite interviews/22//19/ with the employees at site. The risks about occupational health and safety were considered to be negligeable during the operation phase. Thus, it can be concluded that, the project proponent has undertaken necessary safety measures to reduce and avoid any risks related to working conditions and safety of the employees. No such risks identified during the current monitoring period.
Safety of women and girls	No risk identified. PP has implemented the company policy CSR policy/28/ to mitigate the risk.
Safety of minority and marginalized groups, including children	No risk identified. PP has implemented the CSR and EHS/28/ policy to mitigate the same.
Pollutants (air, noise, discharges to water, generation and release of hazardous materials and chemical pesticides and fertilizers	Risk identified. The project is a hydro power plant, thus eliminating concerns regarding air pollution. Additionally, the power generated by this project contributes to improved air quality, avoiding use of coal dominated power plants in baseline and thus eliminating waste water discharge & hazardous materials, excess noise generating heavy machineries. The VVB has reviewed the evidence (Daily Performance Report & Invoices/11/ and commissioning certificates/1/) and concludes that the project effectively enhances nearby environment and achieved significant emission reductions. Verification team noted that, Construction activities result in creation of fugitive dust, excess noise, release of hazardous waste are considered to have occurred during the construction period only. Owing to the fact that construction period being a short-term activity, the impact is considered

	to be low. and mitigation measures/policies/28/ are in place for the other applicable risk related to operation of the project activity.

4.2.7 Respect for Human Rights and Equity

4.2.7.1 Labor and Work

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Discrimination	During the onsite audit and interviews, representative of the PP confirmed that the national law prohibiting the discrimination and sexual harassment[8] is being followed strictly. Further, verification team did not find any complain regarding the same in grievance register and through independent search. PP representative confirmed during onsite audit & interviews that there has been no reports of discrimination or sexual harassment for this monitoring period. The same has been confirmed from the HR policy of the company. Also, PP has implemented "Policy on Prevention of Sexual Harassment"/28/.
Sexual harassment	VVB team conducted interviews with key personnels and checked the Company policy for the sexual harassment and ethics committee formation procedure and member selection process. Same was found appropriate.
Gender equity in labor and work	PP provides equal opportunities in the context of gender equity and pay for labour and work as confirmed during the onsite audit & interviews. The VVB team verified this by reviewing the policy documentation and interviewing personnel responsible for talent acquisition to ensure adherence to the outlined parameters. Additionally, Assessment team has checked the company human right (HR) policy/28/ and found it consistent with national labour law
Forced labor	Assessment team verified that, project is undergoing verification, project activity is already validated, thus during onsite audit and interview with plant personnels of project proponent was conformed that, project operates in compliance with the national labour law and PPs not employ victims of human trafficking, forced labour, as required by the Act. No forced labour observed during the inspection of hydro power plant and desk review of employment records submitted by PP.

[8] The Sexual Harassment Of Women At Workplace (PREVENTION, PROHIBITION AND REDRESSAL) ACT, 2013
ACT NO. 14 OF 2013, Dated 22-April-2013

Child labor	The project proponent bans all types of child labour via its policy. No complaints related to child labour have been received. The PP strictly follows the national laws prohibiting human trafficking, forced labour and child labour. There have been no reports of human trafficking, forced labour and child labour during this monitoring period as observed during the onsite audit or feedback records which were confirmed through interviews with project staff. /19/ The project aligns with the labour convention and labour rights of India, which is a member of the International Labour Organisation (ILO). No human trafficking, no forced labour (all employees declared) and no children are employed by the project.
Human trafficking	The company staff are hired on a consensual and contractual basis. No complaints related to human trafficking have been received. The PP strictly follows the national laws prohibiting human trafficking, forced labour and child labour. There have been no reports of human trafficking, forced labour and child labour during this monitoring period as observed during the onsite audit and confirmed through interview with project staff./19/ The project aligns with the labour convention and labour rights of India, which is a member of the International Labour Organisation (ILO). No human trafficking, no forced labour (all employees declared) and no children are employed by the project.

4.2.7.2 Human Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	Project Proponent following the international human rights law[9], the UNDRIP [10] and ILO Convention 169. There are no human rights violation of any kind to any of the stakeholders during construction and operation of the project activity.

[9] https://www.ohchr.org/sites/default/files/Documents/Publications/fs9Rev.2.pdf

[10] https://www.un.org/development/desa/indigenouspeoples/wp-content/uploads/sites/19/2018/11/UNDRIP_E_web.pdf

	The project is a hydro power project activity which is implemented without cultural or social biases, safeguarding the rights of IPs, LCs, and customary rights holders to be free from discrimination. There are no human rights violation of any kind to any of the stakeholders during construction and operation of the project activity observed during the audit.

4.2.7.3 Indigenous Peoples and Cultural Heritage

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified to the cultural heritage	The project activity is Implemented on a land which is belongs by project owner. Hence, no tangible cultural heritage has been hampered for the project activity. There is no indigenous and cultural heritage near the project as observed from the latest submitted site photographs and plant videos/18/ shared by the PP. Further, PP's committed to protect regional as well as national cultural heritage confirmed from Environment, Quality, Occupational Health, Safety & Social Policy/28/ & Environment Impact Assessment report/8/ submitted by PP.

4.2.7.4 Property Rights

Risks identified	Evidence gathering activities, evidence checked, and assessment conclusion
No risk identified	The project activity was implemented on land that was owned by project owner. Thus, No conflict emerged during this monitoring period. As verified by the assessment team from the registered PD and from the local stakeholders during the onsite interviews/19/, there are no agreement signed on property rights, and project activity was conducted on land that was privately owned. There were no pending property rights conflicts and disputes as confirmed by the local stakeholders in the interviews for current monitoring period. No conflict emerged during this monitoring period. Thus, no risks related to the property rights were identified.

4.2.7.5 Benefit Sharing

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Summary of the benefit sharing plan	During onsite interview with project proponent representatives, it was observed that project proponent has acquired land from local villages for its project activities, ensuring fair compensation for the local villagers (stakeholders). In addition to this, PP actively supports the villagers through various social welfare initiatives. These include the construction of roads, footpaths, a cremation ground, and a footbridge in the project area. Further, from interview with local stakeholder it was confirmed that project proponent also supports local educational institutions and provides health services through its plant dispensary. PPs CSR policy/28/ reflects its commitment to ongoing community development efforts
Benefit sharing during the monitoring period	Details of the activities undertaken for the welfare of local communities during the current monitoring period are provided in the CSR Report/28/ which has been checked and verified by the VVB during the onsite visit and interview with local stakeholders & project representatives.

4.2.8 Ecosystem Health

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Impacts on biodiversity and ecosystems	No risk identifies. As project activity is a run-of-river project it does not store large amounts of river water, preventing submergence of forests, fertile land, or inhabited areas. The structures are not large enough to significantly disturb the ecosystem. Therefore, no impact on biodiversity is likely to be cased as observed by the VVB.
Soil degradation and soil erosion	No risk identifies. No soil erosion and degradation are likely to be caused by project as observed by the VVB during onsite inspection.
Water consumption and stress	No risk identifies. The project is a hydro power project and does not affect the quality and quantity of underground water. hence stress is not likely to be caused.

4.2.8.1 Rare, Threatened, and Endangered species

Item	Evidence gathering activities, evidence checked, and assessment conclusion
Species or habitat	During the onsite audit[19], project proponent informed that there are no sensitive, rare, threatened, or endangered flora or fauna species or habitat within the project implementing territory. Same was confirmed by the local stakeholders too. Hence, This section is not applicable.
Areas needed for habitat connectivity	As project is not located to any adjacent habitat for rare, threatened or endangered species. Therefore, project does not act as a barrier in habitat connectivity. Assessment team confirmed the details during the onsite audit & interviews with project proponent representatives and also local stakeholders. Hence, this section is not applicable.

	Evidence gathering activities, evidence checked, and assessment conclusion
Habitats for rare, threatened, and endangered species	This section is not applicable. Since, there is no impact on Habitats for rare, threatened, and endangered species. The project has not adversely impacted areas needed for habitat connectivity during the monitoring period. Assessment team through the review of project location and geo-coordinates confirmed that the project is relatively located in a remote area, which makes the project isolated. There are no habitats of people or any bird or animal species nearby the project area. Moreover, during the onsite audit[19] project representatives and local stakeholders informed that there are currently no other planned hydro farms in the area. Therefore, it was confirmed that project did not impact the potential endangered species during current monitoring period. Hence, this section is not applicable
Areas for habitat connectivity	This section is not applicable. Since, there is no impact on areas needed for habitat connectivity. The project has not adversely impacted areas needed for habitat connectivity during the monitoring period.

4.2.8.2 Introduction of Species

Species introduced	Evidence gathering activities, evidence checked, and assessment conclusion

Not applicable, as no species introduced.	This section is not applicable since no new species have been introduced in the project implementation area as verified by the assessment team during the onsite inspection & interviews/19/ with PP representatives.

Existing invasive species	Evidence gathering activities, evidence checked, and assessment conclusion
Not Applicable, as no invasive species exists.	This section is not applicable since there are no existing invasive species in the project implementation area as verified by the assessment team during the onsite audit & interviews with PP representatives.

	Evidence gathering activities, evidence checked, and assessment conclusion
Invasive species	This section is not applicable since no new species have been introduced in the project implementation area and there are no invasive species in the project implementation area as verified by the assessment team during the onsite audit & interviews with PP representatives.

4.2.8.3 Ecosystem conversion

Item	Evidence gathering activities and evidence checked
Ecosystem conversion	The project activity is not ARR, ALM, WRC or ACoGS project. Hence it is not applicable.

4.3 Accuracy of Reduction and Removal Calculations

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the VCS PD/4/. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the VCS PD/4/.
Findings	CL01 and CAR03 were raised during the verification process and closed successfully. Please refer Appendix 3 of this report for the detailed closure of the findings.
Conclusion	The project activity has been monitored as per the monitoring plan mentioned in registered PD/4/. All the deviations identified during the previous monitoring periods have been approved by VERRA. The verification team confirms that the flow of information (from data generation, aggregation, to recording, calculation and reporting for these

parameters including the values) is as per the monitoring plan mentioned in registered PD /4/.

The baseline emissions as discussed in MR will include emissions that would have occurred in the absence of the project activity. The emission reduction calculation has been done as per the methodology ACM0002 - Version 12.1.0.

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

Where,

BEy = Baseline emissions in year y (tCO_2/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 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)

Since the project activity is the installation of a new grid-connected renewable power plant/unit at a site where no renewable power plant was operated prior to the implementation of the project activity,

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

$EG_{facility,y}$ = Quantity of net electricity generation supplied by the project plant/unit to the grid in year y (MWh/yr)

The calculation of yearly baseline emissions is provided in the table below:

BE_y = 1,695,340.87 X 0.8031 = 1,361,528 tCO_2e

BE_y = 1,361,528 tCO_2e (Rounded Down value)

The value of net electricity exported has been conservatively calculated deducting the energy imported and auxiliary consumption. All the export and import values were verified from the daily energy logs.

Ex-ante Parameters:

Parameter	Unit	Description	Value
$EF_{grid,OM,y}$	tCO2/MWh[11]	Operating Margin CO2 Emission Factor in year y	1.0086 tCO2/MWh is consistent with the registered VCS Project Description &

[11] (A unit conversion has been performed to convert GWh to MWh)

			registered CDM PDD/4/
$EF_{grid,BM,y}$	tCO2/MWh	Build Margin CO2 Emission Factor in year y	0.5977 tCO2/MWh is consistent with the registered VCS Project Description & Registered CDM PDD/4/
$EF_{grid,CM,y}$	tCO2/MWh	Combined Margin CO2 Emission Factor in year y	0.8031 tCO2/MWh is consistent with the registered VCS Project Description & registered CDM PDD/4/
A_{BL}	m^2	Area of the reservoir (m^2) measured in the surface of the water, before the implementation of the project activity, when the reservoir is full.	0, For new reservoirs, this value is zero, is consistent with the with the registered VCS Project Description & registered CDM PDD/4/
Cap_{BL}	W	Installed capacity of the hydro power plant before the implementation of the project activity.	0, For new hydro power plants, this value is zero, is consistent with the with the registered VCS Project Description & registered CDM PDD/4/

The value in the monitoring report and corresponding emission reduction calculation spreadsheet is consistent with registered CDM PDD and VCS PD/4/. The applied value is correct and justified

<u>Project Emissions</u>

As per applied methodology ACM0002, for hydro power project activities that result in new reservoirs and hydro power project activities that result in the increase of existing reservoirs, project proponents determine project emissions, as follows:

	a). If the power density (PD) of power plant is greater than 4 W/m^2 and less than or equal to 10 W/m^2. Project Emissions (PEy) = (EF_{RES} *EGy)/1000 Where, PE_y = Emission from reservoir expressed as tCO_2e/year EF_{RES} = Default emission factor for emissions from reservoirs, and the default value as per EB23 is 90 Kg CO_2e /MWh. EG_y = Electricity produced by the hydroelectric power project in year y, in MWh b) If the power density of the project is greater than 10 W/m^2, PE_y = 0 The power density of the project activity is calculated as follows: PD= (Cap_{PJ} – Cap_{BL}) / (A_{PJ} - A_{BL}) PD = Power density of the project activity, in W/m^2 Cap_{PJ} = Installed capacity of the hydro power plant after the implementation of the project activity (W). Cap_{BL} = Installed capacity of the hydro power plant before the implementation of the project activity (W). For new hydro power plants, this value is zero. A_{PJ} = Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full (m^2). A_{BL} = Area of the reservoir measured in the surface of the water, before the implementation of the project activity, when the reservoir is full (m^2). For new reservoirs, this value is zero. This project activity being a greenfield project, Cap_{BL} = 0 and A_{BL}=0 Hence, PD = (1045*1000*1000) /553,758 = 1887 W/m^2 Since the power density of the project is greater than 10 W/m^2, Project Emissions (PE_y) = 0. PE_y = 0 tCO_2e The above calculation is in line with the methodology/17/ which is also underlined in registered PD/4/ & page no 7 and Page no 08 of ACM0002 methodology thus confirm the same, assessment team hence concluded that PP has used correct formulae and project emissions are calculated correctly which are within the limits as specified by the methodology ACM0002 version 12.1.0/17/

Leakage Emissions

As per applied methodology, no other leakage emissions are considered. The project activity reduces carbon dioxide emissions through displacement of grid electricity generation with predominantly fossil fuel based power plants by renewable electricity.

The emission reduction (ERy) due to project activity during a given year y is calculated as the difference between baseline emissions (BEy), project emissions (PEy) and emissions due to leakage, as per the formulae given below:

ERy = BEy – PEy

Where,

ERy = Emission Reduction in tCO_2/year

BEy = Baseline emission in tCO_2/year

PEy = 0 for the project activity as per the methodology.

Therefore, ERy = BEy.

For the project activity during the current monitoring period

ERy = BEy = 1,361,528 tCO_2e.

Moreover, the verification team has checked the entire Daily performance report/11/ report and invoices applicable for the monitoring period and found all the parameters are monitored and recorded as per the monitoring plan in the registered PDD and VCS PD/4/. The verification team has checked the revised emission reduction sheet/7/ and monitoring report/6/ data with the Daily performance report/11 and further values have been cross checked with the invoices/11/ and found that values are consistent.

TEGy : The monitoring values were also cross checked with TEGy, which is also a monitored parameter to determine gross electricity generation. The generation value for TEGy (1,954,622.68 MWh) is higher than the $EG_{facility,y}$ (1,695,340.87 MWh) which is verified daily performance report/11/ and found consistent with final Emission reduction spreadsheet/7/ and monitoring report/6/.

Data/ Parameter:	**TEGy**
Data Unit:	MWh
Description	Total electricity produced by the project activity, including the electricity supplied to the grid and the electricity supplied to internal loads, in year y.
Source of data used:	Daily Performance Report
Means of verification:	This gross electricity generation values are cross checked with daily performance report

Cross-check:	Cross checked with the parameter gross electricity value of the project activity

Cap $_{PJ}$: Installed capacity of the hydro power plant of the project activity have not been changed during the current monitoring period, Hence, as there is no change in the parameter value the project capacity 1045 MW. However, during the previous verification the project capacity is enhanced from 1000 MW to 1045MW and the same is notified as approved deviation under section 3.2.2 of this report which is also checked and verified by the verification team with previous registered documents/4/ and found acceptable.

Data/ Parameter:	Cap $_{PJ}$
Data Unit:	W
Description	Installed capacity of the hydro power plant after the implementation of the project activity
Source of data used:	Commissioning Certificate/1/ & previous registered documents/4/
Means of verification:	Capacity has not being changed during current monitoring period. However, during previous approved verification/4/ project capacity is enhanced and thus the same is mentioned under section 3.2 (project deviations) of this report.
Cross-check:	Cross checked with the parameter gross electricity value of the project activity

A $_{PJ}$: There is no change in the reservoir construction since commissioning. Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full is estimated to be 588,400 m^2. However, as per the measurement done in October, 2022 it is found to be slightly reduced to 553,758 m^2 due to siltation. Same have been confirmed during interviews with PP during the site visit/19/. And hence acceptable to the verification team.

Data/ Parameter:	**A $_{PJ}$**
Data Unit:	m^2
Description	Area of the reservoir measured in the surface of the water, after the implementation of the project activity, when the reservoir is full.
Source of data used:	Measured by actual surveys conducted at project site

	Means of verification: To confirm reservoir capacity with actual monitoring survey Cross-check: Not applicable. The verification team confirms that appropriate methods and formulae for calculating baseline emissions have been followed. The assumptions, emission factors and default values that were applied in the calculations are justified. All the data were made available and have monitored as per required monitoring frequency. The means of verification for the values of parameters, used for baseline emission calculation, is described above According to the applied methodology, the conservativeness of the achieved emission reduction was checked, and the detailed emission reduction calculation has been transparently provided in the ER sheet/7/. All the formulae and the calculation procedure were checked by the verification team. In the opinion of verification team, the assumptions, emission factors and default values that were applied in the calculations have been justified. Also, the verification team confirms that there were no manual transposition errors between the data sets in the ER Sheet/7/ during the current monitoring period. It is confirmed that the data has been measured directly from meters and it was checked from the Daily Performance Report and cross checked with the invoices raised and was able to verify the same. Verification team confirms that the monitoring has been carried out in accordance with the monitoring plan, trainings and QA/QC procedure and emergency preparedness contained in the registered VCS PD/4/. Assessment team confirmed that the GHG emission reductions and removals have been quantified correctly in line with the registered VCS PD/4/.

4.4 Quality of Evidence to Determine Reductions and Removals

Means of verification	The verification team checked the Calibration details of the monitoring meters with the calibration evidence/5/ and whether the monitoring has been carried out in accordance with the applicable regulatory documents, inter alia, the applied methodology and registered monitoring plan./4//17/
Findings	No findings were raised during the verification process. Please refer Appendix 3 for more details.
Conclusion	$EG_{PJ,y}$ is the parameter is monitored through energy meters installed at the Pothead yard. It indicates the net electricity generated by the project activity in MWh. The parameter is continuously monitored and monthly recorded as per the VCS PD & CDM PDD. The measuring and reporting frequency are in line to registered VCS PD & CDM PDD and applied methodology. There is one main Energy meter and one check meter at every Power Unit. All the meters were of accuracy class 0.2s. The technical details of the meters are specified

	in the MR are found consistent with the actual records and on ground. The accuracy of the monitoring equipment is 0.2s (all main and check meters), which is as per the registered CDM PDD/4/. The meter details along with calibration frequency & due date are incorporated under appendix 7 of this report. All the meters are of same accuracy class i.e., 0.2s as per the requirement of the registered PD/4/. The same is checked with photographs submitted by the PP /18/and were found to be correct. Verification team has checked the calibration evidence's/5/ submitted for the installed electricity meters and confirmed that calibration frequency is not followed as per registered CDM PD/4/ as calibration was done by the grid company and not under the control of project proponent. Therefore, PP sought deviation (refer section 3.2.2) during current verification and followed calibration frequency as per Central Electricity Authority (Installation and Operation of Meters) Regulations- 2006, which once in five years. The approach further cross checked by the verification team and found in-line with section 18 of CEA (Installation and Operation of Meters) regulations, 2006 and further amendments (https://cea.nic.in/regulations-category/metering-regulations/?lang=en) and found acceptable. *Moreover, verification team further found that, there is a delay in calibration for few days in the month of November 2022, for the same project proponent has applied error factor of 0.2% (corresponding to accuracy class of energy meter) for the whole month of November 2022 which is found conservative & hence acceptable to the verification team.* Project activity is in continuous operation no major breakdowns except a few minor incidents were found to have occurred/13/ during the current monitoring period. Project proponent clarified that the breakdown incidents occurred during current MP did not affect the production, monitoring and measurement, so no conservative measure shall be applied to the ER calculations. Assessment team cross-checked the plant breakdowns sheet /13/ to confirm about this and noted that the breakdown incidents that occurred during the current MP did not have any effect on the plant production. Overall, the plant was operating satisfactorily during the current MP. Hence, PP's clarification was found to be appropriate and acceptable. No unforced errors were observed. No sampling procedure applied for monitoring of the data parameter and entire documents were checked by the assessment team to arrive at positive verification conclusions. The monitoring plan is followed at the project site. All relevant documents were checked to assess the correctness and quality of data submitted by the project proponent, which are used to determine emission reductions. All the records needed for monitoring are archived in line with the requirements of the registered monitoring plan. No significant

	lack of evidence and missing data were detected during desk review and onsite interview discussion. Hence, the verification team confirms that the monitoring system ensures required quality of the monitoring system to ensure the quality of the monitored data. All internal data are subjected to QA/QC measures. The monitoring parameters have been measured / determined without material misstatements and is in line with all applicable standards and relevant requirements. The information inflow (from data generation, aggregation, to recording, calculation and reporting) is included in section 4 under each parameter and confirms to the requirement of the VCS PD/4/. The export and import data are measured by the electricity meters, recorded continuously through electronic means and the invoices are generated monthly. The data is then reported annually on the VCS Monitoring Report as verified by the verification team through desk review and onsite assessment. It was also verified through onsite audit inspection/19/ that the plant's team involved in the monitoring of project activity is well experienced. Hence, the verification team concludes that competent staff is employed by the project proponent to carry out the relevant tasks with sufficient accuracy. Furthermore, it was confirmed during audit discussion that internal training program for the monitoring staff is conducted on regular basis. The VVB confirms that the monitoring has been carried out in accordance with the applicable regulatory documents, inter alia, the applied methodology/17/ and found that there are no material discrepancies between the project implementation and the project description, the implementation of the monitoring plan, its completeness and adequacy to the methodology. If any discrepancies have been found, these are reported, assessed and closed accordingly in the form of CLs or CARs (see Appendix 3), as well as if any project/methodology deviation is sought for this monitoring period, can be found in Section 3 of this Verification Report. As a result of verification of the Emission Reductions calculation process, the VVB confirms that all the parameters required for their determination have been included in the Monitoring Report/6/ and ER Calculation sheet/7/ for which this verification applies. After verifying the data sources, data collection and aggregation processes and final calculations and reported figures, it is confirmed that the values of the parameters from the data sources are consistent with those finally reported in the Monitoring Report and ER Calculation sheet. /6//7/ The verification process for the same and the quality of used evidence have been clearly described above in Section 4 of this Verification Report.

	The verification team can confirm that sufficient evidence is available for the whole monitoring period and the same is verifiable and that the data collection system meets the requirements of the monitoring plan and the applied methodology according to the assessment carried out during the onsite audit/19/ and in the document review.

4.5 Non-Permanence Risk Analysis

Not applicable as this is a renewable project type.

5 VERIFICATION OPINION

5.1 Verification Summary

LGAI Technological Center S.A. (Applus+ Certification) has been contracted/2/ by JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd) to perform the 7th periodic verification of GHG Emission Reductions for the project activity "Hydroelectric Project in Kinnaur District in Himachal Pradesh" (*VCS project ID #1742)*/24/.

The monitoring period included in the Monitoring Report/6/ for which this verification applies is: 01-August-2022 to 31-December-2022 (both days included).

The management of JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd) is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project's Monitoring Plan in the registered Project Description (PD)/4/ and the approved methodology, ACM0002., version 12.1.0./17/

VVB confirms that, GHG statement is the responsibility of the project proponent. The project activity fulfills the criteria for the verification as established in section 4 of the VCS standard version 4.7/10/. Verification team has reviewed the monitoring report including registered VCS PD and subsequently carried out the onsite audit/ follow-up interviews/19/ with PP representatives and confirm the fulfilment of stated criteria. Verification team has the unmodified opinion regarding the project activity, VVB team has checked all the details and found it consistent and free of material errors or misstatements.

Applus+ Certification's verification approach has been based on the requirements of the applicable regulatory documents (defined within this Verification Report and listed in the Appendix 2). Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these.

The verification can confirm that:

- The project is implemented and operated as per the registered VCS PD/4/;
- The monitoring plan in registered VCS PD is as per the applied methodology/17/;
- The monitoring complies with the monitoring plan in the registered VCS PD/4/;
- The monitoring report and other supportive documents provided are complete and verifiable and in accordance with the applicable VCS requirements and any other applied regulatory document;
- The installed equipment's being essential for generating emission reductions runs reliably and are calibrated appropriately (where applicable);
- The monitoring system is in place and generates GHG emission reductions data;
- The GHG emission reductions are calculated without material misstatements.

A Reasonable Level of assurance was achieved as planned, during verification process.

As per VCS Standard version 4.7 Para 4.1.10, VVB team verified that, the criteria for verification of the project activity are in line with the relevant VCS Version 4 criteria/10/. The objective of this verification activity is to have an independent third party for the assessment of the Monitoring report, emission reduction sheet and to ensure a thorough assessment of the project activity against the applicable regulatory requirements.

VVB concluded the assessment, as per para 4.1.18 of the VCS standard version 4.7 /10/, with a positive verification opinion regarding the project activity. The VVB team has raised 02 Corrective action requests (CARs), 04 Clarification (CLs) and no FAR (forward action request). All the issues identified as CARs and/or CLs have been successfully closed and mentioned in Appendix 3 of this verification report. The VVB team clearly state that there is no material misstatement at the level of the GHG statement and GHG declarations made by the Project Proponent. VVB declared that the validation and/or verification of the GHG statement was conducted in accordance with ISO 14064-3:2019 and ISO 14065:2020.

5.2 Verification Conclusion

Our verification approach was based on the requirements as defined under the applicable VCS regulatory requirements/10/. The verification has been conducted in accordance with the VCS standard version 4.7/10/, other valid and applicable VCS regulatory documents and templates /10/(see under appendix 2 of this report), UNFCCC rules and requirements/17/ (where applicable) and associated decisions of the VCS secretariat and the UNFCCC Executive Board (where applicable) and VCS requirement. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Further, the verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of paragraph 4.1.10(1) of the VCS standard V4.7/10/. No

sampling procedure applied for document verifications. The entire documents checked/Power plant verification conducted to arrive at positive verification conclusions.

The verification team can confirm that:

- the project is implemented and operated as planned and described in the project documents;
- the monitoring plan is as per the applied methodology/17/;
- the monitoring process in Monitoring Report is as per the registered VCS PD/4/
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan;
- the installed equipment's being essential for generating emission reduction runs reliably and are calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.
- A Reasonable Level of assurance was achieved as planned, during verification process.

Verification period: From [**01-August-2022**] to [**31-December-2022**]

Verified GHG emission reductions and carbon dioxide removals in the above verification period:

Vintage period	Baseline emissions (tCO_2e)	Project emissions (tCO_2e)	Leakage emissions (tCO_2e)	Reduction VCUs (tCO_2e)	Removal VCUs (tCO_2e)	Total VCUs (tCO_2e)
01-Aug-2022 to 31-Dec-2022	1,361,528	0	0	1,361,528	-	1,361,528
Total	1,361,528	0	0	1,361,528	-	1,361,528

5.3 Ex-ante vs Ex-post ERR Comparison

Vintage period	Ex-ante estimated reductions/ removals	Achieved reductions/ removals	Percent difference	Explanation for the difference
01-Aug-2022 to 31-Dec-2022				The actual emission reductions achieved during this vintage are 8.30.% lower than the estimated emission reductions in VCS PD/6/ for corresponding monitoring period. This is mainly due to the availability of water flow in river which is impacted by

	1,484,693	1,361,528	-8.30 %	draught & altered precipitation patterns etc Also, breakdown/13/ & scheduled maintenance works, forced/unforced shut-down may affect generation during the monitoring period which are detailed under appendix 3 monitoring report/6/ and Appendix-6 of this verification report. And hence the justifications provided by project proponent are acceptable
Total	1,484,693	1,361,528	-8.30 %	The actual emission reductions achieved during this monitoring period are 8.30.% lower than the estimated emission reductions in VCS PD/6/ for corresponding monitoring period. This is mainly due to the availability of water flow in river which is impacted by draught & altered precipitation patterns etc Also, breakdown/13/ & scheduled maintenance works, forced/unforced shut-down may affect generation during the monitoring period which are detailed under appendix 3 monitoring report/6/ and Appendix-6 of this verification report. And hence the justifications provided by project proponent are acceptable.

APPENDIX 1: COMMERCIALLY SENSITIVE INFORMATION

Section	*Information*	*Justification*	*Assessment method and conclusion*
N/A	N/A	N/A	Not applicable as there is No commercially sensitive information has been included in this report.

APPENDIX 2: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

No.	Author	Title	References to the document	Provider
/1/	Project Owner	Commissioning Certificates of all four Hydro Units (Turbine) of the project activity as confirmed by PP to M/s Power System Operation Corporation Limited, Northern Regional Load Despatch Centre	NA	Project Proponent
/2/	VVB	Contract of the project Proponent with the VVB	Contract document signed between PP and VVB, Version 2.0, dated 05-November-2024	Project Proponent
/3/	Project Proponent	Technical Specifications for the project major equipment's	Manufacturer technical specifications	Project Proponent
/4/	Project Proponent & VVBs	Previous Registered Documents Registered CDM PD Registered VCS PD Previous Verification Report for period 01-August-2021 to 31-July-2022.	https://registry.verra.org/app/projectDetail/VCS/1742 Version 4.0, dated 28-March-2012 Version 2, dated 17-April-2018 Version 2, 31-March-2023.	Others
/5/	PGCIL (Power Grid Corporation of India Limited)	Calibration Certificates/Minutes of Meeting for Meter Change & calibration of Energy Meters	For the monitoring period 01-August-2022 to 31-December-2022	Project Proponent
/6/	Project Proponent	Monitoring Report version 01 (Initial) Monitoring Report version 03 (Final)	13-November--2024 21-November-2024	Project Proponent
/7/	Project Proponent	Emission reduction sheet version 01(Initial)	10-Spetember-2024 21-November-2024	Project Proponent

No.	Author	Title	References to the document	Provider
		Emission reduction sheet version 03 (Final)		
/8/	National Environmental Engineering Research Institute	EIA Report Volume I & II	September 2005	Project Proponent
/9/	Project Proponent And Grid Company	Power Purchase Agreement (PPA) Power Purchase Agreement (PPA) • Power Purchase Agreements signed between Jaypee Karcham Hydro Corporation Limited (Now JSW Hydro Energy Ltd) and Power Trading Corporation of India Limited dated 21-March-2006 in New Delhi • Power Sale Agreement signed between PTC India Limited (formerly known as Power Trading Corporation of India Limited) & Punjab State Electricity Board dated 01-September-2006 • Power Sale Agreement signed between PTC India Limited (formerly known as Power Trading Corporation of India Limited) & Uttar Pradesh Power Corporation Limited dated 13-September-2006 • Power Sale Agreement signed between PTC India Limited (formerly known as Power Trading Corporation of India Limited) & Haryana Power Generation Corporation Limited (HPGCL) dated 21-September-2006 • Power Sale Agreement signed between PTC India Limited (formerly known as Power Trading Corporation of India Limited) & (Jaipur Vidyut Vitran Nigam Limited & Ajmer Vidyut Vitran Nigam Limited & Jodhpur Vidyut Vitran Nigam Limited) dated 27-September-2006	NA	Project Proponent

No.	Author	Title	References to the document	Provider
		Please note that supply of power to respective DISCOMS is through PTC India Limited (PTC) - For State UP i.e., Supply of power to Uttar Pradesh Power Corporation Limited through PTC India Limited (PTC) - For State Rajasthan i.e., Supply of Power to Rajasthan Discoms Power Procurement Centre (RDPPC) (Jaipur Vidyut Vitran Nigam Limited, Ajmer Vidyut Vitran Nigam Limited) - For State Punjab i.e., Supply of Power to Punjab State Power Corporation Limited (PSPCL) through PTC India Limited (PTC) - For State Haryana i.e., Supply of Power to Haryana Power Purchase Centre (HPPC) through PTC India Limited (PTC)		
/10/	VERRA	Standard documents used in the project activity • VCS Standard, v4.7 • VCS Program Guide, v4.4 • VCS Program Definitions, v4.5 • Registration and Issuance Process, v4.5 • Validation and Verification Manual, v3.2 • VCS Monitoring Report Template, v4.4 • VCS Verification Report Template, v4.4	VCS web site (https://verra.org/programs/verified-carbon-standard/vcs-program-details/)	VERRA
/11/	Project Proponent	Daily Performance Report's and respective invoices/sales records for the monitoring period 01-August-2022 to 31-December-2022	For the monitoring period 01-August-2022 to 31-December-2022	Project Proponent
/12/	Project Proponent	Self-Declaration regarding no double counting or participation in other GHG program or emissions trading program or any other mechanism that includes GHG	19-September-2024	Project Proponent

No.	Author	Title	References to the document	Provider
		allowance trading for the concerned monitoring period		
/13/	Project Proponent	Breakdown details for the monitoring period	Shutdown breakdown records of the current monitoring period	Project Proponent
/14/	Project Proponent	Employment evidence for plant persons	For the monitoring period 01-August-2022 to 31-December-2022	Project Proponent
/15/	Project Proponent	Grievance register maintained at site	For the monitoring period 01-August-2022 to 31-December-2022	Project Proponent
/16/	UNFCCC	CDM validation and verification standard for project activities, Version 03.0	https://cdm.unfccc.int/sunsetcms/storage/contents/stored-file-20210921115831128/reg_stan06_v03.0.pdf	Others
/17/	UNFCCC	Applied Methodology, ACM0002: Consolidated baseline methodology for grid-connected electricity generation from renewable sources Tool 07: Tool to calculate the emission factor for an electricity system (Version 06.0) CO_2 Baseline Database for the Indian Power Sector User Guide Version 4.0	Version 12.1.0 https://cdm.unfccc.int/methodologies/DB/XP2LKUSA61DKUQC0PIWPGWDN8ED5PG https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-07-v2.pdf https://cea.nic.in/wp-content/uploads/baseline/2020/07/user_guide_ver4.pdf	Others
/18/	NA	Onsite photographs of WTGs, components /Videos /Meters photographs, etc	-	Project Proponent
/19/	VVB	Onsite audit records	Dated 13-November-2024	VVB
/20/	UNFCCC	Guidelines for Application of materiality in verifications (version 02.0)	Version 02.0	UNFCCC
/21/	Project Proponent	Single Line Diagram (SLDs)	-	Project Proponent

No.	Author	Title	References to the document	Provider
/22/	Project Proponent	Training Records	01-August-2022 to 31-December-2022	Project Proponent
/23/	Project Proponent	Plant Layout	-	Project Proponent
/24/	VERRA	VCS webpage for the project, VCS ID 92	https://registry.verra.org/app/projectDetail/VCS/1742	Others
/25/	UNFCCC	Official registry website of Clean Development Mechanism https://cdm.unfccc.int/Projects/projsearch.html	Last retrieved data on 19-November-2024	Others
/26/	GS	Official registry website of Gold Standard https://www.goldstandard.org/	Last retrieved data on 19-November-2024	Others
/27/	GCC	Official registry website of Global Carbon Council https://www.globalcarboncouncil.com/	Last retrieved data on 19-November-2024	Others
/28/	Project Proponent	Company Policies • CSR Policy • Sexual Harassment Policy • Non-Discrimination Policy • Gender Equality • EHS • HR Policy	For the monitoring period 01-August-2022 to 31-December-2022	Project Proponent
/29/	Project Proponent	Organization Chart for JSW Hydro Energy Limited (formerly Himachal Baspa Power Company Ltd)	-	Project Proponent
/30/	IAF	IAF MD4:2023 Document	Version 04, dated 14-June-2023	Others
/31/	ICR	Official registry website of International Carbon Registry: https://www.carbonregistry.com/	Last retrieved data on 19-September-2024	Others
/32/	I-REC	Official registry website of International REC (I-REC) registry: https://www.irecstandard.org/	Last retrieved data on 19-September-2024	Others
/33/	Project Proponent	Open Access (Bilateral Transaction) Application for Scheduling between Adani Electricity Mumbai Limited & KWHPS JSW Hydro Energy Limited, HP	-	Project Proponent

No.	Author	Title	References to the document	Provider

APPENDIX 3: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)

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

~~FAR ID~~	~~XX~~	~~Section no.~~		~~Date:~~ ~~DD Month YYYY~~
~~Description of FAR~~				
~~NA~~				
~~Project participant response~~				~~Date:~~ ~~DD Month YYYY~~
~~NA~~				
~~Documentation provided by project participant~~				
~~NA~~				
~~VVB assessment~~				~~Date:~~ ~~DD Month YYYY~~
~~NA~~				

CL ID	01	Section no.	4.3	Date: 14-November-2024
Description of CL				
Under Submitted ER spreadsheet • In tab, "NRPC data" of ER spreadsheet, the difference between the schedule and actual energy for the month of November 2022, December 2022 and August 2022 are observed to be inconsistent. PP shall check and provide justification along with supportive evidences. Also, check for date format, observed to be un-symmetrical.				
Project participant response				Date: 19-November-2024
ER sheet is now being revised and submitted to verification team. Correct values are being mentioned in revised ER sheet. Now values are consistent with supporting documents.				
Documentation provided by project participant				
Revised ER sheet.				
DOE assessment				Date: 19-November-2024

Revised ER spreadsheet has now been submitted, further values for the month November 2022, December 2022 and August 2022 has now been corrected which were checked & verified by the assessment team and found in-line with submitted Daily Performance Report /Invoices. **Hence, CL is closed.**

CL ID	02	**Section no.**	4.1	**Date:** 14-November-2024
Description of CL				
Under the section 1.1 & 1.2 of the MR, the chronology of the complete verification activity along with the audit history observed to be missing from the submitted monitoring report. Justification required				
Project participant response				**Date:** 19-November-2024
Under the section 1.1 & 1.2 of the MR, the chronology of the complete verification activity along with the audit history are being added in revised MR.				
Documentation provided by project participant				
Revised Monitoring report				
DOE assessment				**Date:** 19-November-2024
Details pertaining to audit history/previous verifications, has now been included under section 1.1 and 1.2 of updated monitoring report, further information has been checked and acceptable to the verification team. **Hence, CL is closed.**				

CL ID	03	**Section no.**	4.1	**Date:** 14-November-2024
Description of CL				
SDG 8 under submitted ER spreadsheet and SDG 4 under the Table 1 of the MR mentioned. PP shall clarify the inconsistency with supportive evidences for current monitoring period.				
Project participant response				**Date:** 19-November-2024
Typo error is being corrected in ER spreadsheet. SDG 4 is now added in ER sheet.				
Documentation provided by project participant				
Revised ER spreadsheet Revised Monitoring report				
DOE assessment				**Date:** 19-November-2024
In revised ER spreadsheet, Typo error has now been corrected, SDG contribution to goal 4, 7 and 13 has been mentioned in-line with section 1.12, (table 1 of updated MR) which is checked & found acceptable. **Hence, CL is Closed**				

CL ID	04	**Section no.**	4.2	**Date:** 14-November-2024
Description of CL				

1. Grievance register/ongoing stakeholder communication records covering the entire monitoring period observed to be missing under section 2.1.4. clarification required along with supportive evidences.
Project participant response **Date:** 19-November -2024
Section 2.1.4 is revised and Grievance register as ongoing stakeholder communication records are being submitted to verification team.
Documentation provided by project participant
Revised Monitoring report
DOE assessment **Date:** 19-November -2024
Section 2.1.4 of revised monitoring report has now been updated in-line with submitted '*Grievance Register*' covering current monitoring period which has been further checked and verified by the verification team and found that "No Grievances" were received during the current monitoring period 01-August-2022 to 31-December-2022. **Hence, CL is closed.**

CAR ID	01	**Section no.**	4.1	**Date:** 14-November-2024
Description of CAR				
In Section 3.2.2 & section 4.2 of the submitted MR, the project deviation information observed to be in-consistent and not clear from which monitoring period it belongs. Thus, corrective action shall be required in-line with current monitoring period.				
Project participant response				**Date:** 19-November -2024
Typo errors are being corrected section 3.2.2 and section 4.2 in revised Monitoring report. Details are mentioned belong to last verification which now been corrected and revised Monitoring report submitted to verification team.				
Documentation provided by project participant				
Revised Monitoring report				
DOE assessment				**Date:** 19-November -2024
Section 3.2.2 & section 4.2, of revised monitoring report has now been updated consistent with reference to deviations approved in previous verifications which are checked and verified by the verification team and found acceptable. **Hence, CAR is closed.**				

CAR ID	02	**Section no.**	4.3	**Date:** 14-November-2024
Description of CAR				

Under submitted ER spreadsheet, tab, "ER Summary": • PP shall include estimated energy generation for current monitoring period • Include SDG monitoring details with refence to monitoring period and submit supportive evidences to verify the same. • PP shall demonstrate emission reduction calculations as ER= BE-PE-LE • Check fro exact decimal value of ER spreadsheet with reference to Daily Performance Energy Report. • PP shall refer the highlighted values for the month September 2023 & June 2024 in the submitted ER sheet, seems incorrect with the submitted JMR's and invoices of the respective month. PP shall check the inconsistency.
Project participant response **Date:** 19-November -2024
Under submitted ER spreadsheet, tab, "ER Summary": • Estimated energy generation for current monitoring period are being added. • Include SDG monitoring details with refence to monitoring period are being added and supportive evidences submitted. • Emission reduction calculations as ER= BE-PE-LE are being demonstrated in revised ER sheet. • Exact decimal value of ER spreadsheet with reference to Daily Performance Energy Report are being mentioned. • Correct values for month September 2023 & June 2024 are being added in revise monitoring report.
Documentation provided by project participant
Revised ER sheet.
DOE assessment **Date:** 19-November -2024
Under tab, ER summary of ER spreadsheet. • Estimated energy generation for current monitoring period has now been included under ER spreadsheet, which has been checked and found acceptable to the verification team • SDG monitoring details with reference to monitoring period, has now been included under ER spreadsheet which are checked and verified by the submitted training & generation records & found acceptable. • Demonstration of formula ER= BE-PE-LE & their corresponding calculation has now been included under updated ER spreadsheet, further checked and found acceptable to verification team. • Exact generation data with reference to "Daily performance report" has now been incorporated under, Tab "ER summary" of ER spreadsheet which are checked and found acceptable to verification team. • In revised ER spreadsheet, values for the month of September 2023 & June 2024 has now been corrected by the project proponent which are checked with their respective invoices/daily performance report & found acceptable. Hence, CAR is Closed.

APPENDIX 4: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed in accordance with the LGAI Technological Center S.A. (Applus+ Certification) procedures and policies, that are in accordance with the ISO 14065:2020 regulatory provisions.

According to the applicable sectoral scope / technical area and experience in the sectoral or national business environment, LGAI Technological Center S.A. (Applus+ Certification) has composed an assessment team in accordance to compliance with the contract review and Assessment Team appointment rules in the internal Quality Management System of LGAI Technological Center S.A. (Applus+ Certification) as well as in compliance with the applicable requirements in the Accreditation Standard.

The composition of audit team (Applus+ Certification's verification team) has been approved by the LGAI Technological Center S.A. (Applus+ Certification) Central site during its Contract Review process, ensuring that the required skills and capabilities are covered by the team.

The qualification levels for Assessment Team members that are assigned by aforementioned appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A).
- Technical Expert (TE).
- Technical Reviewer (TR).
- Any of the above-mentioned roles in training (iT, e.g. AiT for auditor in training, TEiT for Technical Expert in Training, etc.).

The Sectoral Scopes / Technical Areas required knowledge linked to the applied methodology(ies) is covered by the Assessment Team as shown below:

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)	Verification findings

1.	Lead Auditor (LA), Technical Expert (TE)	OE	Rai	Amit	True Quality Certifications Private Limited (Outsourced entity)	Yes	Yes	Yes	Yes
2.	Auditor(A), Technical Expert in Training (TEiT)	OE	Shrivastava	Shruti	True Quality Certifications Private Limited (Outsourced entity)	Yes	Yes	Yes	Yes

Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical Reviewer (TR), Technical Expert (TE)	IR	Xue	Denny	LGAI Technological Center S.A. (Applus+ Certification)
3.	Approver	IR	Calle de Miguel	Agustin	LGAI Technological Center S.A. (Applus+ Certification)

Short CVs of the Team:

Mr. Amit Rai	Mr. Amit Rai, has done Bachelor of Technology in Electrical & Electronics Engineering from Dr. A.P.J. Abdul Kalam Technical University, India and Government Certified Competency Class – I, Electrical Supervisor from Government of National Capital Territory of Delhi, India. He has more than 8 years of working experience in different organizations like Sunrator Technologies, Sun Source Energy Private Ltd. (SHV Energy Group, Singapore) & KBS Certification Services Private Ltd. (UNFCCC's – DOE), In the area of Renewable Project Management, Execution, Designing & Climate Change Services. Currently he is associated with True Quality Certifications Private Limited (Applus+ Certification's Outsourced Entity) and empanelled with Applus+ Certification to carry out GHG audits in the aforementioned schemes. Mr. Amit Rai is based in New Delhi, India.

Ms. Shruti Shrivastava	Ms. Shruti Shrivastava holds a Master's degree in First Degree with Distinction in Environmental Sciences from Amity University, Noida completed in 2021, and completed Bachelor of Science in First Division in Zoology Honors. She started working professionally in the climate change field in association with KBS Certification Services Pvt. Ltd. (UNFCCC's - DOE) from October 2021. Currently, she is associated with True Quality Certifications Pvt. Ltd. (An Outsourced entity for LGAI Technological Center, S.A. (Spain) since March 2023, wherein she has been involved in supporting Audit teams for the validation & verification of Project activities (renewable & non-renewable projects) under different GHG schemes such as CDM, VCS, GS4GG & GCC. She has been conducting comprehensive audits ensuring compliance with the respective standards with sheer commitment and determination. Ms. Shruti Shrivastava is currently based in Indore city, India. Ms. Shruti Shrivastava participates as part of the Audit Team as Technical Expert in Training & Auditor for the assessment.
Mr. Denny Xue	Mr. Denny Xue (Master's Degree in Environmental Engineering, Bachelor's Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment, auditing and technical review. He has more than 6 years of work experience in CDM/GS4GG/VCS project assessment and technical review with Applus+. Before he joined Applus+ LGAI, he has been working for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development. Mr. Denny Xue is based in Shanghai, China. Mr. Denny Xue participate in the project's technical review team.

APPENDIX 5: ABBREVIATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Clean Energy Asia LLC
CL	Clarification request
CM	Combined Margin
CMS	Central Monitoring system
CO_2	Carbon dioxide
CO_2e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
NPTG	National Power Transmission Grid
PD	Project Description
DPR	Daily Performance Report
PD	Project Description
PP	Project Proponent
QA/QC	Quality Assurance and Quality Control
SDGs	Sustainable Development Goals
UNFCCC	United Nations Framework Convention on Climate Change
VCS	Voluntary Carbon Standard
VCSA	Voluntary Carbon Standard Association
VCS PD	VCS Project Description
VCUs	Voluntary Carbon Units
VVB	Validation Verification Body

APPENDIX 6: BREAKDOWN RECORDS

Major Breakdown Details: from 01-August-2022 to 31-December-2022.

Date	Hrs.	Unit Tripped	System	Flags/annunciation control/ Relay Panel	Observation	Action taken
23-August-2022	17:00	Unit-3	DTG	Differntial pressure of MIV and Spiralcase not balanced	Guide Vane No-19 Stuck at intermediate position. And bypass valve of MIV remain in open position.	Guidevane-19 fixed at close position. Unit Synchropnised on date 25.08.2022 at 20:33 hrs.
07-September-2022	18:28	Unit-4	Excitation System	U-4 Excitation backup trip active.	Excitation backup trip active. Relay contactor loose and excitation chanel-1 fan 1& 2 was not working	Relay contactor tightened and both the faulty fans changed with new one
25-November-2022	06:15	Unit-4 not started	Generator break	-	while start the unit, break not released.	Limit switch was not functioning, replaced with new one.
05 December-2022	06:28	Unit-1	Monitoring system	bearing vibration trip	Bearing vibration sensor malfunctioning	Checked the connection at terminal box,pannel and Connection tightening.
15-December-2022	05:59	Unit-4	DTG system	Communication failure.	Communication failure between Ethernet switch & DTG CPU	Replaced the faulty ethernet switch with new one
The total breakdown duration is 54 hours and 17 minutes.						

APPENDIX 7: METER CALIBRATION DETAILS

The calibration details of meters installed by Power Grid for measurement of net electricity export are as below. There are six feeder lines involved for the electricity export. Considering the two years calibration frequency, there is no delay in calibration for current monitoring period.

Meter Installed by Power Grid (to monitor net energy generation)

Sr No	Location	Type	Serial Number	Make	Accuracy Class	Calibration date	Due date of calibration
1	Feeder-1	Main	NP8526A	L & T	0.2s	08-November-2020	07-November-2022
2	Feeder-2	Main	NP8530A	L & T	0.2s	08-November-2020	07-November-2022
3	Feeder-3	Main	NP8528A[12]	L & T	0.2s	08-November-2020	07-November-2022
4	Feeder-3	Main	WR2178A[13]	L & T	0.2s	15-February-2022	14-February-2024
5	Feeder-4	Main	NP8529A	L & T	0.2s	08-November-2020	07-November-2022
6	Feeder-5	Main	NP8527A	L & T	0.2s	08-November-2020	07-November-2022
7	Feeder-6	Main	NP8546A	L & T	0.2s	08-November-2020	07-November-2022
8	Feeder-1	Check	NP8400A	L & T	0.2s	09-November-2020	08-November-2022
9	Feeder-2	Check	NP8401A	L & T	0.2s	09-November-2020	08-November-2022
10	Feeder-3	Check	NP8402A	L & T	0.2s	09-November-2020	08-November-2022
11	Feeder-4	Check	NP8403A	L & T	0.2s	09-November-2020	08-November-2022
12	Feeder-5	Check	NP8548A	L & T	0.2s	09-November-2020	08-November-2022
13	Feeder-6	Check	NP8547A	L & T	0.2s	09-November-2020	08-November-2022

Meter installed for Units at 15.75kV side (to monitor Total Generation)

Serial No.	Unit No.	Type	Serial No.	Make	Accuracy class	Calibration date	Due date of calibration
1	Unit-1	Main	LT0175B	L & T	0.2s	10-November-2020	09-November-2022
2		Check	LT0176B	L & T	0.2s	10-November-2020	09-November-2022
3	Unit-2	Main	LT0177B	L & T	0.2s	10-November-2020	09-November-2022
4		Check	LT0178B	L & T	0.2s	10-November-2020	09-November-2022
5	Unit-3	Main	LT0179B	L & T	0.2s	10-November-2020	09-November-2022

[12] This Meter has been changed on 15/02/2022 (provided in serial no. 4 of Meter Installed by Power Grid), meter is calibrated and valid till 14/02/2024. Hence Meter serial no. is changed from NP8528A to WR2178A with meter make L&T, Model ER300P.

[13] The details provided for feeder 3 main meter is replaced on 15/02/2022 and new meter serial number is WR2178A.

6		Check	LT0180B	L & T	0.2s	10-November-2020	09-November-2022
7	Unit-4	Main	LT0181B	L & T	0.2s	10-November-2020	09-November-2022
8		Check	LT0182B	L & T	0.2s	10-November-2020	09-November-2022

Calibration record covering the current verification duration:

Sl. No.	Location		Meter Sl. No.	Make	Accuracy Class	Calibration Date[14]	Calibration Due Date[15]
1	Feeder-1	Main	NP8526A	L & T	0.2s	12-November-2022	11-November-2027
2	Feeder-2	Main	NP8530A	L & T	0.2s	12-November-2022	11-November-2027
3	Feeder-3	Main	WR2178A	L & T	0.2s	11-November-2022	10-November-2027
4	Feeder-4	Main	NP8529A	L & T	0.2s	12-November-2022	11-November-2027
5	Feeder-5	Main	NP8527A	L & T	0.2s	11-November-2022	10-November-2027
6	Feeder-6	Main	NP8546A	L & T	0.2s	12-November-2022	11-November-2027
7	Feeder-1	Check	NP8400A	L & T	0.2s	14-November-2022	13-November-2027
8	Feeder-2	Check	NP8401A	L & T	0.2s	14-November-2022	13-November-2027
9	Feeder-3	Check	NP8402A	L & T	0.2s	14-November-2022	13-November-2027
10	Feeder-4	Check	NP8403A	L & T	0.2s	14-November-2022	13-November-2027
11	Feeder-5	Check	NP8548A	L & T	0.2s	11-November-2022	10-November-2027
12	Feeder-6	Check	NP8547A	L & T	0.2s	14-November-2022	13-November-2027
Meter installed for Units at 15.75kV side (Generation)							
1	Unit-1	Main	LT0175B	L & T	0.2s	15-November-2022	14-November-2027

[14] Error factor equivalent to accuracy class of meter have been applied to the missing calibration duration.

[15] As per Central Electricity Authority (Installation and Operation of Meters) Regulations- 2006 Dated 17th March, 2006 with Amendments Dated: 4th June, 2010 and. Dated: 26th November, 2014 section 18 Calibration and Periodical Testing of Meters, Energy accounting and audit meters shall be tested at site at least once in five years or whenever the accuracy is suspected or whenever the readings are inconsistent with the readings of other meters.

As per Approved PD (Version 02, Date of Issue 17-April-2018) specifies a calibration frequency of once every two years. However, meter calibration is managed by the state electricity board, not in the control of project proponent, and the board does not adhere to fixed calibration schedule. Consequently, the PP follows the five-year calibration frequency recommended by the Central Electricity Authority.

2		Check	LT0176B	L & T	0.2s	15-November-2022	14-November-2027
3	Unit-2	Main	LT0177B	L & T	0.2s	15-November-2022	14-November-2027
4		Check	LT0178B	L & T	0.2s	15-November-2022	14-November-2027
5	Unit-3	Main	LT0179B	L & T	0.2s	15-November-2022	14-November-2027
6		Check	LT0180B	L & T	0.2s	15-November-2022	14-November-2027
7	Unit-4	Main	LT0181B	L & T	0.2s	15-November-2022	14-November-2027
8		Check	LT0182B	L & T	0.2s	15-November-2022	14-November-2027